

AGENDA
REGULAR CITY COUNCIL MEETING
COUNCIL CHAMBERS
5000 CLARK AVENUE
LAKEWOOD, CALIFORNIA

September 12, 2017

ADJOURNED MEETING: Consideration of Election Dates (SB415) Study Session 6:00 p.m.
EXECUTIVE BOARD ROOM

CALL TO ORDER 7:30 p.m.

INVOCATION: Monsignor Joseph Greeley, St. Pancratius Church

PLEDGE OF ALLEGIANCE: Junior Girl Scout Troop 5543 and Daisy Girl Scout Troop 2683

ROLL CALL: Mayor Diane DuBois
Vice Mayor Steve Croft
Council Member Ron Piazza
Council Member Todd Rogers
Council Member Jeff Wood

ANNOUNCEMENTS AND PRESENTATIONS:

ROUTINE ITEMS:

All items listed within this section of the agenda are considered to be routine and will be enacted by one motion without separate discussion. Any Member of Council may request an item be removed for individual discussion or further explanation. All items removed shall be considered immediately following action on the remaining items.

RI-1 Approval of Minutes of the Meetings held July 25, August 8, and August 22, 2017

RI-2 Approval of Personnel Transactions

RI-3 Approval of Registers of Demands

RI-4 Approval of Monthly Report of Investment Transactions

RI-5 Approval of Permit for Mayfair High School Homecoming Parade

RI-6 Adoption of Resolution No. 2017-48; Appointing a Member and Alternates to the Governing Board of the Los Angeles Gateway Region Integrated Regional Water Management Joint Powers Authority

RI-7 Approval of Amendment to Agreement with Willdan Engineering for Additional Services for the Proposition 84 Grant – Paramount Boulevard Drainage and Landscape Project

City Council Agenda

September 12, 2017

Page 2

ROUTINE ITEMS: - Continued

RI-8 Approval of Installation of Disabled Person Parking Space at 21127 Pioneer Boulevard, Resolution No. 2017-49

RI-9 Authorizing Removal of Disabled Parking at 5658 Pepperwood Avenue, Resolution No. 2017-50

RI-10 Authorization for Willdan Engineering for Preparation of Pavement Management Database and Program

PUBLIC HEARINGS:

1.1 Appeal of Decision of the Planning and Environment Commission Regarding Conditional Use Permit No. 948, 6741 Carson Street, Resolution No. 2017-52

1.2 Award of Bid for Purchasing Bid PUR03-17, Storage Tanks and Delivery of Water Disinfectant

1.3 Second Reading and Adoption of Ordinance No. 2017-7; Granting a Pipeline Franchise to Cardinal Pipeline, L.P.

1.4 Approval of Submittal of Justice Assistance Grant (JAG) Program Funding

1.5 Award of Bid for Public Works Project No. 2017-5, Resilient Surfacing Replacement at Mayfair Park Tot Play Area Project

1.6 Purchase of Two DASH Buses

1.7 Approval of First Amendment to Subrecipient Agreement between the City and the Los Angeles Gateway Region Integrated Regional Water Management Joint Powers Authority

1.8 Approval of Submittal of Outdoor Environmental Education Facilities (OEEF) Grant Program, Resolution No. 2017-51

1.9 Approval of CDBG Program Consolidated Annual Performance and Evaluation Report

REPORTS:

3.1 Water Master Plan and Water Rate Study

AGENDA LAKEWOOD HOUSING SUCCESSOR AGENCY

1. Approval of Register of Demands

ORAL COMMUNICATIONS:

ADJOURNMENT

Any qualified individual with a disability that would exclude that individual from participating in or attending the above meeting should contact the City Clerk's Office, 5050 Clark Avenue, Lakewood, CA, at 562/866-9771, ext. 2200; at least 48 hours prior to the above meeting to ensure that reasonable arrangements can be made to provide accessibility to the meeting or other reasonable auxiliary aids or services may be provided.

Copies of staff reports and other writings pertaining to this agenda are available for public review during regular business hours in the Office of the City Clerk, 5050 Clark Avenue, Lakewood, CA 90712

Routine Items



Minutes

Lakewood City Council

Adjourned Regular Meeting held July 25, 2017

MEETING WAS CALLED TO ORDER at 6:00 p.m. by Mayor DuBois in the Executive Board Room at the Civic Center, 5000 Clark Avenue, Lakewood, California.

ROLL CALL: PRESENT: Mayor Diane DuBois
Vice Mayor Steve Croft
Council Member Ron Piazza
Council Member Todd Rogers
Council Member Jeff Wood

SHORT-TERM/HOME-SHARE RENTALS

Mayor DuBois welcomed members of the public who were in attendance at the meeting and asked City staff to introduce themselves for reference purposes.

Sonia Southwell, Director of Community Development, stated that Toyasha Sebbag, Water Administration Manager, worked with Community Development to prepare the report on short-term/home-share rentals and would be delivering the presentation for training purposes.

Ms. Sebbag displayed slides and gave a presentation based on the memo in the agenda explaining that traditional forms of short-term rentals were hotels, motels and “bed and breakfasts” and that newer forms included online rental agreements through websites like Airbnb, HomeAway, Craigslist and FlipKey. She added that short-term home-share leases involved a primary resident living at the home while renting out a room or space and that vacation rentals were rentals of the entire home. She reported that staff surveyed the Airbnb website and found six homes, 39 rooms and 13 shared rooms listed for rent in Lakewood and that less than 21 were consistently rented based on their reviews. She explained that a primary issue with researching Airbnb was that exact addresses of rental locations were not listed on the website and that pictures did not include the outside of the home, so the only way to know the exact address was to book the rental. She stated that some reasons supporting the regulation of short-term/home-share rentals were transformation of neighborhoods to communities of transients, increased public safety risks, noise issues, trash/parking problems, less availability of affordable housing and Transient Occupancy Tax (TOT) revenue. She added that some cities had agreements with Airbnb so that renters pay TOT when booking a rental and Airbnb transferred the taxes to the partnering city. She reported that some challenges of regulating short-term/home-share rentals were that smaller cities did not have partnerships with Airbnb to collect TOT revenues, the cost of implementing enforceable mandates and the cost of enforcement being unnecessary for municipalities that were not experiencing significant negative impacts of neighborhood degradation or complaints. She concluded by stating that staff recommended that the City Council direct staff to monitor the City of Lakewood’s short-term/home-share rental market and return with a report in six months.

SHORT-TERM/HOME-SHARE RENTALS – Continued

Ms. Southwell noted that there was a consulting company named Host Compliance that monitored short-term rental compliance, provided enforcement solutions, had contact with Airbnb and encouraged cities to allow short-term/home-share rentals and vacation rentals. She added that they were costly consultants since they worked with big cities like Miami and Los Angeles. She stated that the main concern for the City was the rental of entire homes because it impacted hotel sales and noted that the city of Santa Monica had a team of code enforcement officers working on this issue. Steve Skolnik, for the City Attorney, noted that Santa Monica was sued by Airbnb, who claimed that the city regulated home-share rentals in an unconstitutional manner. Ms. Southwell explained that there were typically no complaints or problems with room rentals and that the City had received one home-share complaint. She noted that an advantage of short-term/home-share rentals was that it was in the owner's best interest to have their home look nice to receive high rental ratings.

In response to an inquiry from Council Member Rogers, Ms. Southwell confirmed that only one complaint for one short-term/home-share rental property had been received. Council Member Rogers inquired about the experience of regulating or banning short-term rentals in surrounding cities and Ms. Sebbag reported that the City of Cerritos banned short-term leases and required permitted overnight parking on its streets. She added that the City of Long Beach was also researching short-term rentals to report back to their City Council and that many other cities were in the stage of researching based on complaints that were received.

Responding to Vice Mayor Croft's inquiry, Ms. Southwell confirmed that cities which regulated short-term/home-share rentals did require rental properties to obtain business licenses. She explained that the City of Santa Monica requested voluntary registration of homes as providers for Airbnb services so that renters would provide taxes from bookings since there was no way to acquire the addresses of all short-term/home-share rental properties in the City without booking an overnight stay at each location. She added that the data could be received from Airbnb, however, they were reluctant to share data since Airbnb did not agree with restrictions on services they provided.

In response to inquiries from Mayor DuBois regarding TOT revenues, Ms. Southwell explained that the taxes were paid by rental customers during their booking and Mr. Skolnik stated that Transient Occupancy Taxes were listed in the Lakewood Municipal Code.

Council Member Piazza expressed his hope that part of staff's study of short-term/home-share rentals would include proposals for implementing enforcement, staff hours for enforcement and cost figures. Ms. Southwell stated that enforcement was a concern since it would be the City's task to prove that someone was renting their home or a room(s) in their home and for how long in order to enforce mandates. Neighborhood Preservation Manager Charles Carter shared that some code enforcement colleagues had staff track short-term/home-share rentals daily and code enforcement officers who investigated where rental properties were so they could contact homeowners and let them know if they were violating a City ordinance to issue a citation. He added that costs of hiring staff had been an issue for some colleagues and that such factors were taken into account when a third party like Host Compliance would be considered.

SHORT-TERM/HOME-SHARE RENTALS – Continued

Council Member Piazza noted the importance of conducting research and making decisions fairly on whether to enforce any mandates. Ms. Southwell stated that the City was currently able to address traditional issues such as loud noise from party houses, parking problems and unsightly properties with current City codes if complaints were received. Mr. Carter added that when the City received its one complaint the complainant was asked if there were traditional issues that could be regulated but they were concerned with knowing who was renting with Airbnb and staying in their neighborhood.

Responding to an inquiry from Council Member Wood, Ms. Southwell stated that 21 of the 58 short-term/home-share rentals in Lakewood were consistently rented based on multiple reviews from the Airbnb website. Council Member Wood shared his concerns about possible increases in criminal activity, neighborhood disruption from noisy party houses, the possibility of short-term renters squatting in residents' homes and the potential for becoming a transient community. Ms. Southwell provided assurance that there had not been any complaints for an entire home rental being a party house and that eviction issue complaints existed with long-term renters.

Vice Mayor Croft inquired if there had been a way to confirm that a home was a short-term/home-share rental when a complaint was received. Ms. Southwell stated that the address for an Airbnb rental could be received from the website by booking the rental and that if a complaint is received staff could contact the property owner to inquire if the home was a short-term/home-share rental.

In response to inquiries from Council Member Wood, Ms. Southwell clarified that a shared room was a room with multiple beds that could be rented as a whole and that a couch rental was not considered a shared room and tended to be a rental option in big cities with high hotel prices like New York City.

Council Member Rogers stated that parking saturation issues would be hard to address if they occurred and that short-term/home-share rentals would likely cause an impact. He noted that extreme actions would be to not address short-term rentals or to ban them completely and he hoped for a resolution in the middle that would hold homeowners accountable for conducting business responsibly in the City and potentially bring in TOT revenues. He was interested to see what options staff would create from their study. Ms. Southwell stated that staff was still learning how this type of business worked in Lakewood and that monitoring should be undertaken. She mentioned the possibilities of educating the public, researching how other cities' enforcement worked and exploring the cost for a third party consultant like Host Compliance since they had access to Airbnb data, ensured taxes were collected and handled enforcement. Council Member Rogers stated that the study should produce various options for the City Council to consider and which explained potential ramifications of actions.

Responding to Vice Mayor Croft's inquiry, Mr. Skolnik stated that the City would not be at risk for regulating one type of business instead of others but there was a potential to overstep State or Federal laws for limits on the ability to ban or regulate short-term/home-share rentals since those laws were in flux due to various lawsuits. Vice Mayor Croft noted the importance of monitoring other cities' actions to seek out more successful processes.

SHORT-TERM/HOME-SHARE RENTALS – Continued

Mayor DuBois called for anyone in the audience wishing to address the City Council on this matter.

Larry Hill, Lakewood, stated his concerns about strangers coming and going from his next door neighbor's home on a regular basis. He expressed displeasure that a motel type business was operating in his family neighborhood and that it caused issues of unwanted strangers, lack of street parking, inappropriate behavior by renters and marijuana use. He also reported that the homeowners would leave for several days as renters continued to come and go from the home and that he felt insecure and trapped in his own home. He shared his desire for a quiet and safe neighborhood.

Kevin Whitney, Lakewood, stated that he and his wife, Candice, purchased their home with the help of a VA Home Loan and after a remodel and renovation they had two spare bedrooms. They researched ways to supplement their mortgage and having been Airbnb customers for years they decided to rent their bedrooms through the company by becoming hosts. He reported that in the first five months of hosting they had 81 separate reservations which equaled 276 nights between the two rooms and that monthly earnings allowed them to supplement their mortgage, pay off student debts and landscape their yards. He noted that he was often asked about strange occurrences with his renters and claimed nothing strange had happened and that 99% of guests were good people who simply preferred staying in homes to hotels. He added that he was regularly asked about security concerns and affirmed that as a Navy veteran he did not take security lightly and would not be a host if it caused risk to his family or neighbors. He assured that Airbnb consisted of a trustworthy community and allowed hosts to set requirements for renters such as having government identification, clear profile photo and no negative recommendations from other hosts. He reported that guests from 12 different countries and of all ages and backgrounds including teachers, students, tourists, business professionals and retirees had stayed in his home and that many considered Lakewood a great central location for traveling throughout the area. He stated his willingness to answer any questions and share his Airbnb data and hoped the City Council would make a decision that would benefit short-term renters and the community.

In response to an inquiry from Council Member Wood, Mr. Whitney verified that he lived next door to Mr. Hill.

Debra Robbins, Lakewood, stated that she attended the meeting to learn how short-term rentals were regulated explaining that she had witnessed issues of marijuana use, an increased number of vehicles and people coming and going from Mr. Whitney's home. She shared that she would be very upset if she lived next door to an Airbnb rental home and that she felt this type of business was unsafe because it invited the public into neighborhoods.

Sally Hill, Lakewood, expressed her concern about Mr. Whitney's home being located near an elementary school. She felt it was unsafe for children to walk by a home that housed different people regularly. She stated her opinion that neighborhood values were being diminished by the guests and that she felt she was being taken advantage of as a neighbor because she was told that a guest had parked in her driveway when she was not home. She felt that short-term rentals were unsafe and not good for the neighborhood.

SHORT-TERM/HOME-SHARE RENTALS – Continued

Mayor DuBois accepted Mr. Whitney's request to respond to Ms. Hill's statements and he stated that their guests would not park in their neighbor's driveways and that he allowed guests to park in his driveway on street sweeping day. He added that his neighbors seemed to dislike change and that they had made various claims that were unsubstantiated even when the Sheriff's Department had been called and he felt a growing animosity from them.

Ms. Robbins stated that Mr. Whitney's guests were parked in their neighbor's driveway and she confronted the people outside of the home and learned they were friends of the renters staying with Mr. Whitney. She claimed that incident caused her to attend this meeting because she grew interested in how this business was regulated to keep neighborhoods safe.

Vice Mayor Croft shared his concern about Mr. Whitney having had a large number of rental bookings for the past five months because he felt that renters could not have the same love and respect for Lakewood that residents did. He stated that everyone had the right to make a living and better their lives but when that begins affecting other people, it can create a need for cities to intervene. He noted that he would not like 200 strangers coming and going in his neighborhood and that he favored the monitoring and regulating of short-term/home-share rentals.

Responding to Vice Mayor Croft's inquiry, Ms. Sebbag and Ms. Southwell stated that reviews from the Airbnb website showed that various properties were rented consistently but an exact number of rentals per property could not be known without obtaining the exact data. Vice Mayor Croft noted that if this business increased and places became consistently rented, then problems might happen.

Council Member Rogers stated the importance of having tools and methods to regulate short-term/home-share rentals in case problems did occur since the City currently had limited abilities for regulating potential issues.

Council Member Piazza stated that the City was very proud of its Neighborhood Watch program, which instilled the instruction of "see something, say something" when residents observe unusual activity or strangers in their neighborhoods. He added that although he did not favor inhibiting people's right to do what they wanted with their homes, he could not ask the community to disregard what they had been trained to observe because of the regularity of strangers in the neighborhood caused by short-term rentals.

Responding to inquiries from Council Member Wood, Mr. Whitney stated that if he and his wife were not home when a renter arrived, they used a lockbox with a key code to check in on their own and that he had not witnessed any of the issues mentioned by his neighbors. He added that if issues were affecting his neighbors he would appreciate notification so that he could attempt to mediate the matter.

In response to inquiries from Council Member Wood and Council Member Rogers, Ms. Southwell confirmed that the Community Development department staff would be studying the short-term/home-share rental business and that the report that would be brought to the City Council would include a series of recommendations.

SHORT-TERM/HOME-SHARE RENTALS – Continued

COUNCIL MEMBER WOOD MOVED AND COUNCIL MEMBER ROGERS SECONDED TO APPROVE STAFF'S RECOMMENDATION OF DIRECTING STAFF TO MONITOR THE SHORT-TERM/HOME-SHARE RENTAL MARKET AND RETURN WITH A REPORT IN SIX MONTHS. UPON ROLL CALL VOTE, THE MOTION WAS APPROVED:

AYES: COUNCIL MEMBERS: Wood, Piazza, Croft, Rogers and DuBois

NAYS: COUNCIL MEMBERS: None

ADJOURNMENT

There being no further business to be brought before the City Council, Mayor DuBois adjourned the meeting at 7:04 p.m.

Respectfully submitted,

Isabelle Diaz
Management Aide



Minutes

Lakewood City Council

Regular Meeting held
August 8, 2017

MEETING WAS CALLED TO ORDER at 7:30 p.m. by Mayor DuBois in the Council Chambers at the Civic Center, 5000 Clark Avenue, Lakewood, California.

INVOCATION was offered by High Councilor Lary Carlton, Church of Jesus Christ of Latter-day Saints

PLEDGE OF ALLEGIANCE was led by Cub Scouts Pack 75

ROLL CALL: PRESENT: Mayor Diane DuBois
Vice Mayor Steve Croft
Council Member Ron Piazza
Council Member Todd Rogers
Council Member Jeff Wood

ANNOUNCEMENTS AND PRESENTATIONS:

Mayor DuBois announced that the meeting would be adjourned in memory of Lakewood Sheriff's Station motorcycle deputy, Michael Haak, a 29-year veteran of the L.A. County Sheriff's Department; in memory of Al Williams, who retired in 2006 as Assistant Director of Recreation and Community Services after a 26-year career with the City and was involved with the beginnings of the Nature Trail along with the successful two-year maintenance trainee program; in memory of Navy veteran, Bernard Gramling, Jr., the father of Water Resources Department employee Gary Gramling; in memory of Leticia Cochico, a small business owner and the mother of Purchasing Officer Wilfred Cochico; in memory of the mother of Facilities Maintenance Supervisor Bob Rennie, Gladys Rennie, who survived bombing attacks in her native Scotland during World War II; in memory of John Herbold, an icon in Lakewood sports history, who was a baseball coach at Lakewood High School, a city staff member teaching a baseball clinic at the parks and who went on to a Hall of Fame college coaching career at Cal State Los Angeles; and in memory of William Ashe McCormack, the father of Lakewood's incoming City Manager Thaddeus McCormack.

ROUTINE ITEMS:

COUNCIL MEMBER PIAZZA MOVED AND VICE MAYOR CROFT SECONDED TO APPROVE ROUTINE ITEMS 1 THROUGH 7.

RI-1 Approval of Minutes of the Meeting held July 25, 2017

RI-2 Approval of Personnel Transactions

RI-3 Approval of Registers of Demands

ROUTINE ITEMS: - Continued

RI-4 Approval of Permit for Street Closure for August 26th Block Party

RI-5 RESOLUTION NO. 2017-37; A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKEWOOD AUTHORIZING THE DESTRUCTION OF CERTAIN PUBLIC RECORDS OF THE DEPARTMENT OF ADMINISTRATION MORE THAN TWO YEARS OLD

RESOLUTION NO. 2017-38; A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKEWOOD AUTHORIZING THE DESTRUCTION OF CERTAIN PUBLIC RECORDS OF THE DEPARTMENT OF ADMINISTRATION MORE THAN TWO YEARS OLD

RESOLUTION NO. 2017-39; A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKEWOOD AUTHORIZING THE DESTRUCTION OF CERTAIN PUBLIC RECORDS OF THE DEPARTMENT OF ADMINISTRATIVE SERVICES MORE THAN TWO YEARS OLD

RESOLUTION NO. 2017-40; A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKEWOOD AUTHORIZING THE DESTRUCTION OF CERTAIN PUBLIC RECORDS OF THE DEPARTMENT OF CITY CLERK MORE THAN TWO YEARS OLD

RESOLUTION NO. 2017-41; A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKEWOOD AUTHORIZING THE DESTRUCTION OF CERTAIN PUBLIC RECORDS OF THE DEPARTMENT OF COMMUNITY DEVELOPMENT MORE THAN TWO YEARS OLD

RESOLUTION NO. 2017-42; A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKEWOOD AUTHORIZING THE DESTRUCTION OF CERTAIN PUBLIC RECORDS OF THE DEPARTMENT OF PERSONNEL MORE THAN TWO YEARS OLD

RESOLUTION NO. 2017-43; A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKEWOOD AUTHORIZING THE DESTRUCTION OF CERTAIN PUBLIC RECORDS OF THE DEPARTMENT OF RECREATION AND COMMUNITY SERVICES MORE THAN TWO YEARS OLD

RESOLUTION NO. 2017-44; A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKEWOOD AUTHORIZING THE DESTRUCTION OF CERTAIN PUBLIC RECORDS OF THE DEPARTMENT OF WATER RESOURCES MORE THAN TWO YEARS OLD

RI-6 RESOLUTION NO. 2017-45; A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKEWOOD AFFIRMING THE FISCAL YEAR 2017-2018 BUDGET FOR THE USE OF FUNDS PROVIDED BY THE ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017

ROUTINE ITEMS: - Continued

RI-7 Approval of non-Exclusive License Agreement with T-Mobile for Access through the Lakewood Equestrian Center

UPON ROLL CALL VOTE, THE MOTION WAS APPROVED:

AYES: COUNCIL MEMBERS: Wood, Piazza, Croft, Rogers and DuBois

NAYS: COUNCIL MEMBERS: None

1.1 • AWARD OF BID FOR PUBLIC WORKS PROJECT NO. 2017-4, CORRIDOR WALL WAINSCOT IMPROVEMENTS TO THE EXISTING CENTRE AT SYCAMORE PLAZA PROJECT

Lisa Rapp, the Director of Public Works, made a presentation based on the memo in the agenda and reported that one bid had been received for installation of the Corridor Wall Wainscot Improvements at The Centre at Sycamore Plaza. The project consisted of interior wall finish improvements, such as the installation of acoustical wall fabric, wall guards and corner guards in the corridor of the Centre. It was the recommendation of staff that the City Council adopt the plans, specifications, addendum and working details for Public Works Project No. 2017-4; award a contract to Absolute Building Services, Inc. in the amount of \$17,250; and authorize staff to approve a cumulative total of change orders as necessary to the subject project scope of work not to exceed \$1,725.

Responding to Council Member Piazza's inquiry, Ms. Rapp stated that staff had been working to minimize disruptions to the Centre's scheduling and operations.

Mayor DuBois opened the public hearing at 7:43 p.m. and called for anyone in the audience wishing to address the City Council on this matter. There was no response.

COUNCIL MEMBER ROGERS MOVED AND COUNCIL MEMBER PIAZZA SECONDED TO APPROVE STAFF'S RECOMMENDATIONS. UPON ROLL CALL VOTE, THE MOTION WAS APPROVED:

AYES: COUNCIL MEMBERS: Wood, Piazza, Croft, Rogers and DuBois

NAYS: COUNCIL MEMBERS: None

1.2 • CONGESTION MANAGEMENT PROGRAM CONFORMANCE SELF-CERTIFICATION PROCESS

Community Development Director Sonia Southwell presented a report based on the memo in the agenda and stated the City had been required to complete an annual conformance self-certification process for the Congestion Management Program. Components of the Program required a report showing development activity and a public hearing. It was the recommendation of staff that the City Council hold a public hearing and adopt the proposed resolution to find the City to be in conformance with the Congestion Management Program and adopt the CMP Local Development Report.

1.2 • CMP CONFORMANCE SELF-CERTIFICATION PROCESS - Continued

RESOLUTION NO. 2017-46; A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKEWOOD, CALIFORNIA, FINDING THE CITY TO BE IN CONFORMANCE WITH THE CONGESTION MANAGEMENT PROGRAM (CMP) AND ADOPTING THE CMP LOCAL DEVELOPMENT REPORT, IN ACCORDANCE WITH CALIFORNIA GOVERNMENT CODE SECTION 65089

Mayor DuBois opened the public hearing at 7:45 p.m. and called for anyone in the audience wishing to address the City Council on this matter. There was no response.

COUNCIL MEMBER WOOD MOVED AND VICE MAYOR CROFT SECONDED TO ADOPT RESOLUTION NO. 2017-46. UPON ROLL CALL VOTE, THE MOTION WAS APPROVED:

AYES: COUNCIL MEMBERS: Wood, Piazza, Croft, Rogers and DuBois

NAYS: COUNCIL MEMBERS: None

2.1 • RESOLUTION NO. 2017-47; SETTING A PUBLIC HEARING ON THE REQUEST OF CARDINAL PIPELINE, L.P. FOR A PIPELINE FRANCHISE AND INTRODUCTION OF ORDINANCE NO. 2017-7, TO GRANT A FRANCHISE

The Public Works Director gave a presentation based on the memo in the agenda and stated a request had been received from Cardinal Pipeline, L.P., to renew a franchise agreement for a pipeline. The process for granting a new 20-year franchise included introducing a new ordinance and adopting a resolution declaring the intent to grant and setting the date for a public hearing on the ordinance. It was the recommendation of staff that the City Council introduce Ordinance No. 2017-7 and adopt Resolution No. 2017-47.

Ms. Rapp confirmed for Council Member Piazza that the existing franchise had been previously renewed under a different entity name. She responded to his additional questions regarding upgrading and maintenance of the pipes by stating that Federal regulations governed petroleum pipeline safety with testing and certification requirements under the purview of the Federal Energy Regulatory Commission.

Responding to Council Member Rogers's inquiry pertaining to franchise fees, Ms. Rapp stated that the rate structure did not allow for flexibility as they were set in accordance with the Public Utilities Commission rates and were paid annually. She stated that revenues were modest noting that they totaled \$1,000.42 in 2016 and \$979.80 in 2015.

RESOLUTION NO. 2017-47; A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKEWOOD, CALIFORNIA, DECLARING ITS INTENTION TO GRANT TO CARDINAL PIPELINE COMPANY, L.P., A FRANCHISE GRANTING THE RIGHT, FRANCHISE AND PRIVILEGE FROM TIME TO TIME TO LAY, CONSTRUCT, MAINTAIN, OPERATE, REPAIR, RENEW, CHANGE THE SIZE OF, AND REMOVE OR ABANDON IN PLACE A PIPELINE SYSTEM FOR THE TRANSPORTATION OF INDUSTRIAL GAS, GASOLINE, PETROLEUM OIL, GAS, OTHER HYDROCARBON

2.1 • RESOLUTION SETTING A PUBLIC HEARING ON THE REQUEST OF CARDINAL PIPELINE, L.P. FOR A PIPELINE FRANCHISE AND INTRODUCTION OF ORDINANCE NO. 2017-7, TO GRANT A FRANCHISE - Continued

SUBSTANCES, WATER, WASTE WATER, MUD, STEAM, AND OTHER LIQUID OR GAS SUBSTANCES INCIDENT TO THE OIL INDUSTRY, TOGETHER WITH ALL MANHOLES, VALVES, SERVICE CONNECTIONS AND APPURTENANCES NECESSARY OR CONVENIENT FOR THE MAINTENANCE AND OPERATION OF SAID PIPELINES, INCLUDING ANY FACILITIES NECESSARY FOR CATHODIC PROTECTION OF SAID PIPELINES; WITHIN THE CITY OF LAKEWOOD, AND SETTING A PUBLIC HEARING THEREON AT 7:30 P.M. ON THE 12TH DAY OF SEPTEMBER, 2017, IN THE CITY COUNCIL CHAMBER, 5000 CLARK AVENUE, LAKEWOOD, CALIFORNIA

ORDINANCE NO. 2017-7; AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF LAKEWOOD GRANTING A FRANCHISE TO CONSTRUCT AND USE AN OIL PIPELINE TO CARDINAL PIPELINE, L.P. was read by title by the City Clerk.

COUNCIL MEMBER WOOD MOVED AND COUNCIL MEMBER ROGERS SECONDED TO WAIVE FURTHER READING AND INTRODUCE ORDINANCE NO. 2017-7 AND TO ADOPT RESOLUTION NO. 2017-47. UPON ROLL CALL VOTE, THE MOTION WAS APPROVED:

AYES: COUNCIL MEMBERS: Wood, Piazza, Croft, Rogers and DuBois

NAYS: COUNCIL MEMBERS: None

3.1 • FALL RECREATION PROGRAMS

Recreation and Community Services Director Lisa Litzinger displayed slides and made a presentation based on the memo in the agenda. She reported that the Fall/Winter Recreation catalog would be mailed out to residents around the Labor Day weekend and summarized the programs offered. She highlighted some of the most popular offerings such as the Activity Zone, which included homework assistance, organized games and supervised activities for school-age children; the College Fair, featuring fifty to sixty colleges and would be held this year in the Weingart Ballroom at the Centre; Lakewood Youth Sports, which included a pilot program for volleyball; Patriot Day; Lollipop Lane Craft Boutique; Halloween carnivals at each park; Winter Break activities for children; and the Project Shepherd Holiday Assistance Program. She concluded by stating that the after school programs, youth sports leagues, special events, and contract classes provided residents with opportunities to learn, be active, have fun and connect with the community.

3.2 • CITY MANAGER EMPLOYMENT AGREEMENT

Steve Skolnik, for the City Attorney, stated that at its July 25th meeting, the City Council appointed Thaddeus McCormack as City Manager and directed that an employment agreement be brought back for approval. The proposed agreement, for a three-year term, would commence on September 5 with an annual compensation of \$230,072, plus benefits as provided to the City's senior management employees. He concluded by stating it was recommended that the City Council authorize the Mayor to execute the proposed agreement for employment of the City Manager in a form subject to the approval of the City Attorney.

COUNCIL MEMBER ROGERS MOVED AND COUNCIL MEMBER WOOD SECONDED TO APPROVE THE EMPLOYMENT AGREEMENT AND AUTHORIZE ITS EXECUTION BY THE MAYOR. UPON ROLL CALL VOTE, THE MOTION WAS APPROVED:

AYES: COUNCIL MEMBERS: Wood, Piazza, Croft, Rogers and DuBois

NAYS: COUNCIL MEMBERS: None

Mr. McCormack expressed appreciation for the City Council's confidence

3.3 • APPROVAL OF PROPOSAL BY WILLDAN TO PROVIDE ENVIRONMENTAL CEQA DOCUMENTS FOR THE LAKEWOOD BOULEVARD REGIONAL CORRIDOR CAPACITY ENHANCEMENT PROJECT

The Director of Public Works gave a presentation based on the memo in the agenda and reported that the Los Angeles County Metropolitan Transportation Authority (LACMTA) had provided a grant of \$3,600,000 in Measure R Funds for improvements to Lakewood Boulevard within the City as part of the Lakewood Boulevard Regional Corridor Capacity Enhancement Project. The project included street widening, median improvements, bike lanes, sidewalk, street resurfacing, ADA and storm water compliance, traffic signal modification, drought-resistant landscaping and irrigation and signing and striping; all within the existing right-of-way. She concluded by stating it was staff's recommendation that the City Council approve Willdan's proposal to provide Environmental CEQA documents for the Lakewood Blvd Regional Corridor Capacity Enhancement Project under their existing Engineering Services Agreement in an amount not to exceed \$187,174 and authorize the Mayor to sign the proposal subject to approval of form by the City Attorney.

COUNCIL MEMBER CROFT MOVED AND COUNCIL MEMBER ROGERS SECONDED TO APPROVE STAFF'S RECOMMENDATIONS. UPON ROLL CALL VOTE, THE MOTION WAS APPROVED:

AYES: COUNCIL MEMBERS: Wood, Piazza, Croft, Rogers and DuBois

NAYS: COUNCIL MEMBERS: None

SUCCESSOR AGENCY ACTIONS

1. Approval of Register of Demands

COUNCIL MEMBER PIAZZA MOVED AND VICE MAYOR CROFT SECONDED TO APPROVE THE REGISTER OF DEMANDS. UPON ROLL CALL VOTE, THE MOTION WAS APPROVED:

AYES: COUNCIL MEMBERS: Wood, Piazza, Croft, Rogers and DuBois

NAYS: COUNCIL MEMBERS: None

. . .

ORAL COMMUNICATIONS: None

. . .

ADJOURNMENT

There being no further business to be brought before the City Council, Mayor DuBois adjourned the meeting at 8:06 p.m. A moment of silence was observed in memory of Michael Haak, Al Williams, Bernard Gramling, Jr., Leticia Cochico, Gladys Rennie, John Herbold and William Ashe McCormack.

Respectfully submitted,

Jo Mayberry, CMC
City Clerk



Minutes

Lakewood City Council

Regular Meeting held
August 22, 2017

At 7:30 p.m. on August 22, 2017, in the City Council Chambers at the Civic Center, 5000 Clark Avenue, Lakewood, California, the Management Aide was present.

It was the time and place for a Regular Meeting of the City Council of the City of Lakewood.

The Management Aide immediately declared the Meeting adjourned due to lack of a quorum to Tuesday, September 12, 2017, at 6:00 p.m. in the Executive Board Room.

Respectfully submitted,

Jo Mayberry, CMC
City Clerk

**D
I
V
I
D
E
R
S
H
E
E
T**

COUNCIL AGENDA
September 12, 2017

TO: The Honorable Mayor and City Council

SUBJECT: Report of Personnel Transactions

<u>Name</u>	<u>Title</u>	<u>Schedule</u>	<u>Effective Date</u>
1. FULL-TIME EMPLOYEES			
A. Appointments			
Raymundo Alvarez	Purchasing Clerk	08A	08/13/2017
Thaddeus McCormack	City Manager	CMGR	09/05/2017
B. Changes			
None			
C. Separations			
Albert Gaddis	Pump Station Operator	18A	09/01/2017
Camilo Castillo	Environmental Resources Supervisor	27B	08/31/2017
Gary Gramling	Pump Station Operator	18A	08/10/2017
Georgina Peterson	Senior Account Clerk	10A	08/10/2017
2. PART-TIME EMPLOYEES			
A. Appointments			
Diagoro Gutierrez	Maintenance Trainee I	B	09/05/2017
Nancy Lopez	Maintenance Trainee I	B	08/13/2017
B. Changes			
Daniel Pulido	Maintenance Trainee I	B to	08/13/2017
	Maintenance Trainee II	B	
Gregory Brower	Maintenance Trainee I	B to	08/13/2017
	Maintenance Trainee II	B	
Steven Bojorquez	Maintenance Trainee I	B to	08/13/2017
	Maintenance Trainee II	B	
C. Separations			
Angel Covarrubias	Maintenance Services Aide	B	08/02/2017
Joe Jimenez	Maintenance Services Aide	B	08/18/2017
Mark Busch	Maintenance Trainee I	B	09/01/2017

Carol Flynn Jacoby
Assistant City Manager



**D
I
V
I
D
E
R
S
H
E
E
T**

**CITY OF LAKEWOOD
FUND SUMMARY 8/10/2017**

In accordance with section 2521 of the Lakewood Municipal Code there is presented herewith a summary of obligations to be paid by voucher 83390 through 83644. Each of the following demands has been audited by the Director of Administrative Services and approved by the City Manager.

1010	GENERAL FUND	372,622.72
1015	SPECIAL OLYMPICS	145.18
1020	CABLE TV	325.00
1030	CDBG CURRENT YEAR	750.00
1050	COMMUNITY FACILITY	2,931.75
3000	AIR QUALITY IMPROVEMENT	10,000.00
3001	CAPITAL IMPROV PROJECT FUND	226,300.16
3060	PROPOSITION "A"	109,188.57
3070	PROPOSITION "C"	1,520.00
5010	GRAPHICS AND COPY CENTER	1,490.92
5020	CENTRAL STORES	5,773.94
5030	FLEET MAINTENANCE	5,053.09
6020	GEOGRAPHIC INFORMATION SYSTEM	17,034.09
7500	WATER UTILITY FUND	23,869.05
8020	LOCAL REHAB LOAN	17,309.75
8030	TRUST DEPOSIT	3,774.72
		798,088.94

Council Approval

_____ Date

_____ City Manager

Attest

_____ City Clerk

_____ Director of Administrative Services

**CITY OF LAKEWOOD
SUMMARY CHECK REGISTER**

CHECK #	CHECK DATE	VEND #	VENDOR NAME	GROSS	DISC.	CHECK AMOUNT
83390	08/10/2017	48469	BURWELL MICHAEL RAY	855.00	0.00	855.00
83391	08/10/2017	4700	CALIFORNIA DEPT OF WATER RESOURCES	900.00	0.00	900.00
83392	08/10/2017	7800	CERRITOS CITY	1,443.75	0.00	1,443.75
83393	08/10/2017	64932	CJ CONSTRUCTION INC	16,300.00	0.00	16,300.00
83394	08/10/2017	3778	COMMERCIAL AQUATIC SERVICES INC	166.29	0.00	166.29
83395	08/10/2017	58618	DURHAM SCHOOL SERVICES	4,574.91	0.00	4,574.91
83396	08/10/2017	3820	PLAYCORE WISCONSIN INC	151.12	0.00	151.12
83397	08/10/2017	4910	HARDY, CHARLES G INC	1,021.36	0.00	1,021.36
83398	08/10/2017	4994	JKP, INC	1,331.75	0.00	1,331.75
83399	08/10/2017	21100	LOS ANGELES CO DIST ATTORNEY	129.46	0.00	129.46
83400	08/10/2017	36844	LA COUNTY DEPT OF PUBLIC WORKS	3,632.46	0.00	3,632.46
83401	08/10/2017	50512	PATHWAYS VOLUNTEER HOSPICE	750.00	0.00	750.00
83402	08/10/2017	2374	RICHARDS WATSON & GERSHON INC	1,191.72	0.00	1,191.72
83403	08/10/2017	4958	STETSON ENGINEERS INC.	13,559.46	0.00	13,559.46
83404	08/10/2017	66215	SUPERIOR COURT OF CALIFORNIA	8,034.00	0.00	8,034.00
83405	08/10/2017	66215	SUPERIOR COURT OF CALIFORNIA	10,290.00	0.00	10,290.00
83406	08/10/2017	4830	TELECOM LAW FIRM PC	2,062.50	0.00	2,062.50
83407	08/10/2017	31800	U S POSTMASTER	198.00	0.00	198.00
83408	08/10/2017	35146	WILLDAN ASSOCIATES	8,940.20	0.00	8,940.20
83409	08/10/2017	4842	A T & T CORP	236.86	0.00	236.86
83410	08/10/2017	4551	ACCOUNTING PRINCIPALS, INC	596.25	0.00	596.25
83411	08/10/2017	58000	AMERICAN TRUCK & TOOL RENTAL INC	376.13	0.00	376.13
83412	08/10/2017	4465	ATALLA, IBRAHIM	406.25	0.00	406.25
83413	08/10/2017	4050	B&K ELECTRIC WHOLESALE	275.79	0.00	275.79
83414	08/10/2017	443	B&M LAWN AND GARDEN INC	143.00	0.00	143.00
83415	08/10/2017	4878	B.R. BREWER SIGN & GRAPHICS	2,053.36	0.00	2,053.36
83416	08/10/2017	5026	BARRON, MARK MAURICE	1,375.00	0.00	1,375.00
83417	08/10/2017	39123	BACKFLOW APPARATUS & VALUE COMPANY	388.85	0.00	388.85
83418	08/10/2017	43808	BELLFLOWER AUTO TRIM	632.75	0.00	632.75
83419	08/10/2017	52244	BELLFLOWER, CITY OF	500.00	0.00	500.00
83420	08/10/2017	48108	BERG, APRIL	429.00	0.00	429.00
83421	08/10/2017	62737	BOYES, GOBIND	104.00	0.00	104.00
83422	08/10/2017	66457	BRENNTAG PACIFIC INC	2,878.98	0.00	2,878.98
83423	08/10/2017	48469	BURWELL MICHAEL RAY	1,520.00	0.00	1,520.00
83424	08/10/2017	5000	CALANOC, PATRICK	97.50	0.00	97.50
83425	08/10/2017	1484	CALDERONE, SAMUEL	225.00	0.00	225.00
83426	08/10/2017	4064	CALIF MUNICIPAL REVENUE &	320.00	0.00	320.00
83427	08/10/2017	6300	CALIFORNIA CONTRACT CITIES ASN	70.00	0.00	70.00
83428	08/10/2017	57079	CALIF JOINT POWERS INS AUTHORITY	207,484.00	0.00	207,484.00
83429	08/10/2017	988	CDW LLC	29,211.44	0.00	29,211.44
83430	08/10/2017	59274	CERTIFIED PLANT GROWERS INC	278.59	0.00	278.59
83431	08/10/2017	45894	CINTAS CORPORATION	59.94	0.00	59.94
83432	08/10/2017	5008	COLOR CARD ADMINISTRATOR CORP.	75.08	0.00	75.08
83433	08/10/2017	3778	COMMERCIAL AQUATIC SERVICES INC	1,740.54	0.00	1,740.54

**CITY OF LAKEWOOD
SUMMARY CHECK REGISTER**

CHECK #	CHECK DATE	VEND #	VENDOR NAME	GROSS	DISC.	CHECK AMOUNT
83434	08/10/2017	4243	COMPLETE FIRE SERVICE INC	3,194.63	0.00	3,194.63
83435	08/10/2017	59434	CONTRACT LAW FUND	180.00	0.00	180.00
83436	08/10/2017	4380	CAPITAL ONE NATIONAL ASSOCIATION	118.89	0.00	118.89
83437	08/10/2017	4102	CROSBY, JERRIT	247.00	0.00	247.00
83438	08/10/2017	4890	DATABASE SYSTEMS CORP	56.18	0.00	56.18
83439	08/10/2017	57945	DELL MARKETING LP	3,667.78	0.00	3,667.78
83440	08/10/2017	51393	EMPLOYMENT DEVELOPMENT DEPT	3,291.00	0.00	3,291.00
83441	08/10/2017	49735	ENVIRONMENTAL SYSTEMS RESEARCH	13,366.31	0.00	13,366.31
83442	08/10/2017	3946	FERGUSON ENTERPRISES INC	30.86	0.00	30.86
83443	08/10/2017	66217	MAGNASYNC-MOVIOLA CORP	292.57	0.00	292.57
83444	08/10/2017	63519	FLUE STEAM INC	198.00	0.00	198.00
83445	08/10/2017	4289	FRAZIER, ROBERT C	137.80	0.00	137.80
83446	08/10/2017	59433	GANAHL LUMBER COMPANY	59.49	0.00	59.49
83447	08/10/2017	58692	GATEWAY CITIES COUNCIL OF GOV'TS	20,000.00	0.00	20,000.00
83448	08/10/2017	34845	GLASBY MAINTENANCE SUPPLY CO	401.25	0.00	401.25
83449	08/10/2017	64215	GOLD COAST AWARDS INC	3,491.57	0.00	3,491.57
83450	08/10/2017	4836	GONZALEZ, RAMIRO	1,600.00	0.00	1,600.00
83451	08/10/2017	61769	GRAUTEN, EVELYN R	349.44	0.00	349.44
83452	08/10/2017	4483	GREENFIX AMERICA, LLC	465.00	0.00	465.00
83453	08/10/2017	62491	HANDS ON MAILING &	325.00	0.00	325.00
83454	08/10/2017	65593	HASS, BARBARA	416.00	0.00	416.00
83455	08/10/2017	49554	HAWK, TRUDY (FAHTIEM)	117.00	0.00	117.00
83456	08/10/2017	42031	HOME DEPOT	676.86	0.00	676.86
83457	08/10/2017	41897	HOSE-MAN THE	40.78	0.00	40.78
83458	08/10/2017	4962	HUNTINGTON PARK RUBBER STAMP CO	33.88	0.45	33.43
83459	08/10/2017	40994	JACOBY, CAROL FLYNN	704.00	0.00	704.00
83460	08/10/2017	4622	JHM SUPPLY INC	393.97	0.00	393.97
83461	08/10/2017	2956	KICK IT UP KIDZ, LLC	1,958.45	0.00	1,958.45
83462	08/10/2017	4668	SALES, KEVIN DBA	880.00	0.00	880.00
83463	08/10/2017	4250	CEDAR FAIR	2,760.00	0.00	2,760.00
83464	08/10/2017	18550	LAKEWOOD, CITY OF	100.00	0.00	100.00
83465	08/10/2017	52357	LESLIE'S POOLMART INC	80.47	0.00	80.47
83466	08/10/2017	2409	LIFTECH ELEVATOR SERVICES INC	522.00	0.00	522.00
83467	08/10/2017	5010	LOMELI, ROSANA	100.00	0.00	100.00
83468	08/10/2017	20700	LONG BEACH PUBLIC TRANSPORTATION CO	108,896.00	0.00	108,896.00
83469	08/10/2017	4643	BRODERICK JAY	503.75	0.00	503.75
83470	08/10/2017	4705	MAG-TROL, INC.	327.56	0.00	327.56
83471	08/10/2017	62080	MARKLEY, ELIZABETH	195.00	0.00	195.00
83472	08/10/2017	60839	MARKOPULOS, CYNTHIA	84.50	0.00	84.50
83473	08/10/2017	65773	MAYFLOWER DISTRIBUTING COMPANY	58.28	0.00	58.28
83474	08/10/2017	23130	MC MASTER-CARR SUPPLY CO	35.12	0.70	34.42
83475	08/10/2017	41831	MIEIR-KING, RICHARD	682.50	0.00	682.50
83476	08/10/2017	4443	O'REILLY AUTOMOTIVE STORES INC	652.95	11.99	640.96
83477	08/10/2017	34536	OCOBOC, DEBRA	169.65	0.00	169.65

**CITY OF LAKEWOOD
SUMMARY CHECK REGISTER**

CHECK #	CHECK DATE	VEND #	VENDOR NAME	GROSS	DISC.	CHECK AMOUNT
83478	08/10/2017	47554	OFFICE DEPOT BUSINESS SVCS	210.81	0.00	210.81
83479	08/10/2017	56461	OVERPACK, NANCY - CARICATURE ARTIST	180.00	0.00	180.00
83480	08/10/2017	5016	P & R PAPER SUPPLY COMPANY, INC.	250.24	0.00	250.24
83481	08/10/2017	63708	DY-JO CORPORATION	1,480.00	0.00	1,480.00
83482	08/10/2017	4494	PIERSON, JEREMY L.	249.60	0.00	249.60
83483	08/10/2017	4374	PITNEY BOWES INC	148.82	0.00	148.82
83484	08/10/2017	4374	PITNEY BOWES INC	2,500.00	0.00	2,500.00
83485	08/10/2017	4459	READWRITE EDUCATIONAL SOLUTIONS INC	1,412.45	0.00	1,412.45
83486	08/10/2017	63364	REEVES NORM HONDA	295.46	0.00	295.46
83487	08/10/2017	4946	REYES CONSTRUCTION, INC.	226,300.16	0.00	226,300.16
83488	08/10/2017	27730	ROSEMEAD OIL PRODUCTS	484.23	0.00	484.23
83489	08/10/2017	4956	ROSS AVIATION INVESTMENT, LLC	4,368.00	0.00	4,368.00
83490	08/10/2017	47285	ROTARY CORP	335.17	0.00	335.17
83491	08/10/2017	45437	S & J SUPPLY CO	4,803.83	0.00	4,803.83
83492	08/10/2017	1841	SAFETY DRIVER'S ED, LLC	117.00	0.00	117.00
83493	08/10/2017	41691	SAFETY-KLEEN CORP	1,045.97	0.00	1,045.97
83494	08/10/2017	5037	SIMONE, STUART RUSSELL	1,350.00	0.00	1,350.00
83495	08/10/2017	3186	CORAL BAY HOME LOANS	439.40	0.00	439.40
83496	08/10/2017	52279	SMART & FINAL INC	935.39	0.00	935.39
83497	08/10/2017	26900	SO CALIF SECURITY CENTERS INC	86.58	0.00	86.58
83498	08/10/2017	29400	SOUTHERN CALIFORNIA EDISON CO	3,799.54	0.00	3,799.54
83499	08/10/2017	37930	STANDARD INSURANCE CO UNIT 22	2,341.80	0.00	2,341.80
83500	08/10/2017	37930	STANDARD INSURANCE CO UNIT 22	9,971.92	0.00	9,971.92
83501	08/10/2017	64602	STAPLES CONTRACT & COMMERCIAL INC	1,657.13	0.00	1,657.13
83502	08/10/2017	60792	STEPHENS, ERIC	193.05	0.00	193.05
83503	08/10/2017	52610	SWANK MOTION PICTURES INC	678.00	0.00	678.00
83504	08/10/2017	4893	TENG, WHEA-FUN	83.20	0.00	83.20
83505	08/10/2017	65224	TUMBLE-N-KIDS, INC	2,431.00	0.00	2,431.00
83506	08/10/2017	60685	TURF STAR	394.39	0.00	394.39
83507	08/10/2017	4480	TYLER BUSINESS FORMS	542.39	0.00	542.39
83508	08/10/2017	35089	UNDERGROUND SERVICE ALERT	203.05	0.00	203.05
83509	08/10/2017	5028	UNISAFE INC.	520.65	0.00	520.65
83510	08/10/2017	4840	VERITIV OPERATING COMPANY	835.45	0.00	835.45
83511	08/10/2017	64652	CELLCO PARTNERSHIP	138.68	0.00	138.68
83512	08/10/2017	17640	WAXIE ENTERPRISES INC	3,002.55	0.00	3,002.55
83513	08/10/2017	62628	WELLS C. PIPELINE MATERIALS	996.70	0.00	996.70
83514	08/10/2017	50172	PRIMUS INC	457.07	0.00	457.07
83515	08/10/2017	2145	WYNN, LAKYN	78.00	0.00	78.00
83516	08/10/2017	63471	XANTHE CORP	68.25	0.00	68.25
83517	08/10/2017	4837	XEROX CORPORATION	1,490.92	0.00	1,490.92
83518	08/10/2017	3699	APLEDOORN, SUSAN	136.75	0.00	136.75
83519	08/10/2017	3699	BRADLEY, MICHELE	250.00	0.00	250.00
83520	08/10/2017	3699	CHACON, RENEE	5.00	0.00	5.00
83521	08/10/2017	3699	CLUNE CONSTRUCTION	235.00	0.00	235.00

**CITY OF LAKEWOOD
SUMMARY CHECK REGISTER**

CHECK #	CHECK DATE	VEND #	VENDOR NAME	GROSS	DISC.	CHECK AMOUNT
83522	08/10/2017	3699	DAGMAWI, ALAZAR	26.00	0.00	26.00
83523	08/10/2017	3699	DANNE, PATRICIA	19.00	0.00	19.00
83524	08/10/2017	3699	DEL GARCIA, MARIA	26.00	0.00	26.00
83525	08/10/2017	3699	DIAZ, JOSE	19.40	0.00	19.40
83526	08/10/2017	3699	ELLEDGE, DANI	19.40	0.00	19.40
83527	08/10/2017	3699	ESCOTO, SUSANA	13.00	0.00	13.00
83528	08/10/2017	3699	ESPIRITU, CLAUDIA	26.00	0.00	26.00
83529	08/10/2017	3699	FAWCETT, WHANITA	250.00	0.00	250.00
83530	08/10/2017	3699	FERNANDEZ, NATALIA	33.50	0.00	33.50
83531	08/10/2017	3699	FERRARO, HELEN	26.00	0.00	26.00
83532	08/10/2017	3699	FORREY, CHARIANE	13.00	0.00	13.00
83533	08/10/2017	3699	FRANCO, NANCY	13.00	0.00	13.00
83534	08/10/2017	3699	FRAZIER, BEVERLY	13.00	0.00	13.00
83535	08/10/2017	3699	GAMEZ, SUSIE	38.00	0.00	38.00
83536	08/10/2017	3699	GARCIA, CHRISTINA	38.00	0.00	38.00
83537	08/10/2017	3699	GATES, CAROLYN	13.00	0.00	13.00
83538	08/10/2017	3699	GATHUMI, RUTH	13.00	0.00	13.00
83539	08/10/2017	3699	GONZALEZ, JUAN	9.70	0.00	9.70
83540	08/10/2017	3699	GRASER, CRISTA	13.00	0.00	13.00
83541	08/10/2017	3699	GRIVARELLO, GINA	13.00	0.00	13.00
83542	08/10/2017	3699	HALVERSON, LORI	13.00	0.00	13.00
83543	08/10/2017	3699	HASLEY, PATRICIA	19.40	0.00	19.40
83544	08/10/2017	3699	HELLER, MARIA J	13.00	0.00	13.00
83545	08/10/2017	3699	HENDERSON, BRANDON	250.00	0.00	250.00
83546	08/10/2017	3699	HENDERSON, DEBORAH L	26.00	0.00	26.00
83547	08/10/2017	3699	HERNANDEZ, ADRIAN	26.00	0.00	26.00
83548	08/10/2017	3699	HERNANDEZ, LAURA	9.70	0.00	9.70
83549	08/10/2017	3699	HERNANDEZ, LIZBETH	19.00	0.00	19.00
83550	08/10/2017	3699	HERNANDEZ, MIREILLE	13.00	0.00	13.00
83551	08/10/2017	3699	HERRERA, URIEL	39.00	0.00	39.00
83552	08/10/2017	3699	IVEY, PATRICIA	13.00	0.00	13.00
83553	08/10/2017	3699	JAMES, MARIA	67.00	0.00	67.00
83554	08/10/2017	3699	JARQUIN, ITZZAYANA	250.00	0.00	250.00
83555	08/10/2017	3699	JIMENEZ, MILA	13.00	0.00	13.00
83556	08/10/2017	3699	JIMENEZ, MONICA C	80.17	0.00	80.17
83557	08/10/2017	3699	JIMENEZ, PATRICIA	13.00	0.00	13.00
83558	08/10/2017	3699	JOHNSON, TAMIKA	250.00	0.00	250.00
83559	08/10/2017	3699	JOYCE, CONNIE	13.00	0.00	13.00
83560	08/10/2017	3699	JUAREZ, REBECCA	26.00	0.00	26.00
83561	08/10/2017	3699	KHETAMI, SAMGITA	19.00	0.00	19.00
83562	08/10/2017	3699	KING, PETRINA H & JOEY	159.48	0.00	159.48
83563	08/10/2017	3699	LAFORTEZA, LOURDES	20.50	0.00	20.50
83564	08/10/2017	3699	LE, DAN	52.00	0.00	52.00
83565	08/10/2017	3699	LEMONS, VIRGIL	13.00	0.00	13.00

**CITY OF LAKEWOOD
SUMMARY CHECK REGISTER**

CHECK #	CHECK DATE	VEND #	VENDOR NAME	GROSS	DISC.	CHECK AMOUNT
83566	08/10/2017	3699	LEON, PERLA	26.00	0.00	26.00
83567	08/10/2017	3699	LOMELI, RODOLFO	19.00	0.00	19.00
83568	08/10/2017	3699	LOPEZ, LETICIA	19.00	0.00	19.00
83569	08/10/2017	3699	LOPEZ, PATTY	19.00	0.00	19.00
83570	08/10/2017	3699	LOPEZ, VICTOR	33.50	0.00	33.50
83571	08/10/2017	3699	LOVETT, CLYDEAN	19.40	0.00	19.40
83572	08/10/2017	3699	LUNA, LETICIA	9.70	0.00	9.70
83573	08/10/2017	3699	LY, PETER	26.00	0.00	26.00
83574	08/10/2017	3699	MABBOTT, DON	26.00	0.00	26.00
83575	08/10/2017	3699	MAGANA, FRANCISCO	26.00	0.00	26.00
83576	08/10/2017	3699	MALSBERGER, JOHN	39.00	0.00	39.00
83577	08/10/2017	3699	MANZANO, BETH	33.50	0.00	33.50
83578	08/10/2017	3699	MARTINEZ, JESSICA	13.00	0.00	13.00
83579	08/10/2017	3699	MARTINEZ, YOLIKZA	29.10	0.00	29.10
83580	08/10/2017	3699	MARTZ, KATE	26.00	0.00	26.00
83581	08/10/2017	3699	MCDOWELL, LORI	100.00	0.00	100.00
83582	08/10/2017	3699	MCKINNEY, CINDI	29.10	0.00	29.10
83583	08/10/2017	3699	MEJIA-PENA, MARILYN	39.00	0.00	39.00
83584	08/10/2017	3699	MELEG, CHERYL	9.70	0.00	9.70
83585	08/10/2017	3699	MEMBRENO, MARTHA	26.00	0.00	26.00
83586	08/10/2017	3699	METZLER, ALICIA	13.00	0.00	13.00
83587	08/10/2017	3699	MITCHELL, CIARA	19.00	0.00	19.00
83588	08/10/2017	3699	MOYA, ANDREA	38.00	0.00	38.00
83589	08/10/2017	3699	MURGUEITIO, ADALEZA	57.00	0.00	57.00
83590	08/10/2017	3699	NATARENO, ELDER	13.00	0.00	13.00
83591	08/10/2017	3699	NEUTILITY INC	137.08	0.00	137.08
83592	08/10/2017	3699	NUNEZ, CLAUDIA	38.00	0.00	38.00
83593	08/10/2017	3699	O'ROARK, LEILANI	26.00	0.00	26.00
83594	08/10/2017	3699	OCAMPO, HEATHER	19.00	0.00	19.00
83595	08/10/2017	3699	OLLEN, JUDY	19.40	0.00	19.40
83596	08/10/2017	3699	OLSEN ROOFING COMPANY	8,473.00	0.00	8,473.00
83597	08/10/2017	3699	ORTIZ, DIANA	13.00	0.00	13.00
83598	08/10/2017	3699	ORTIZ, JESUS	19.00	0.00	19.00
83599	08/10/2017	3699	PARADA, YADIRA	26.00	0.00	26.00
83600	08/10/2017	3699	PARRIS, CORI	26.00	0.00	26.00
83601	08/10/2017	3699	PASIM, REEM	26.00	0.00	26.00
83602	08/10/2017	3699	PATERNO'S HEATING & AIR CONDITIONING	8,700.00	0.00	8,700.00
83603	08/10/2017	3699	PATRICK, ROBIN	57.00	0.00	57.00
83604	08/10/2017	3699	PEREZ, VERONICA	9.70	0.00	9.70
83605	08/10/2017	3699	POLANCO, ALBERT	26.00	0.00	26.00
83606	08/10/2017	3699	POWERS, CHARISSA	13.00	0.00	13.00
83607	08/10/2017	3699	QUEZADA, CRISTINA	26.00	0.00	26.00
83608	08/10/2017	3699	QUEZADA, DANIEL	13.00	0.00	13.00
83609	08/10/2017	3699	QUINTANILLA, ANGELICA	26.00	0.00	26.00

**CITY OF LAKEWOOD
SUMMARY CHECK REGISTER**

CHECK #	CHECK DATE	VEND #	VENDOR NAME	GROSS	DISC.	CHECK AMOUNT
83610	08/10/2017	3699	RAM, DINESH	19.00	0.00	19.00
83611	08/10/2017	3699	REED, SCOTT	38.00	0.00	38.00
83612	08/10/2017	3699	REYES, PRISCILLA	13.00	0.00	13.00
83613	08/10/2017	3699	RICE, RYAN	13.00	0.00	13.00
83614	08/10/2017	3699	ROBINSON, RENISSA	250.00	0.00	250.00
83615	08/10/2017	3699	RODRIGUEZ, GLORIA	13.00	0.00	13.00
83616	08/10/2017	3699	RODRIGUEZ, JENNIFER	19.00	0.00	19.00
83617	08/10/2017	3699	RODRIGUEZ, MARIA	33.50	0.00	33.50
83618	08/10/2017	3699	RUIZ, LEONARD R	38.00	0.00	38.00
83619	08/10/2017	3699	SALAZAR, JUAN	19.00	0.00	19.00
83620	08/10/2017	3699	SALDANA, RUTH	38.00	0.00	38.00
83621	08/10/2017	3699	SANDOVAL, KARINA	57.00	0.00	57.00
83622	08/10/2017	3699	SANDOVAL, MONICA	13.00	0.00	13.00
83623	08/10/2017	3699	SEQUEIRA, LISA	33.50	0.00	33.50
83624	08/10/2017	3699	SERIATI, ROSSY	20.50	0.00	20.50
83625	08/10/2017	3699	SEYLER, YVONNE	67.00	0.00	67.00
83626	08/10/2017	3699	SIMBORG, JENNIFER	13.00	0.00	13.00
83627	08/10/2017	3699	TENORIO-GARCIA, ANNA	67.00	0.00	67.00
83628	08/10/2017	3699	TIER, JANE	13.00	0.00	13.00
83629	08/10/2017	3699	TOBAR, JASMINE	13.00	0.00	13.00
83630	08/10/2017	3699	TOCKSTEIN, MICHELLE	38.00	0.00	38.00
83631	08/10/2017	3699	TRAINOR, AMIE	19.40	0.00	19.40
83632	08/10/2017	3699	VAN-WIG, ALLISON	114.97	0.00	114.97
83633	08/10/2017	3699	VANCE, KIMBERLY	19.00	0.00	19.00
83634	08/10/2017	3699	VARELA, LORENA	38.00	0.00	38.00
83635	08/10/2017	3699	VEGA, CLAUDIA	52.00	0.00	52.00
83636	08/10/2017	3699	VELASCO, EVELIA	78.00	0.00	78.00
83637	08/10/2017	3699	VELAZQUEZ, ALESSANDRO	13.00	0.00	13.00
83638	08/10/2017	3699	VELAZQUEZ, MARCO	26.00	0.00	26.00
83639	08/10/2017	3699	WALKER-PALACIO, NANIA	13.00	0.00	13.00
83640	08/10/2017	3699	WESSELMAN, JOHN F	9.70	0.00	9.70
83641	08/10/2017	3699	WILLIAMS, JAMILIA	9.70	0.00	9.70
83642	08/10/2017	3699	WILLIAMSON, ADRIAN	13.00	0.00	13.00
83643	08/10/2017	3699	WONG, KENT	13.00	0.00	13.00
83644	08/10/2017	3699	WORKMAN, MONIQUE	26.00	0.00	26.00
Totals:				<u>798,102.08</u>	<u>13.14</u>	<u>798,088.94</u>

**CITY OF LAKEWOOD
FUND SUMMARY 8/17/2017**

In accordance with section 2521 of the Lakewood Municipal Code there is presented herewith a summary of obligations to be paid by voucher 83645 through 83758. Each of the following demands has been audited by the Director of Administrative Services and approved by the City Manager.

1010	GENERAL FUND	1,525,085.93
1030	CDBG CURRENT YEAR	875.00
1050	COMMUNITY FACILITY	16,369.34
1336	STATE COPS GRANT	16,228.45
3001	CAPITAL IMPROV PROJECT FUND	685.00
3060	PROPOSITION "A"	19,139.15
3070	PROPOSITION "C"	2,969.08
5010	GRAPHICS AND COPY CENTER	872.46
5020	CENTRAL STORES	3,157.64
5030	FLEET MAINTENANCE	3,024.53
7500	WATER UTILITY FUND	215,577.07
8030	TRUST DEPOSIT	132.09
		<hr/> 1,804,115.74

Council Approval

_____ Date

_____ City Manager

Attest

_____ City Clerk

_____ Director of Administrative Services

**CITY OF LAKEWOOD
SUMMARY CHECK REGISTER**

CHECK #	CHECK DATE	VEND #	VENDOR NAME	GROSS	DISC.	CHECK AMOUNT
83645	08/17/2017	35016	ASSOCIATED SOILS ENGINEERING INC	685.00	0.00	685.00
83646	08/17/2017	48469	BURWELL MICHAEL RAY	660.00	0.00	660.00
83647	08/17/2017	6600	CALIFORNIA STATE DEPT OF JUSTICE	5,985.00	0.00	5,985.00
83648	08/17/2017	4963	COUCH, RON JR.	350.00	0.00	350.00
83649	08/17/2017	64215	GOLD COAST AWARDS INC	55.73	0.00	55.73
83650	08/17/2017	42031	HOME DEPOT	4.52	0.00	4.52
83651	08/17/2017	4688	HUNTER, JOHN L & ASSOCIATES	10,073.75	0.00	10,073.75
83652	08/17/2017	18400	LAKEWOOD, CITY WATER DEPT	9,777.27	0.00	9,777.27
83653	08/17/2017	20700	LONG BEACH PUBLIC TRANSPORTATION CO	19,139.15	0.00	19,139.15
83654	08/17/2017	21600	LOS ANGELES CO SHERIFFS DEPT	843,728.72	0.00	843,728.72
83655	08/17/2017	45069	LOS ANGELES CO/DEPT PW BLDG SVCS	159,321.63	0.00	159,321.63
83656	08/17/2017	4513	OCEAN BLUE ENVIRONMENTAL SERVICES	981.39	0.00	981.39
83657	08/17/2017	4720	PATRIOT ENVIRONMENTAL LABORATORY	175.00	0.00	175.00
83658	08/17/2017	64602	STAPLES CONTRACT & COMMERCIAL INC	4,728.17	0.00	4,728.17
83659	08/17/2017	7400	WATER REPLENISHMENT DISTRICT OF	191,814.48	0.00	191,814.48
83660	08/17/2017	4551	ACCOUNTING PRINCIPALS, INC	607.50	0.00	607.50
83661	08/17/2017	860	ALLIANT INSURANCE SERVICES	132.09	0.00	132.09
83662	08/17/2017	58000	AMERICAN TRUCK & TOOL RENTAL INC	289.97	0.00	289.97
83663	08/17/2017	4724	ARC DOCUMENT SOLUTIONS, LLC	219.87	0.00	219.87
83664	08/17/2017	38532	AREA E CIVIL DEFENSE &	3,924.00	0.00	3,924.00
83665	08/17/2017	4126	AUTOZONE PARTS INC	5.28	0.00	5.28
83666	08/17/2017	443	B&M LAWN AND GARDEN INC	23.27	0.00	23.27
83667	08/17/2017	51467	BADGER METER INC	307.94	0.00	307.94
83668	08/17/2017	4721	BELL EVENT SERVICES INC	3,380.00	0.00	3,380.00
83669	08/17/2017	1935	BREA, CITY OF	41,415.00	0.00	41,415.00
83670	08/17/2017	66457	BRENNTAG PACIFIC INC	5,860.43	0.00	5,860.43
83671	08/17/2017	5000	CALANOC, PATRICK	19.50	0.00	19.50
83672	08/17/2017	307	CALIF. STATE DISBURSEMENT UNIT	155.07	0.00	155.07
83673	08/17/2017	53983	CALIF STATE FRANCHISE TAX BOARD	384.00	0.00	384.00
83674	08/17/2017	57079	CALIF JOINT POWERS INS AUTHORITY	1,067.00	0.00	1,067.00
83675	08/17/2017	36746	CERRITOS DODGE	79.75	0.00	79.75
83676	08/17/2017	45894	CINTAS CORPORATION	69.27	0.00	69.27
83677	08/17/2017	57070	CITY LIGHT & POWER LKWD INC	3,189.94	0.00	3,189.94
83678	08/17/2017	3778	COMMERCIAL AQUATIC SERVICES INC	2,249.15	0.00	2,249.15
83679	08/17/2017	4963	COUCH, RON JR.	262.50	0.00	262.50
83680	08/17/2017	62407	CRN AM CAR WASH INC.	60.00	0.00	60.00
83681	08/17/2017	4348	D&J INTERNATIONAL INC	2,676.63	0.00	2,676.63
83682	08/17/2017	39267	DOG DEALERS INC	864.50	0.00	864.50
83683	08/17/2017	5020	ENCORE WELLNESS, LLC	137.60	0.00	137.60
83684	08/17/2017	4862	FACILITY SERVICES - NEVADA INC	2,020.00	0.00	2,020.00
83685	08/17/2017	4435	ELLIOTT AUTO SUPPLY COMPANY INC	641.80	0.00	641.80
83686	08/17/2017	63519	FLUE STEAM INC	24.00	0.00	24.00
83687	08/17/2017	59433	GANAHL LUMBER COMPANY	296.18	0.00	296.18
83688	08/17/2017	42664	GIACHELLO, LENNY	536.25	0.00	536.25

**CITY OF LAKEWOOD
SUMMARY CHECK REGISTER**

CHECK #	CHECK DATE	VEND #	VENDOR NAME	GROSS	DISC.	CHECK AMOUNT
83689	08/17/2017	5005	GIEMONT, GREGORY S.	261.00	0.00	261.00
83690	08/17/2017	64215	GOLD COAST AWARDS INC	124.54	0.00	124.54
83691	08/17/2017	65779	GOLDEN STATE WATER COMPANY	19,893.02	0.00	19,893.02
83692	08/17/2017	2551	GOV'T FINANCE OFFICERS ASSOC	790.00	0.00	790.00
83693	08/17/2017	33150	GRAINGER W W INC	276.00	0.00	276.00
83694	08/17/2017	54961	HACH COMPANY	882.96	0.00	882.96
83695	08/17/2017	58838	HANSON AGGREGATES LLC	100.00	0.00	100.00
83696	08/17/2017	35477	HARA M LAWNMOWER CENTER	58.42	0.00	58.42
83697	08/17/2017	4910	HARDY, CHARLES G INC	62.82	0.00	62.82
83698	08/17/2017	49520	HINDERLITER DE LLAMAS & ASSOC	4,273.73	0.00	4,273.73
83699	08/17/2017	42031	HOME DEPOT	1,702.12	0.00	1,702.12
83700	08/17/2017	4149	INFOSEND INC	7,095.65	0.00	7,095.65
83701	08/17/2017	49843	INOUYE, MICHAEL JOHN	1,072.50	0.00	1,072.50
83702	08/17/2017	64040	ISA	235.00	0.00	235.00
83703	08/17/2017	4461	TEXTRON INC	24.69	0.00	24.69
83704	08/17/2017	4622	JHM SUPPLY INC	1,119.45	0.00	1,119.45
83705	08/17/2017	2956	KICK IT UP KIDZ, LLC	22.10	0.00	22.10
83706	08/17/2017	4851	LA ALLSTARS INC.	2,000.00	0.00	2,000.00
83707	08/17/2017	55469	LAKEWOOD CITY EMPLOYEE ASSOCIATION	2,100.00	0.00	2,100.00
83708	08/17/2017	2453	LAKEWOOD EDUCATION FOUNDATION	2,500.00	0.00	2,500.00
83709	08/17/2017	53311	LAKEWOOD MEALS ON WHEELS	875.00	0.00	875.00
83710	08/17/2017	18400	LAKEWOOD, CITY WATER DEPT	42,581.28	0.00	42,581.28
83711	08/17/2017	4783	LANDCARE HOLDINGS INC	14,368.56	0.00	14,368.56
83712	08/17/2017	2409	LIFTECH ELEVATOR SERVICES INC	522.00	0.00	522.00
83713	08/17/2017	58414	MANAGED HEALTH NETWORK	363.66	0.00	363.66
83714	08/17/2017	4929	MAUREEN KANE & ASSOCIATES INC	1,550.00	0.00	1,550.00
83715	08/17/2017	23130	MC MASTER-CARR SUPPLY CO	50.24	1.00	49.24
83716	08/17/2017	52588	MILLER DON & SONS	81.41	0.70	80.71
83717	08/17/2017	61672	MUSCULAR DYSTROPHY ASSOC INC	20.00	0.00	20.00
83718	08/17/2017	4971	NOTEWORTHY PUPPETS INC.	300.00	0.00	300.00
83719	08/17/2017	4443	O'REILLY AUTOMOTIVE STORES INC	676.36	12.44	663.92
83720	08/17/2017	4650	SPRADLEY, MARGARET	299.00	0.00	299.00
83721	08/17/2017	3975	OUTDOOR CREATIONS INC	4,342.69	0.00	4,342.69
83722	08/17/2017	4497	PACIFIC COACHWAYS CHARTER SERVICES	925.00	0.00	925.00
83723	08/17/2017	51171	PERS LONG TERM CARE PROGRAM	301.10	0.00	301.10
83724	08/17/2017	15600	LONG BEACH PUBLISHING CO	845.86	0.00	845.86
83725	08/17/2017	45437	S & J SUPPLY CO	576.84	0.00	576.84
83726	08/17/2017	39268	SHARRARD, RICHARD	58.40	0.00	58.40
83727	08/17/2017	3186	CORAL BAY HOME LOANS	659.10	0.00	659.10
83728	08/17/2017	52279	SMART & FINAL INC	706.97	0.00	706.97
83729	08/17/2017	26900	SO CALIF SECURITY CENTERS INC	90.00	0.00	90.00
83730	08/17/2017	47054	SOUTHEAST AREA ANIMAL CONTROL AUTH	218,149.50	0.00	218,149.50
83731	08/17/2017	29400	SOUTHERN CALIFORNIA EDISON CO	73,749.20	0.00	73,749.20
83732	08/17/2017	29500	SOUTHERN CALIFORNIA GAS CO	677.05	0.00	677.05

**CITY OF LAKEWOOD
SUMMARY CHECK REGISTER**

CHECK #	CHECK DATE	VEND #	VENDOR NAME	GROSS	DISC.	CHECK AMOUNT
83733	08/17/2017	49529	SPICERS PAPER INC	880.52	8.06	872.46
83734	08/17/2017	4770	MANCE, MIKE J.	435.94	0.00	435.94
83735	08/17/2017	2372	TGIS CATERING SVCS INC	15,577.43	0.00	15,577.43
83736	08/17/2017	4364	THE RINKS-LAKEWOOD ICE	87.75	0.00	87.75
83737	08/17/2017	1676	U S TELEPACIFIC CORP	453.38	0.00	453.38
83738	08/17/2017	65224	TUMBLE-N-KIDS, INC	2,362.75	0.00	2,362.75
83739	08/17/2017	53760	UNITED WAY- GREATER LOS ANGELES	10.00	0.00	10.00
83740	08/17/2017	5003	WALTOWER, SHAWN	468.00	0.00	468.00
83741	08/17/2017	17640	WAXIE ENTERPRISES INC	415.09	0.00	415.09
83742	08/17/2017	40925	WEST COAST ARBORISTS INC	52,798.15	0.00	52,798.15
83743	08/17/2017	4501	WEST COAST SAND AND GRAVEL, INC.	607.98	0.00	607.98
83744	08/17/2017	37745	WESTERN EXTERMINATOR CO	48.50	0.00	48.50
83745	08/17/2017	50058	WHITE HOUSE FLORIST INC	1,569.93	0.00	1,569.93
83746	08/17/2017	3699	AYSO REGION 106	250.00	0.00	250.00
83747	08/17/2017	3699	COOPER, TWAN	168.00	0.00	168.00
83748	08/17/2017	3699	DEL CAMPO, ESTHER	250.00	0.00	250.00
83749	08/17/2017	3699	DELGADO, CHRITINA	250.00	0.00	250.00
83750	08/17/2017	3699	GAMBOA, BRENDA	250.00	0.00	250.00
83751	08/17/2017	3699	LUMFORD, BRANDI	250.00	0.00	250.00
83752	08/17/2017	3699	MCCULLOUGH, IVORY	250.00	0.00	250.00
83753	08/17/2017	3699	MONTANONA, ROSEANN	250.00	0.00	250.00
83754	08/17/2017	3699	MORA, MONICA	250.00	0.00	250.00
83755	08/17/2017	3699	TIRONA, VANESSA	250.00	0.00	250.00
83756	08/17/2017	3699	TOSCANO, RICARDO	5.00	0.00	5.00
83757	08/17/2017	3699	VARELA, MONICA & ORTEGA, ROBERT	119.82	0.00	119.82
83758	08/17/2017	3699	VIVINT SOLAR	138.18	0.00	138.18
Totals:				<u>1,804,137.94</u>	<u>22.20</u>	<u>1,804,115.74</u>

**CITY OF LAKEWOOD
FUND SUMMARY 8/24/2017**

In accordance with section 2521 of the Lakewood Municipal Code there is presented herewith a summary of obligations to be paid by voucher 83759 through 83876. Each of the following demands has been audited by the Director of Administrative Services and approved by the City Manager.

1010	GENERAL FUND	346,996.98
1020	CABLE TV	1,186.51
1030	CDBG CURRENT YEAR	798.12
1050	COMMUNITY FACILITY	1,373.82
3001	CAPITAL IMPROV PROJECT FUND	2,053.26
3070	PROPOSITION "C"	2,590.67
5010	GRAPHICS AND COPY CENTER	215.77
5020	CENTRAL STORES	4,418.90
5030	FLEET MAINTENANCE	8,524.90
7500	WATER UTILITY FUND	233,922.73
8030	TRUST DEPOSIT	740.57
		<hr/>
		602,822.23

Council Approval

_____ Date

_____ City Manager

Attest

_____ City Clerk

_____ Director of Administrative Services

**CITY OF LAKEWOOD
SUMMARY CHECK REGISTER**

CHECK #	CHECK DATE	VEND #	VENDOR NAME	GROSS	DISC.	CHECK AMOUNT
83759	08/24/2017	52244	BELLFLOWER, CITY OF	254.77	0.00	254.77
83760	08/24/2017	43135	CERRITOS, CITY OF - WATER DIVISION	38,998.98	0.00	38,998.98
83761	08/24/2017	4911	CONVERGINT TECHNOLOGIES LLC	2,187.31	0.00	2,187.31
83762	08/24/2017	58618	DURHAM SCHOOL SERVICES	407.18	0.00	407.18
83763	08/24/2017	5046	WARDLE, SEAN	4,471.54	0.00	4,471.54
83764	08/24/2017	53849	LAKEWOOD ROTARY CLUB	379.00	0.00	379.00
83765	08/24/2017	65659	PHASE II SYSTEMS INC	4,104.71	0.00	4,104.71
83766	08/24/2017	29475	SOUTHERN CALIFORNIA EDISON CO	2,053.26	0.00	2,053.26
83767	08/24/2017	1437	U S BANK NATIONAL ASSOCIATION	19,634.03	0.00	19,634.03
83768	08/24/2017	7400	WATER REPLENISHMENT DISTRICT OF	86,795.28	0.00	86,795.28
83769	08/24/2017	40925	WEST COAST ARBORISTS INC	18,578.75	0.00	18,578.75
83770	08/24/2017	2701	AIRE RITE A/C & REFRIGERATION INC	11,898.69	0.00	11,898.69
83771	08/24/2017	4551	ACCOUNTING PRINCIPALS, INC	534.38	0.00	534.38
83772	08/24/2017	50163	AMERICAN PUBLIC WORKS ASSN	237.50	0.00	237.50
83773	08/24/2017	4126	AUTOZONE PARTS INC	14.88	0.00	14.88
83774	08/24/2017	443	B&M LAWN AND GARDEN INC	228.86	0.00	228.86
83775	08/24/2017	66457	BRENNTAG PACIFIC INC	2,606.23	0.00	2,606.23
83776	08/24/2017	48469	BURWELL MICHAEL RAY	870.00	0.00	870.00
83777	08/24/2017	5000	CALANOC, PATRICK	78.00	0.00	78.00
83778	08/24/2017	48029	CALIFORNIA DEPT OF	472.50	0.00	472.50
83779	08/24/2017	45894	CINTAS CORPORATION	61.50	0.00	61.50
83780	08/24/2017	4654	BRAGG INVESTMENT COMPANY, INC.	239.16	0.00	239.16
83781	08/24/2017	3778	COMMERCIAL AQUATIC SERVICES INC	322.30	0.00	322.30
83782	08/24/2017	53451	COMMUNITY FAMILY GUIDANCE CTR	750.00	0.00	750.00
83783	08/24/2017	4776	CORELOGIC, INC.	96.25	0.00	96.25
83784	08/24/2017	4380	CAPITAL ONE NATIONAL ASSOCIATION	1,179.71	0.00	1,179.71
83785	08/24/2017	60195	CR TRANSFER INC	3,154.50	0.00	3,154.50
83786	08/24/2017	4442	DANIEL'S TIRE SERVICE INC	90.72	0.00	90.72
83787	08/24/2017	4641	DAO, THAO	1,476.50	0.00	1,476.50
83788	08/24/2017	58618	DURHAM SCHOOL SERVICES	12,299.84	0.00	12,299.84
83789	08/24/2017	2708	EPICENTER SUPPLIES, LLC	1,843.69	0.00	1,843.69
83790	08/24/2017	4435	ELLIOTT AUTO SUPPLY COMPANY INC	137.63	0.00	137.63
83791	08/24/2017	52316	FEDERAL EXPRESS CORP	170.83	0.00	170.83
83792	08/24/2017	4884	FRONTIER CALIFORNIA INC.	81.98	0.00	81.98
83793	08/24/2017	4822	LA GATEWAY REGION INTEGRATED RNL	179,602.36	0.00	179,602.36
83794	08/24/2017	45682	BROD INVESTMENTS INC	983.25	0.00	983.25
83795	08/24/2017	54961	HACH COMPANY	554.83	0.00	554.83
83796	08/24/2017	62491	HANDS ON MAILING &	187.83	0.00	187.83
83797	08/24/2017	58838	HANSON AGGREGATES LLC	100.00	0.00	100.00
83798	08/24/2017	65575	HAP'S AUTO PARTS	68.89	0.00	68.89
83799	08/24/2017	35477	HARA M LAWNMOWER CENTER	294.98	0.00	294.98
83800	08/24/2017	4801	HEALTHPOINTE MEDICAL GROUP INC.	30.00	0.00	30.00
83801	08/24/2017	4872	HEATON, KATHRYN	65.00	0.00	65.00
83802	08/24/2017	42031	HOME DEPOT	325.16	0.00	325.16

**CITY OF LAKEWOOD
SUMMARY CHECK REGISTER**

CHECK #	CHECK DATE	VEND #	VENDOR NAME	GROSS	DISC.	CHECK AMOUNT
83803	08/24/2017	4433	HOUSTON ENGINEERING INC	2,200.00	0.00	2,200.00
83804	08/24/2017	36589	IMMEDIATE MEDICAL CARE	855.00	0.00	855.00
83805	08/24/2017	49843	INOUYE, MICHAEL JOHN	123.50	0.00	123.50
83806	08/24/2017	4622	JHM SUPPLY INC	26.61	0.00	26.61
83807	08/24/2017	4180	JONES RICHARD D. A PROF LAW CORP	6,867.39	0.00	6,867.39
83808	08/24/2017	4696	NORTH AMERICAN YOUTH ACTIVITIES LLC	1,664.00	0.00	1,664.00
83809	08/24/2017	4969	KILOWATT ENGINEERING INC	8,500.00	0.00	8,500.00
83810	08/24/2017	66412	KWIK-COVERS	107.51	0.00	107.51
83811	08/24/2017	44733	LIEBERT CASSIDY WHITMORE	560.00	0.00	560.00
83812	08/24/2017	3564	LONG BEACH, CITY OF	740.82	0.00	740.82
83813	08/24/2017	4521	PEACHY DEVELOPMENTS CALIFORNIA, LLC	1,232.01	0.00	1,232.01
83814	08/24/2017	63809	MACAULAY, CHRISTINA	150.00	0.00	150.00
83815	08/24/2017	4643	BRODERICK JAY	760.50	0.00	760.50
83816	08/24/2017	65220	STEVEN MAHR PRINTING INC.	215.77	0.00	215.77
83817	08/24/2017	23130	MC MASTER-CARR SUPPLY CO	276.44	5.53	270.91
83818	08/24/2017	64333	MOSES-CALDERA, ISABEL	406.25	0.00	406.25
83819	08/24/2017	615	MUNI SERVICES LLC	500.00	0.00	500.00
83820	08/24/2017	4190	NATIONAL UNION FIRE INSURANCE CO	647.61	0.00	647.61
83821	08/24/2017	4320	NEHRU, ARTI	150.00	0.00	150.00
83822	08/24/2017	3843	EDSON JAMES T	1,686.03	0.00	1,686.03
83823	08/24/2017	4443	O'REILLY AUTOMOTIVE STORES INC	173.94	11.94	162.00
83824	08/24/2017	47554	OFFICE DEPOT BUSINESS SVCS	817.85	0.00	817.85
83825	08/24/2017	450	PACIFIC EH & S SERVICES INC	1,792.00	0.00	1,792.00
83826	08/24/2017	63708	DY-JO CORPORATION	635.00	0.00	635.00
83827	08/24/2017	65659	PHASE II SYSTEMS INC	802.36	0.00	802.36
83828	08/24/2017	4374	PITNEY BOWES INC	827.34	0.00	827.34
83829	08/24/2017	47285	ROTARY CORP	107.38	0.00	107.38
83830	08/24/2017	45437	S & J SUPPLY CO	262.20	0.00	262.20
83831	08/24/2017	59527	S C W M F	225.00	0.00	225.00
83832	08/24/2017	4309	SAFESHRED	25.00	0.00	25.00
83833	08/24/2017	41691	SAFETY-KLEEN CORP	677.17	0.00	677.17
83834	08/24/2017	3153	SECTRAN SECURITY INC	135.89	0.00	135.89
83835	08/24/2017	52279	SMART & FINAL INC	342.28	0.00	342.28
83836	08/24/2017	26900	SO CALIF SECURITY CENTERS INC	16.39	0.00	16.39
83837	08/24/2017	36658	SOUTH COAST A.Q.M.D.	1,123.31	0.00	1,123.31
83838	08/24/2017	29400	SOUTHERN CALIFORNIA EDISON CO	26,505.30	0.00	26,505.30
83839	08/24/2017	29500	SOUTHERN CALIFORNIA GAS CO	1,994.23	0.00	1,994.23
83840	08/24/2017	4368	SPECIALTY TIRES LLC	316.10	0.00	316.10
83841	08/24/2017	50299	SPENCER, GORDON	350.00	0.00	350.00
83842	08/24/2017	44104	STATE WATER RESOURCES CONTROL BOARD	90.00	0.00	90.00
83843	08/24/2017	60792	STEPHENS, ERIC	343.20	0.00	343.20
83844	08/24/2017	57912	SURI, KAREN	280.80	0.00	280.80
83845	08/24/2017	38679	WESTERN EXTERMINATOR COMPANY	125.92	0.00	125.92
83846	08/24/2017	4830	TELECOM LAW FIRM PC	1,000.00	0.00	1,000.00

**CITY OF LAKEWOOD
SUMMARY CHECK REGISTER**

CHECK #	CHECK DATE	VEND #	VENDOR NAME	GROSS	DISC.	CHECK AMOUNT
83847	08/24/2017	2372	TGIS CATERING SVCS INC	935.01	0.00	935.01
83848	08/24/2017	4364	THE RINKS-LAKEWOOD ICE	234.00	0.00	234.00
83849	08/24/2017	4873	TRANSAMERICA LIFE INSURANCE COMPANY	2,315.78	0.00	2,315.78
83850	08/24/2017	60685	TURF STAR	2,876.23	0.00	2,876.23
83851	08/24/2017	1437	U S BANK NATIONAL ASSOCIATION	19,271.25	0.00	19,271.25
83852	08/24/2017	7400	WATER REPLENISHMENT DISTRICT OF	102,693.69	0.00	102,693.69
83853	08/24/2017	17640	WAXIE ENTERPRISES INC	2,848.74	0.00	2,848.74
83854	08/24/2017	36166	WEGENER, KATHY	950.30	0.00	950.30
83855	08/24/2017	37745	WESTERN EXTERMINATOR CO	291.00	0.00	291.00
83856	08/24/2017	50172	PRIMUS INC	143.84	0.00	143.84
83857	08/24/2017	35146	WILLDAN ASSOCIATES	1,283.50	0.00	1,283.50
83858	08/24/2017	2145	WYNN, LAKYN	19.50	0.00	19.50
83859	08/24/2017	3699	AVILA, BLANCA	250.00	0.00	250.00
83860	08/24/2017	3699	BAUTISTA, RINA RIVERA	320.00	0.00	320.00
83861	08/24/2017	3699	CAZARES, ARTURO	250.00	0.00	250.00
83862	08/24/2017	3699	CRALLE, JANETTE	250.00	0.00	250.00
83863	08/24/2017	3699	DAVIS, CHRISTOPHER	250.00	0.00	250.00
83864	08/24/2017	3699	DE JESUS, JOSEPH	250.00	0.00	250.00
83865	08/24/2017	3699	ENNIS, ALISA	250.00	0.00	250.00
83866	08/24/2017	3699	FOREST, PAM	30.00	0.00	30.00
83867	08/24/2017	3699	LOPEZ, CRISTINA	250.00	0.00	250.00
83868	08/24/2017	3699	NETTLES, ERINN	240.00	0.00	240.00
83869	08/24/2017	3699	NUNEZ, CARMEN	15.00	0.00	15.00
83870	08/24/2017	3699	PARKER BUILDING AND CONCRETE	169.44	0.00	169.44
83871	08/24/2017	3699	PEARSON, ASHLEY	250.00	0.00	250.00
83872	08/24/2017	3699	PEREZ, DIANNE	30.00	0.00	30.00
83873	08/24/2017	3699	ROJAS, VINCENT	250.00	0.00	250.00
83874	08/24/2017	3699	VIVINT SOLAR	98.56	0.00	98.56
83875	08/24/2017	3699	WILLIAMS, CHALAOUE	250.00	0.00	250.00
83876	08/24/2017	3699	WONG, KENT	13.00	0.00	13.00
Totals:				<u>602,839.70</u>	<u>17.47</u>	<u>602,822.23</u>

**CITY OF LAKEWOOD
FUND SUMMARY 8/31/2017**

In accordance with section 2521 of the Lakewood Municipal Code there is presented herewith a summary of obligations to be paid by voucher 83877 through 83975. Each of the following demands has been audited by the Director of Administrative Services and approved by the City Manager.

1010	GENERAL FUND	723,512.31
1020	CABLE TV	834.97
1030	CDBG CURRENT YEAR	458.33
1050	COMMUNITY FACILITY	1,597.57
1070	RETIREE MEDICAL	462.00
3001	CAPITAL IMPROV PROJECT FUND	5,157.91
3070	PROPOSITION "C"	-200.63
5010	GRAPHICS AND COPY CENTER	1,741.40
5020	CENTRAL STORES	1,461.23
5030	FLEET MAINTENANCE	20,302.01
7500	WATER UTILITY FUND	57,039.00
8030	TRUST DEPOSIT	5,979.29
		<hr/> 818,345.39

Council Approval

_____ Date

_____ City Manager

Attest

_____ City Clerk

_____ Director of Administrative Services

**CITY OF LAKEWOOD
SUMMARY CHECK REGISTER**

CHECK #	CHECK DATE	VEND #	VENDOR NAME	GROSS	DISC.	CHECK AMOUNT
83877	08/31/2017	1025	C A C E 0	125.00	0.00	125.00
83878	08/31/2017	4700	CALIFORNIA DEPT OF WATER RESOURCES	3,900.00	0.00	3,900.00
83879	08/31/2017	36844	LA COUNTY DEPT OF PUBLIC WORKS	140,343.68	0.00	140,343.68
83880	08/31/2017	7400	WATER REPLENISHMENT DISTRICT OF	1,979.29	0.00	1,979.29
83881	08/31/2017	4837	XEROX CORPORATION	802.85	0.00	802.85
83882	08/31/2017	4551	ACCOUNTING PRINCIPALS, INC	1,282.50	0.00	1,282.50
83883	08/31/2017	4765	ALAN'S LAWN AND GARDEN CENTER, INC.	23.12	0.00	23.12
83884	08/31/2017	860	ALLIANT INSURANCE SERVICES	20,852.00	0.00	20,852.00
83885	08/31/2017	1700	ALLIED REFRIGERATION INC	4.21	0.00	4.21
83886	08/31/2017	4684	AMAZON.COM LLC	3,204.33	0.00	3,204.33
83887	08/31/2017	58000	AMERICAN TRUCK & TOOL RENTAL INC	1,056.38	0.00	1,056.38
83888	08/31/2017	4724	ARC DOCUMENT SOLUTIONS, LLC	168.84	0.00	168.84
83889	08/31/2017	443	B&M LAWN AND GARDEN INC	91.26	0.00	91.26
83890	08/31/2017	4878	B.R. BREWER SIGN & GRAPHICS	1,258.56	0.00	1,258.56
83891	08/31/2017	5026	BARRON, MARK MAURICE	45.00	0.00	45.00
83892	08/31/2017	43808	BELLFLOWER AUTO TRIM	347.93	0.00	347.93
83893	08/31/2017	48108	BERG, APRIL	828.75	0.00	828.75
83894	08/31/2017	4432	BOTROS, DIANA	1,523.60	0.00	1,523.60
83895	08/31/2017	491	LEE, YOUNG	1,080.48	0.00	1,080.48
83896	08/31/2017	5000	CALANOC, PATRICK	39.00	0.00	39.00
83897	08/31/2017	307	CALIF. STATE DISBURSEMENT UNIT	155.07	0.00	155.07
83898	08/31/2017	53983	CALIF STATE FRANCHISE TAX BOARD	76.00	0.00	76.00
83899	08/31/2017	62164	CARD INTEGRATORS CORP	127.68	0.00	127.68
83900	08/31/2017	7500	CENTRAL BASIN MUNICIPAL WATER	1,305.00	0.00	1,305.00
83901	08/31/2017	4815	CHESSMAN, RONALD	250.00	0.00	250.00
83902	08/31/2017	45894	CINTAS CORPORATION	70.83	0.00	70.83
83903	08/31/2017	64932	CJ CONSTRUCTION INC	86,912.50	0.00	86,912.50
83904	08/31/2017	5008	COLOR CARD ADMINISTRATOR CORP.	75.08	0.00	75.08
83905	08/31/2017	3778	COMMERCIAL AQUATIC SERVICES INC	1,255.02	0.00	1,255.02
83906	08/31/2017	4442	DANIEL'S TIRE SERVICE INC	1,407.32	0.00	1,407.32
83907	08/31/2017	39267	DOG DEALERS INC	599.30	0.00	599.30
83908	08/31/2017	3199	EDCO WASTE SERVICES LLC	390,020.85	0.00	390,020.85
83909	08/31/2017	4435	ELLIOTT AUTO SUPPLY COMPANY INC	79.34	0.00	79.34
83910	08/31/2017	3946	FERGUSON ENTERPRISES INC	306.51	0.00	306.51
83911	08/31/2017	4289	FRAZIER, ROBERT C	137.80	0.00	137.80
83912	08/31/2017	3188	GALLS LLC/QUARTERMASTER LLC	174.25	0.00	174.25
83913	08/31/2017	64215	GOLD COAST AWARDS INC	55.73	0.00	55.73
83914	08/31/2017	61769	GRAUTEN, EVELYN R	321.75	0.00	321.75
83915	08/31/2017	62491	HANDS ON MAILING &	325.00	0.00	325.00
83916	08/31/2017	49031	HDL COREN & CONE	745.00	0.00	745.00
83917	08/31/2017	4872	HEATON, KATHRYN	65.00	0.00	65.00
83918	08/31/2017	59486	HERMAN, LINDA	225.00	0.00	225.00
83919	08/31/2017	42031	HOME DEPOT	546.92	0.00	546.92
83920	08/31/2017	65891	HUMAN SERVICES ASSOCIATION	458.33	0.00	458.33

**CITY OF LAKEWOOD
SUMMARY CHECK REGISTER**

CHECK #	CHECK DATE	VEND #	VENDOR NAME	GROSS	DISC.	CHECK AMOUNT
83921	08/31/2017	242	INSTANT IMPRESSIONS INC	794.34	0.00	794.34
83922	08/31/2017	59873	JJS PALOMO'S STEEL INC	16.54	0.00	16.54
83923	08/31/2017	4180	JONES RICHARD D. A PROF LAW CORP	16,750.00	0.00	16,750.00
83924	08/31/2017	18300	LAKEWOOD CHAMBER OF COMMERCE	1,833.33	0.00	1,833.33
83925	08/31/2017	18550	LAKEWOOD, CITY OF	100.00	0.00	100.00
83926	08/31/2017	20300	LONG BEACH CITY GAS & WATER DEPT	217.18	0.00	217.18
83927	08/31/2017	54760	LU'S LIGHT HOUSE	630.20	0.00	630.20
83928	08/31/2017	4705	MAG-TROL, INC.	327.56	0.00	327.56
83929	08/31/2017	23130	MC MASTER-CARR SUPPLY CO	132.02	2.64	129.38
83930	08/31/2017	4446	MIDAMERICA ADMIN & RETIREMENT	462.00	0.00	462.00
83931	08/31/2017	4443	O'REILLY AUTOMOTIVE STORES INC	221.06	4.05	217.01
83932	08/31/2017	4513	OCEAN BLUE ENVIRONMENTAL SERVICES	1,009.24	0.00	1,009.24
83933	08/31/2017	47554	OFFICE DEPOT BUSINESS SVCS	455.06	0.00	455.06
83934	08/31/2017	459	PACIFIC TRUCK EQUIPMENT, INC.	45.36	0.00	45.36
83935	08/31/2017	65659	PHASE II SYSTEMS INC	258.83	0.00	258.83
83936	08/31/2017	4719	JOYCE LOU, INC.	248.78	0.00	248.78
83937	08/31/2017	51171	PERS LONG TERM CARE PROGRAM	301.10	0.00	301.10
83938	08/31/2017	4374	PITNEY BOWES INC	284.89	0.00	284.89
83939	08/31/2017	4902	PROTEL COMMUNICATIONS INC.	11,354.00	0.00	11,354.00
83940	08/31/2017	4459	READWRITE EDUCATIONAL SOLUTIONS INC	1,027.00	0.00	1,027.00
83941	08/31/2017	63364	REEVES NORM HONDA	19.03	0.00	19.03
83942	08/31/2017	45437	S & J SUPPLY CO	9,056.83	0.00	9,056.83
83943	08/31/2017	63960	SOUTHERN COUNTIES OIL CO	15,595.56	0.00	15,595.56
83944	08/31/2017	52279	SMART & FINAL INC	25.08	0.00	25.08
83945	08/31/2017	29400	SOUTHERN CALIFORNIA EDISON CO	42,156.30	0.00	42,156.30
83946	08/31/2017	4026	SPASEFF TED C	112.50	0.00	112.50
83947	08/31/2017	4972	CHARTER COMMUNICATIONS HOLDINGS, LLC	4,375.89	0.00	4,375.89
83948	08/31/2017	2559	STANLEY CONVERGENT SECURITY	28,821.69	0.00	28,821.69
83949	08/31/2017	977	STEVEN ENTERPRISES	77.02	0.00	77.02
83950	08/31/2017	55947	STOVER SEED COMPANY	2,785.88	0.00	2,785.88
83951	08/31/2017	56039	SULLY MILLER	407.39	0.00	407.39
83952	08/31/2017	60359	CNS INDUSTRIES INC	180.60	0.00	180.60
83953	08/31/2017	38679	WESTERN EXTERMINATOR COMPANY	413.00	0.00	413.00
83954	08/31/2017	59212	TETRA TECH INC	2,330.00	0.00	2,330.00
83955	08/31/2017	65224	TUMBLE-N-KIDS, INC	2,487.55	0.00	2,487.55
83956	08/31/2017	60685	TURF STAR	1,580.48	0.00	1,580.48
83957	08/31/2017	61019	CHRISTMAN WILLIAM B	175.00	0.00	175.00
83958	08/31/2017	17640	WAXIE ENTERPRISES INC	603.26	0.00	603.26
83959	08/31/2017	62628	WELLS C. PIPELINE MATERIALS	699.31	0.00	699.31
83960	08/31/2017	4501	WEST COAST SAND AND GRAVEL, INC.	606.37	0.00	606.37
83961	08/31/2017	63471	XANTHE CORP	45.50	0.00	45.50
83962	08/31/2017	4837	XEROX CORPORATION	774.67	0.00	774.67
83963	08/31/2017	3699	ATSPS/HERTZ PROCESSING	21.00	0.00	21.00
83964	08/31/2017	3699	BEDIR, ISIS	250.00	0.00	250.00

**CITY OF LAKEWOOD
SUMMARY CHECK REGISTER**

CHECK #	CHECK DATE	VEND #	VENDOR NAME	GROSS	DISC.	CHECK AMOUNT
83965	08/31/2017	3699	BOOGAARD, JOHN	128.00	0.00	128.00
83966	08/31/2017	3699	BURNS, LAUREN	250.00	0.00	250.00
83967	08/31/2017	3699	DUNCAN, NORMA	15.00	0.00	15.00
83968	08/31/2017	3699	GUASCHINO, ERIC	250.00	0.00	250.00
83969	08/31/2017	3699	GUERRERO, JULIA	240.00	0.00	240.00
83970	08/31/2017	3699	H P ASSOCIATES	1,498.62	0.00	1,498.62
83971	08/31/2017	3699	KING, VIRGINIE	250.00	0.00	250.00
83972	08/31/2017	3699	MENDOZA, NOE	250.00	0.00	250.00
83973	08/31/2017	3699	PANGANIBAN, ANTOINETTE	250.00	0.00	250.00
83974	08/31/2017	3699	TORRES, IMELDA	250.00	0.00	250.00
83975	08/31/2017	3699	VILLANUEVA, WILLIAM	250.00	0.00	250.00
Totals:				<u>818,352.08</u>	<u>6.69</u>	<u>818,345.39</u>

**CITY OF LAKEWOOD
SUMMARY ACH/WIRE REGISTER AUGUST 2017**

ACH date	Amount	Recipient	Purpose	Period
8/3/17	119,672.27	IRS via F&M	Fed taxes	Jul 16-29, 2017
8/3/17	28,026.45	EDD	State taxes	Jul 16-29, 2017
8/3/17	7,615.65	Southland C/U	employee savings account	Jul 16-29, 2017
8/3/17	4,128.50	F&A Fed C/U	employee savings account	Jul 16-29, 2017
8/3/17	8,609.44	MidAmerica	ARS aka APPLE	Jul 16-29, 2017
8/3/17	3,425.00	PARS via U.S. Bank	excess stackable plan	Jul 16-29, 2017
8/3/17	7,278.04	PARS via U.S. Bank	stackable plan	Jul 16-29, 2017
8/9/17	86,077.09	CalPERS	PERS contribution	Jul 16-29, 2017
8/17/17	127,861.20	IRS via F&M	Fed taxes	Jul 30-Aug 12, 2017
8/17/17	30,601.82	EDD	State taxes	Jul 30-Aug 12, 2017
8/17/17	7,615.65	Southland C/U	employee savings account	Jul 30-Aug 12, 2017
8/17/17	4,128.50	F&A Fed C/U	employee savings account	Jul 30-Aug 12, 2017
8/17/17	32,387.63	PARS via U.S. Bank	defined benefit; retirement	Jul 30-Aug 12, 2017
8/17/17	8,227.09	MidAmerica	ARS aka APPLE	Jul 30-Aug 12, 2017
8/17/17	10,522.50	PARS via U.S. Bank	stackable plan	Jul 30-Aug 12, 2017
8/17/17	19,021.98	VOYA	VOYA 457	Jul 16-29, 2017
8/17/17	13,283.09	VOYA	VOYA 401(a)	Jul 16-29, 2017
8/18/17	18,744.32	VOYA	VOYA 457	Jul 16-29, 2017
8/18/17	13,121.74	VOYA	VOYA 401(a)	Jul 16-29, 2017
8/18/17	57,432.69	City Light & Power	monthly maint fee	Aug 2017
8/22/17	85,900.88	CalPERS	PERS contribution	Jul 30-Aug 12, 2017
8/30/17	100,969.91	IRS via F&M	Fed taxes	Aug 13-26, 2017
8/30/17	22,296.90	EDD	State taxes	Aug 13-26, 2017
8/31/17	18,173.90	VOYA	VOYA 457	Aug 13-26, 2017
8/31/17	12,515.47	VOYA	VOYA 401(a)	Aug 13-26, 2017
8/31/17	7,173.66	MidAmerica	ARS aka APPLE	Aug 13-26, 2017
8/31/17	10,311.34	PARS via U.S. Bank	stackable plan	Aug 13-26, 2017

Council Approval

Date

City Manager

Attest

City Clerk

Director of Administrative Services

**D
I
V
I
D
E
R
S
H
E
E
T**

COUNCIL AGENDA
September 12, 2017

TO: The Honorable Mayor and City Council

SUBJECT: Monthly Report of Investment Transactions

INTRODUCTION

In accordance with California Government Code Section 53607, the City Council has delegated to the City Treasurer the responsibility to invest or to reinvest funds, or to sell or exchange securities so purchased. The California Government Code Section 53607 requires that, if such responsibility has been delegated, then the Treasurer “shall make a monthly report of those transactions to the legislative body.” In compliance with this requirement, the Monthly Report of Investment Transactions is being rendered to be received and filed.

STATEMENT OF MONTHLY ACTIVITY

<u>Date</u>	<u>Amount at Cost</u>	<u>Vehicle</u>	<u>Transaction</u>
07-01-2017	\$ 15,821.48	FNMA	Paydown ^{1.646%}
07-01-2017	\$ 18,333.69	FNMA	Paydown ^{1.55%}
07-01-2017	\$ 32,733.41	FNMA	Paydown ^{1.246%}
07-01-2017	\$ 70,480.44	FNMA	Paydown ^{1.785%}
07-01-2017	\$ 36.63	FNMA	Interest ^{1.246%}
07-01-2017	\$ 690.58	FNMA	Interest ^{1.646%}
07-01-2017	\$ 245.17	FNMA	Interest ^{1.898%}
07-01-2017	\$ 204.84	FNMA	Interest ^{1.55%}
07-01-2017	\$ 299.41	FNMA	Interest ^{1.785%}
07-03-2017	\$ 12.57	MMT	Interest
07-05-2017	\$ 728,174.22	CD	Sell
07-05-2017	\$ 730,562.68	TREAS	Purchase
07-06-2017	\$ 4,999.48	TREAS	Sell
07-08-2017	\$ 825.00	CORP	Interest ^{1.65%}
07-10-2017	\$ 6,813.19	CD	Interest ^{1.89%}
07-13-2017	\$ 250,000.00	LAIF	Withdrawal
07-14-2017	\$ 26,923.82	LAIF	Interest ^{0.92%}
07-15-2017	\$ 4,287.50	CORP	Interest ^{2.45%}
07-16-2017	\$ 4,531.25	CORP	Interest ^{1.25%}
07-17-2017	\$ 75,289.06	CORP	Sell
07-17-2017	\$ 84,914.15	CORP	Purchase
07-19-2017	\$ 1,642.50	SUPRA	Interest ^{0.875%}
07-19-2017	\$ 3,937.50	FHLMC	Interest ^{0.875%}
07-20-2017	\$ 3,000,000.00	LAIF	Withdrawal
07-23-2017	\$ 3,937.50	CORP	Interest ^{2.25%}
07-27-2017	\$ 300,000.00	LAIF	Withdrawal

Monthly Report of Investment Transactions

Sept 12, 2017

Page Two

07-27-2017	\$	2,318.75	CORP	Interest	2.65%
07-31-2017	\$	5,890.63	TREAS	Interest	1.625%
07-31-2017	\$	1,215.00	CORP	Interest	1.80%
07-31-2017	\$	8,750.00	TREAS	Interest	1.25%
07-31-2017	\$	41.39	CAMP	Interest	1.12%
07-31-2017	\$	633.22	CAMP	Interest	1.12%

RECOMMENDATION

It is recommended that the City Council receive and file the Monthly Report of Investment Transactions rendered for the month of July 2017.

for Diane Perkin
Director of Administrative Services



Thaddeus McCormack
City Manager



**D
I
V
I
D
E
R
S
H
E
E
T**

COUNCIL AGENDA
September 12, 2017

TO: The Honorable Mayor and City Council

SUBJECT: Mayfair High School Homecoming Parade Permit

STATEMENT OF FACTS

Mayfair High School has submitted an application for a Homecoming Parade Permit.

The scheduled parade date is Friday, October 6, 2017, between 3:30 p.m. and 4:30 p.m. The parade would start at Fidler Avenue and South Street (across from Mayfair Park), proceed east on South Street to Woodruff Avenue, then north on Woodruff Avenue to Mayfair High School. This year's parade will consist of approximately twelve convertible cars.

The parade permit was directed to the Sheriff's Station for review and approval. Lakewood's service area lieutenant will supervise parade activities.

It is staff's opinion that this event: 1) will not substantially interrupt the safe and orderly movement of other traffic contiguous to its route; 2) will not require a significant number of law enforcement officers to properly police the parade route; 3) will not unduly interfere with proper fire and police protection or ambulance services; and 4) will proceed from its point of origin to its point of destination expeditiously and without unreasonable delays en route.

RECOMMENDATION

Staff recommends the City Council approve the application of Mayfair High School for a permit to conduct their annual Homecoming parade on October 6, 2017.

Carol Flynn Jacoby 
Assistant City Manager

Thaddeus McCormack 
City Manager

**D
I
V
I
D
E
R
S
H
E
E
T**

COUNCIL AGENDA

September 12, 2017

TO: The Honorable Mayor and City Council

SUBJECT: Adopt a Resolution Appointing a Member and Alternates to the Governing Board of the Los Angeles Gateway Region Integrated Regional Water Management Joint Powers Authority

INTRODUCTION

The City of Lakewood joined the Los Angeles Gateway Region Integrated Water Management Authority and Joint Powers Authority on July 24, 2007.

STATEMENT OF FACT

Currently, Director of Public Works Lisa Rapp is the primary board member, and Director of Water Resources Jason Wen and Public Works Environmental Programs Manager Konya Vivanti serve as the alternates. The bylaws of the GWMA allow for the appointment of up to three alternates, and all must be reappointed every two years. Staff proposes that a third alternate be added: Water Administration Manager, Toyasha Sebbag. These appointees will serve a 2 year term effective from October 1, 2017 to September 30, 2019.

RECOMMENDATION

Staff recommends the following action:

1. Approval of the proposed resolution appointing one primary board member and three alternate board members representing Lakewood with Gateway Region Integrated Regional Water Management Joint Powers Authority.

Lisa Ann Rapp 
Director of Public Works

Thaddeus McCormack 
City Manager

RESOLUTION NO. 2017-48

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF
LAKEWOOD APPOINTING A MEMBER AND ALTERNATES
TO THE LOS ANGELES GATEWAY REGION INTEGRATED
REGIONAL WATER MANAGEMENT JOINT POWERS
AUTHORITY GOVERNING BOARD

WHEREAS, the Los Angeles Gateway Region Integrated Water Management Joint Powers Authority (GWMA) was formed in 2007 in response to the passage of two voter approved water bonds; Proposition 50, passed in 2002 and Proposition 84, passed in 2006; and

WHEREAS, the Lakewood is a member of the GWMA; and

WHEREAS, under the GWMA Joint Powers Agreement and the GWMA Bylaws, each member agency shall appoint one Member and up to three Alternate Members; and

WHEREAS, pursuant to the GWMA Bylaws the Member and Alternate Members appointed by this resolution shall hold office until September 30, 2019.

NOW, THEREFORE, BE IT RESOLVED as follows:

1. Effective October 1, 2017, Lisa Rapp is appointed to serve as the GWMA Board Member representing Lakewood.
2. Effective October 1, 2017, Jason Wen, Konya Vivanti, and Toyasha Sebbag are appointed to serve as alternate Board Members representing Lakewood.

PASSED, APPROVED, AND ADOPTED at the CITY COUNCIL MEETING of the CITY OF LAKEWOOD on this 12th day of SEPTEMBER, 2017.

Mayor

ATTEST:

City Clerk

**D
I
V
I
D
E
R
S
H
E
E
T**

COUNCIL AGENDA

September 12, 2017

TO: The Honorable Mayor and City Council

SUBJECT: Amendment of Agreement with Willdan Engineering for Additional Services for the Prop. 84 Grant – Paramount Blvd. Drainage and Landscape Project

INTRODUCTION

The City of Lakewood received a Proposition 84 Grant for the conversion of the landscaping on the two side panels on Paramount Blvd. between Carson St. and Del Amo Blvd. Turf and trees would be converted to drought tolerant landscape, and on-street drainage would be improved as provision would be made for urban runoff and stormwater to infiltrate into the side panels.

STATEMENT OF FACT

The city's subrecipient grant agreement states the cost of the project will be \$2,027,418 million, and the grant will cover approximately half of the cost, with the city contributing \$1,027,418 of our own funds to the project. Our share of the funding is proposed to be from Measure R, and there is sufficient fund balance to allow for the allocation of funding for this project.

We are utilizing the services of Willdan through their on-call agreement with us, for assistance in reporting, as well as for design and construction support of the project. They have previously assisted staff in the preparation of the grant application and all of the post award documents for the grant agreement required by the granting agency. They initially provided a proposal of \$365,580 for their services with a fully detailed scope of work to match the requirements of the grant. Several months ago a revised proposal for an additional \$19,196 was submitted for storm water compliance, labor compliance, geotechnical and survey requirements which was not known at the time of the initial proposal.

RECOMMENDATION

Staff recommends that the City Council:

1. Authorize Willdan Engineering to provide additional design and construction support services in the amount of \$19,196 for the Prop. 84 Grant – Paramount Blvd. Drainage and Landscape Project under their existing on-call agreement with the City.

Lisa Ann Rapp 
Director of Public Works

Thaddeus McCormack 
City Manager

**D
I
V
I
D
E
R
S
H
E
E
T**

COUNCIL AGENDA
September 12, 2017

TO: The Honorable Mayor and City Council

SUBJECT: Community Safety Commission Recommendation – Disabled Person Parking

INTRODUCTION

The Community Safety Commission met on August 7th, 2017 to consider various community safety matters that included the consideration of a request for a disabled person parking space at 21127 Pioneer Boulevard.

STATEMENT OF FACT

On August 7th, the Community Safety Commission approved a request for a disabled person parking space at 21127 Pioneer Boulevard. The resident requested the space because his wife drives him to where he needs to go as he does not drive, and he finds it easier to load and unload at the curb. The resident stated that parking is always limited in front and on the side of his home because of the tenants of the apartments across the street. Staff verified the placard number given and monitored the parking in the area to find that it was normally limited at the address.

RECOMMENDATION

The Community Safety Commission recommends that the City Council adopt the attached resolution authorizing installation of a disabled person designated parking space at 21127 Pioneer Boulevard.

Lisa Ann Rapp
Director of Public Works



Thaddeus McCormack
City Manager



RESOLUTION NO. 2017-49

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF
LAKEWOOD ESTABLISHING DISABLED PERSON
DESIGNATED PARKING ON THE WEST SIDE OF PIONEER
BOULEVARD WITHIN THE CITY OF LAKEWOOD

THE CITY COUNCIL OF THE CITY OF LAKEWOOD DOES RESOLVE AS FOLLOWS:

SECTION 1. This Resolution is enacted pursuant to Section 21458 and 22507 of the Vehicle Code of the State of California, and Section 3250.2 of the Lakewood Municipal Code.

SECTION 2. Disabled person designated parking is hereby established on the west side of Pioneer Boulevard, beginning thirty eight (38) feet north of the north curb line of Massinger Street, continuing north for a distance of twenty four (24) feet within the City of Lakewood. No vehicle shall stop, stand or park in said parking restriction unless displaying a special identification license plate or placard issued by the Department of Motor Vehicles pursuant to Section 22511.55 of the California Vehicle Code.

SECTION 3. This resolution shall be effective as long as said restriction is painted and posted in accordance with the requirements of Vehicle Code Section 22511.7 of the California Vehicle Code. In addition, this resolution shall be in effect only as long as George Wicks, a physically disabled person, occupies the house at 21127 Pioneer Boulevard.

SECTION 4. This resolution has been adopted pursuant to a Community Safety Commission recommendation.

ADOPTED AND APPROVED this 12th day of September, 2017.

Mayor

ATTEST:

City Clerk

**D
I
V
I
D
E
R
S
H
E
E
T**

COUNCIL AGENDA
September 12, 2017

TO: The Honorable Mayor and City Council

SUBJECT: Community Safety Commission Recommendation – Removal of a Disabled Person Parking Space

INTRODUCTION

The Community Safety Commission met on August 7, 2017 to review various community safety matters that included requests to remove the disabled person parking space at 5658 Pepperwood Avenue.

STATEMENT OF FACT

The Public Works Department recently received a request for the removal of the disabled person parking space at 5658 Pepperwood Avenue. Staff verified that the disabled person who obtained the disabled person parking space no longer resides at the address. Therefore, the parking restriction should be removed.

RECOMMENDATION

The Community Safety Commission recommends that the City Council adopt the attached resolutions authorizing the removal of disabled person designated parking at 5658 Pepperwood Avenue.

Lisa Ann Rapp
Director of Public Works



Thaddeus McCormack
City Manager



RESOLUTION NO. 2017-50

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKEWOOD RESCINDING A RESOLUTION ESTABLISHING A PHYSICALLY HANDICAPPED PERSONS DESIGNATED PARKING SPACE WITHIN THE CITY OF LAKEWOOD

THE CITY COUNCIL OF THE CITY OF LAKEWOOD DOES RESOLVE AS FOLLOWS:

SECTION 1. Resolution No. 2013-56 entitled:

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKEWOOD ESTABLISHING A DISABLED PERSONS DESIGNATED PARKING SPACE ON THE EAST SIDE OF PEPPERWOOD AVENUE WITHIN THE CITY OF LAKEWOOD

is hereby rescinded.

SECTION 7. This resolution has been adopted pursuant to a Community Safety Commission recommendation.

ADOPTED AND APPROVED this 12th day of September, 2017.

Mayor

ATTEST:

City Clerk

**D
I
V
I
D
E
R
S
H
E
E
T**

TO: The Honorable Mayor and City Council

SUBJECT: Authorization for Willdan Engineering for Preparation of Pavement Management Database and Program (Revised)

INTRODUCTION

Lakewood's computerized Pavement Management System was prepared by Willdan for FY 2006-07, over ten years ago. It is now time to update both the PMS software program and more importantly, the inspection data for our street system.

STATEMENT OF FACT

Prior to the 2006 computerized program, staff performed the responsibilities of pavement management using a map to manually document our field observations of the streets, and by 2006, the city was well into our multi-year plan to repave the entire city. We were required to do a computerized PMS to be eligible to receive the Prop C funds as well as other funding sources. The 2006-07 PMS report was a result of an extensive field inspection and evaluation by the city's on-call engineering consultant, Willdan Engineering. The data was housed in a software program that had been purchased by Willdan for use by their clients called PavementView Plus by Cartegraph, and it was widely used and highly regarded. It is now no longer supported by the company, and can no longer be used for this purpose.

Since that time, staff has kept careful notes on the street paving projects we have completed along with their dates for eventual input into an update of the PMS data. Updating the system was not previously urgent because our streets were indeed in very good condition based upon our city-wide paving program. Now, we are required to certify a Pavement Condition Index (PCI) for the more flexible uses of SB-1 funds. We believe that our PCI is in the range of 83-85, however, we cannot generate a computerized report to document a PCI.

PavementView Plus is no longer supported or updated by its original developer. This is not uncommon for mature software programs and we have experienced this same issue with other office software programs we have used in the past, even Windows Operating Systems. In California, 80-90% of public agencies have adopted the use of Micro PAVER, a software program developed and updated by the U.S. Army Corps of Engineers and distributed through American Public Works Association. It has been updated over time to take advantage of advances in computer technology, and is now on Version 7.0. Willdan owns a copy of the program and uses it to serve their client agencies, so we will not need to purchase the program directly. This makes sense because we do not have the staff or expertise to operate the program in-house. They have already changed over most of their clients from the previous software program to MicroPaver. In addition, Willdan has developed various customizations to MicroPaver that allow coordination with most cities' GIS Systems that facilitate generation of visuals such as maps and graphs. Willdan has also added customization that allows calculation

and inclusion of a Structural Index in addition to the PCI, which adds to the effectiveness of the results.

Just as in the 2006-07 effort, the most significant cost for the project is in the inspection of the streets, evaluation of their condition, documentation, data entry and analysis, and report generation. Every street and alley within the City will be inspected by Willdan staff who are trained and experienced in Pavement Management systems and inspection. Preparation of an updated PMS is suggested every three years by the Prop C guidelines and every five years in Measure M. It is important to have a functioning system with current data so that we can certify to the CTC that our Pavement Condition Index exceeds the threshold of 80, thus allowing us to spend our SB-1 funds on a broader range of eligible uses. The other important use of this data will be to document the history of our City-wide paving program and prioritize paving projects going forward into the future based upon the performance of our streets over time.

Staff proposes to utilize the services of Willdan through their on-call agreement with the City of Lakewood, for inspection, data collection and analysis, and report generation. They prepared Pavement Management Systems for a number of other cities that they serve, and have years of experience working on such systems. They have provided a proposal in the amount of \$69,855 for their services with a fully detailed scope of work. Funds were previously appropriated from the City's new SB-1 transportation funding, and this project was authorized by Council to be submitted to the CTC. **Since the preparation of this report, staff received some new information that use of SB-1 funds may not be eligible for this activity since we have not yet certified that our PCI is 80 or above. This activity would be eligible for use of both Measure R and Measure M funds, which is reflected in the revised recommendation below.**

RECOMMENDATION

Staff recommends that the City Council:

1. Authorize Willdan Engineering to prepare a new Pavement Management System under their existing on-call agreement with the City in the amount of \$69,855 **and authorize the use of Measure R or Measure M funds for this purpose.**

Lisa Ann Rapp 
Director of Public Works

Thaddeus McCormack 
City Manager

**D
I
V
I
D
E
R
S
H
E
E
T**

Public Hearings

COUNCIL AGENDA

September 12, 2017

TO: The Honorable Mayor and City Council

SUBJECT: Appeal of Conditional Use Permit No. 948, 6741 Carson Street

INTRODUCTION

The appellant, Mr. Arthur Pinette, is appealing the Planning and Environment Commission's (PEC) decision to approve a Conditional Use Permit (CUP) and the related Mitigated Negative Declaration for the establishment of a carwash and a car service building at 6741 Carson Street.

STATEMENT OF FACTS

On July 6, 2017 the PEC conducted a public hearing for CUP No. 948 and following the hearing, the PEC adopted Resolution No. 14-2017 approving CUP No. 948 and the related Mitigated Negative Declaration. On July 26, 2017, the appellant, Mr. Arthur Pinette, submitted an appeal of the PEC's approval of CUP No. 948. The appellant cites noise, fumes, smells, congestion of idling cars, parking, removal of trees as infringements of rights to peace and quiet, and the lowering of property values as a result of the above infringements. The appellant also submitted a petition objecting to proposed project. The following July 6, 2017 PEC meeting items are attached to this report:

1. Report to the PEC on the application for CUP No. 948, which includes:
 - a. Staff report for on the application for CUP No. 948.
 - b. Letter from the Los Angeles County Sheriff's Department containing the findings of their review of the application for CUP No. 948 and recommended conditions.
 - c. Initial Study, Environmental Checklist, and appendices pursuant to CEQA.
 - d. Vicinity Map and Aerial View of the property and the surrounding area.
 - e. The following exhibits:
 - i) "A" – Site Plan
 - ii) "B" – Floor Plan and Roof Plan for Carwash
 - iii) "C" – Equipment Layout for Carwash
 - iv) "D" – Floor Plan and Roof Plan for Car Service Building
 - v) "E" – Elevations for Carwash
 - vi) "F" – Elevations for Car Service Building
 - vii) "G" – Canopy Plan and Elevations
 - viii) "H" – Planting Plan
 - ix) "I" – Irrigation Plan
 - f. PEC Resolution No. 14-2017 approving CUP No. 948, with conditions of approval (signed).
2. Copy of the slideshow from the July 6, 2017 PEC public hearing.
3. Copy of the audio recording from the July 6, 2017 PEC public hearing.
4. Documents from the appellant appealing the PEC approval of CUP No. 948.

When the City Council reviews or considers an appeal of a CUP, LMC Section 9407.4 states that no new matter or evidence shall be received or considered by the City Council, and City Council shall make its determination on the bases of the record brought before it on appeal or review.

LMC Section 9407.5 states that the City Council may, by majority action at any time during the course of the review of a decision of the Planning Commission under this Part brought before it by either appeal or review, determine that a new hearing should be heard for the purpose of taking new or additional evidence in respect to this matter. In such an event, a new hearing shall be set by the City Council, at which time the public will be entitled to appear to present new or additional evidence for or against said application.

RECOMMENDATION

Staff recommends the City Council deny the appeal and affirm the PEC's decision to approve CUP No. 948.

Sonia Dias Southwell, AICP 
Director of Community Development

Thaddeus McCormack 
City Manager

APPLICATION FOR: Conditional Use Permit No. 948

LOCATION: 6741 Carson Street

APPLICANT: Mr. Mario S. Torres representing SRK Architects

PROPOSED USE: Establishment of a carwash with covered outdoor vacuum stations and a car service building

ZONING: C-3 (Intermediate Commercial)

INTRODUCTION

The applicant, Mr. Mario S. Torres representing SRK Architects, is requesting approval of Conditional Use Permit No. 948 to establish a carwash with covered outdoor vacuum stations and a car service building at 6741 Carson Street and the related Mitigated Negative Declaration. The site is designated by the General Plan for Commercial uses and the site is located in the C-3 (Intermediate Commercial) zone.

Pursuant to LMC Section 9341.B, all uses in the C-1 (Neighborhood Commercial) zone “shall be conducted wholly within a building except a plant nursery, gasoline, oil or petroleum product pumps, newsstand, outdoor advertising, commercial parking lots, vehicular parking and loading spaces, *vacuums, vacuum stations, and other outdoor equipment and activities normally associated with a carwash as permitted in conjunction with such facilities*, and other outdoor accessory uses, displays, and storage, which are normal and incidental to the primary permitted commercial use, where otherwise allowed or authorized by this Part. No required vehicle storage space or landscaped area shall be devoted to outdoor displays or storage.” LMC Section 9347.A allows any use permitted as a matter of course in the C-1 zone to be in the C-3 zone under the same specified conditions.

Pursuant to LMC Section 9347.D.11 a Conditional Use Permit is required for establishment of a carwash in the C-3 zone. That Section allows for “...vehicle wash racks, carwashes, or any permanent facility offering hand and/or mechanical washing, which includes detailing, waxing, or cleaning of non-commercial vehicles, and whether self- or full-service. Carwash facilities may include outdoor vacuums, vacuum stations, and other outdoor equipment and activities normally associated with a carwash. Other activities and uses may co-locate with a carwash as deemed acceptable by the Planning and Environment Commission.”

STATEMENT OF FACTS

Area Description

The project site is on the north side of Carson Street, approximately 350 feet west of the intersection of Los Coyotes Diagonal and Carson Street. To the north and west, across a 20-foot wide public alley, are single-family residential dwellings in the R-1 (Single-Family Residential) zone. To the east is a commercial strip center in the C-3 zone. To the south, across Carson Street within the City of Long Beach, is the Heartwell golf course. The portion of Carson Street adjacent to the site is within the City of Long Beach (see Vicinity Map and Aerial View). The closest residential properties are approximately 20 feet north and east of the site. The following table lists the land uses and zoning designations for the site and the surrounding properties.

AREA	EXISTING LAND USE	ZONE DESIGNATION
Subject Site	Commercial	C-4 (General Commercial)
North	Single-Family Homes	R-1 (Single-Family Residential)
East	Commercial	C-4 (General Commercial)
South	Heartwell golf course	P (Park - City of Long Beach)
North	Single-Family Homes	R-1 (Single-Family Residential)

Site Description

The project site is rectangular in shape and is approximately 1.11 acres in area and will have a net area of 1.06 acres following five-foot alley dedications along portions of the north and west property lines and a 10-foot by 10-foot truncation of the northwest corner of the property as part of the alley dedications. The site is accessed primarily from Carson Street and has 173 feet of street frontage. The easterly 20 feet of the property is a vehicle easement used for access by the adjacent commercial site. The site is developed with a former 4,888 square-foot, single-story, McDonald's drive-thru restaurant. There is also a freestanding sign (but lacking a sign face), three flagpoles, a trash enclosure, a paved parking lot, and ornamental landscaping.

Project Description

The project calls for conversion of the existing restaurant building into a self-service style of carwash and for the construction of a new car service building. Most of the former 4,888 square-foot McDonald's drive-thru restaurant will be demolished, but the west wall of the former restaurant will be incorporated into the new carwash building. The existing trash enclosure will be demolished and replaced with a new trash enclosure.

The new carwash building will approximately 3,100 square feet and includes the main car wash tunnel, an equipment room with openings in the wall to support vending machines for carwash customers, a storage room, bathroom, office, electrical equipment room, a canopy above the

tunnel entrance, and a canopy above the customer waiting/viewing area. The carwash building will have an overall height of 30 feet.

A new 3,900 square-foot car service building will be built at the north portion of the property. The car service building will include a reception area, bathroom, storage room, and five service bays. Potential auto services may include auto repair, oil and lube services, tire installation, window tinting and any other automobile service or services as allowed by Section 9347.B.3 of the Lakewood Municipal Code. Section 9347.B.3 permits automobile repair garages in the C-3 zone but prohibits body and fender work or auto painting businesses.

The site will have two entrance/exit driveway approaches at Carson Street. Two additional access points will connect with the alley at the west side of the property. As noted above, there will be five-foot alley dedications along portions of the north and west property lines and a 10-foot by 10-foot truncation of the northwest corner of the property as part of the alley dedications. The dedicated alley must be improved and paved to the satisfaction of the Director of Public Works.

There will be two carwash queue lanes. The queuing lanes will have a self-serve pay station where customers will select the type of wash and make their payment. The two lanes converge to the entrance to the carwash tunnel. The carwash tunnel will include a blower to dry cars as they exit. After exiting the carwash tunnel, drivers may exit directly onto Carson Street, or turn to the left to gain access to the self-serve vacuum stations.

The project will have 27 parking spaces including two ADA accessible parking spaces. There will also be one 10' x 25' loading zone space near the northwest corner of the building. A covered trash enclosure and vacuum equipment enclosure will be located on the east side of the site. The 16 spaces on the east side of the carwash building will be used as covered outdoor vacuum stations. The vacuum stations will be covered with fabric canopies. The overall height of the vacuum canopies will be less than 14 feet. An 88 square-foot vacuum enclosure will be constructed at the east side of the site at the north end of the vacuum canopies. The enclosure will be of masonry construction to reduce noise. The applicant's proposed hours of operation are shown below and are incorporated into the proposed Resolution of Approval.

Building	Monday-Saturday	Sundays
Carwash	7:30 AM to 8:00 PM or 30 minutes after dusk, whichever comes first	8:00 AM to 8:00 PM or 30 minutes after dusk, whichever comes first
Car service building	7:30 AM to 7:00 PM	9:00 AM to 7:00 PM

The applicant intends to utilize the existing freestanding sign and three flag poles adjacent to Carson Street as part of this project.

Development Review Board

The Development Review Board reviewed DRB Case No. 8607 on January 25, 2017 for the proposed project and took the following actions:

RECOMMEND APPROVAL to the Planning and Environment Commission (PEC), of a Conditional Use Permit (CUP) to allow the installation and operation of an automated car wash in accordance with the provisions of LMC Section 9347.D.3. and subject to the following conditions.

This recommended action was taken by unanimous vote of a quorum of the Development Review Board (DRB) in consideration that all the required findings specified by the Lakewood Municipal Code (LCM) Section 9484.1 are being made in a positive manner supporting the development of the related project. This action is not appealable as it is an advisory recommendation only. The Development Review Board is recommending to the PEC the following conditions, which if adopted by the PEC shall be completed by the applicant to the satisfaction of the Community Development Department:

1. Conditional Use Permit. The applicant shall submit for review revised plans and obtain approval of a CUP from the PEC to allow the installation and operation of a new car wash in conformance with LMC Section 9347.D.3.
2. Revised Plans. The DRB recommends that the plans be revised as follows:
 - All driveways shall be 24' wide.
 - Outline blue path of travel with 3" white stripe when crossing or using driveway.
 - Delete the western "escape drive (old drive-thru lane) and direct this drive to the alley.
 - Replace the western drive with a landscaped area that can be used as an on-site bioswale.
 - Remove the north doors on the 5-bay repair facility to reduce impacts on adjacent homes.
 - Add detail regarding night security lighting and security camera system.
 - Add detail regarding on-site directional signage.
 - Submit detail of landscape and irrigation plans.
 - Determine if sewer has adequate capacity.
3. Compliance. All existing structures shall be properly permitted and sited in compliance with the Lakewood Municipal Code. Any non-complying structures shall either be removed or properly permitted, prior to final inspection of the requested improvements. Signage shall require additional approval from the Development Review Board.
4. NOV. There is an active code enforcement case related to this property. A Notice of Violation for Service Request Number 382219 was issued on March 3, 2016. The violations

listed shall be resolved and the case closed prior to final inspection. The demolition of the existing building and trash enclosure with permits, closing existing permits and removal of all waste and debris from the site should resolve the listed issues.

5. Permits. After obtaining approval of the CUP, the applicant shall submit the revised plans; obtain permits to install a new car wash in accordance with the approved plans, which are on file with the Community Development Department. All construction shall obtain a successful final inspection.
6. Facility Operation. The car wash shall be operated in compliance with LMC Section 9347.D.3. in such a manner that it does not become unsightly, produce disturbing noise or odors or interfere with the normal ingress and egress movements.
7. Materials. The applicant shall coordinate and/or match throughout, all architectural elements, including fascia. All windows and doors shall match in terms of trim and style on each elevation. All roofing materials shall match and all exterior materials, textures and colors shall blend.
8. Paint Scheme. The applicant shall install the requested paint scheme, in accordance with the approved plans, which are on file with the Community Development Department
9. Trash Collection. Prior to final inspection the trash collection procedures and enclosures shall comply with current City requirements. This includes capacity for recycling (split or double bin) and organic waste storage as required to comply with AB 1826 (2014). All trash bins shall be in an enclosure. The trash enclosure shall be constructed with: a) a rainproof roof, b) welded wire mesh or other acceptable material between the roof and wall leaving no gap greater than two inches wide and c) have a lockable entry door that is a minimum 6'8" in height. The trash enclosure shall be painted one consistent color to be compatible with the adjoining building.
10. Business Licenses. All contractors, including subcontractors, shall have a properly issued city business license. A record of these is required to be given to the inspector at final inspection.
11. Landscaping and Irrigation. The landscape and irrigation shall be installed in accordance with the approved plans. Vegetation shall be installed to provide an attractive and vibrant streetscape with proper maintenance and replacement where necessary.
12. Drought. In response to the on-going drought and state-mandated water conservation measures, the consideration of alternatives to the use of turf is encouraged and the use of high-efficient water-conserving irrigation technology systems (e.g. drip irrigation, low-volume micro-spray rotating irrigation heads, etc.) is highly encouraged. The installation of water-conserving irrigation systems is required if the system is new or is being substantially replaced (50% or more). The installation of landscape and irrigation systems is required to comply with California Code of Regulations, Chapter 2.7 Model Water Efficient Landscape Ordinance. Information regarding water conservation/water rebate programs for Lakewood is located at: <http://www.lakewoodcity.org/services/request/water/rebates.asp>.
13. Maintenance. Property owners are required to properly maintain their commercial buildings and surrounding landscaping at all times in an aesthetically pleasing manner and in compliance with the Lakewood Municipal Code (LMC 4323 and 4221.1). This means proper and continuous maintenance of all landscaping and structures including all buildings,

roofs, painting, walls/fences, ADA paths-of travel, parking lot surface and striping. *The DRB recommends that where the blue striped ADA paths-of-travel cross asphalt driveways, that the pathway be outlined with a 3" wide white stripe on each side to increase the visibility of the crosswalk.* Any cracked, faded, stained or peeling painted surface shall be repainted. All exterior surfaces shall be repaired or replaced regularly to provide a new or near-new appearance. All graffiti shall be removed in a timely manner (no more than 7 days). There shall be no dead, diseased, missing or overgrown vegetation. Vegetation shall be properly trimmed in proportion to adjoining structures and shall not encroach onto or into public sidewalks or roadways. Vegetation in the parkway planter shall not exceed six inches in height. Drought tolerant landscaping does require periodic trimming.

Sheriff's Department

The Los Angeles County Sheriff's Department submitted a letter dated June 1, 2017 commenting on the proposed use, which is attached to this report. The Sheriff's Department reports that they conducted a review of calls for service for a two-year time period for the project site and did not find any incidents that directly reflect negatively on the proposed business. However, based on past histories with these types of businesses, the Sheriff's Department requests the following conditions be placed on the proposed business should the Conditional Use Permit be approved. These conditions have been incorporated into the proposed Resolution of Approval and are shown below.

1. Parking should be configured for and maintained with sufficient lighting to illuminate the appearance and conduct of all persons in parking areas.

Resolution wording: Parking shall be configured for and maintained with sufficient lighting to illuminate the appearance and conduct of all persons in parking areas. All exterior lighting shall be designed and arranged so as not to reflect direct or indirect light upon abutting or adjacent properties, with a maximum light spill of point .5 foot candles at grade level.

2. Emphasize the importance of effective communication between the managers of the establishment regarding professional business practices.

Resolution wording: Managers shall emphasize the importance of effective communication between the managers of the establishment regarding professional business practices.

3. Management should have an ongoing liaison relationship with members of the Sheriff's Department, so that communication can be easily facilitated if problems occur.

Resolution wording: Management shall have an ongoing liaison relationship with members of the Los Angeles County Sheriff's Department, so that communication may be easily facilitated if problems occur and to ensure a strong level of communication for crime prevention and problem solving efforts.

4. The establishment should be required to have a working "State of the art" video surveillance system in place to allow Sheriff's personnel to assist in criminal investigations. The storage medium should be secured in such a manner as to not to facilitate the easy removal from unauthorized personnel or employees under duress.

Resolution wording: The carwash and car service buildings shall have working "state of the art" video surveillance system in place to assist Los Angeles County Sheriff's personnel in their criminal investigations. The storage medium shall be secured in such a manner as to not to facilitate the easy removal from unauthorized personnel or employees under duress.

5. The establishment should be required to have a "state of the art" silent robbery alarm system in place to allow employees to promptly report crimes in progress, if they are safely able to do so.

Resolution wording: The carwash and car service buildings shall have a "state of the art" silent robbery alarm system in place to allow employees to promptly report crimes in progress, if they are safely able to do so.

6. No alcohol allowed, including refusal of services to any intoxicated person, or person who is under the influence of a controlled substance.

Resolution wording: Management shall ensure that no alcoholic beverages are allowed on the site and shall refuse services to any intoxicated person, or person who is under the influence of a controlled substance.

7. This CUP shall be subject to a six-month review after the initial opening of the carwash facility allowing input from the Sheriff's Department for any concerns that may arise.

Resolution wording: This CUP shall be subject to a six-month review after the initial opening of the carwash facility to ensure that the facility has complied with the requirements contained in this Resolution and to allow input from the Sheriff's Department for any concerns that may arise.

Accordingly, the above conditions are incorporated into the proposed Resolution of Approval.

Code Requirements

A Conditional Use Permit for the proposed use can only be approved upon findings of the Planning and Environment Commission (PEC) that the proposed use, subject to any conditions imposed, will not be detrimental to surrounding property or residents. A finding that the proposed use is in accord with the following principles and standards is necessary in each case, as specified in LMC Section 9401.

1. *The proposed conditional use shall not be in substantial conflict with the General Plan.*

The subject site is designated for Commercial uses by the General Plan and is in the C-3 (Intermediate Commercial) zone. The proposed use is commercial in nature and therefore compatible with both the General Plan land use designation of the site and with the zoning designation of the site. Potential conflicts with the General Plan relating to specific areas, such as air quality, noise, and traffic, have been addressed in the Environmental Checklist and Initial Study prepared for this project and mitigation measures were identified and are included in the proposed Resolution of Approval.

2. *The nature, condition, and development of adjacent uses, buildings, and structures shall be considered, and no CUP shall be granted where such use will adversely affect or be materially detrimental to said adjacent uses, buildings, or structures.*

Air Quality

During the demolition and construction phase, fugitive airborne dust may impact adjacent uses however such an impact will be less than significant following implementation of the mitigations measures included in the Environmental Checklist and Initial Study prepared for this project.

Hazards and Hazardous Materials

An Asbestos and Lead Paint Survey and Hazardous Building Materials Inventory Report were prepared for this project (see Appendix "F" for report and summary memo). The analysis detected asbestos in some of the roof penetration mastic, 264 fluorescent light tubes and four compact fluorescent light tubes throughout the structure, and a refrigerator and an ice machine. The report includes measures by which the roof mastic should be removed, handled, and disposed of, as well as the fluorescent lighting and refrigerants. These measures have been included as mitigation measures for the project.

Noise

The carwash will include various pieces of mechanical equipment including blowers for drying automobiles, motors, vacuums, and pumps. Blowers for drying automobiles are capable of producing excessive levels of noise. The closest residential properties are single-family homes that are approximately 20 feet to the north and south as measured from

property line to property line. A noise study was prepared for this project (see Appendix "I" contained in the Environmental Checklist and Initial Study).

The noise study found existing off-site traffic noise levels range between 68.5 to 76.63 dB(A) CNEL. Existing traffic noise plus the project levels resulting from additional traffic generated by the project is estimated to be in the range of 68.53 to 76.64 dB(A) CNEL, which is an increase of 0.01 to 0.03 dB(A) CNEL. Therefore, a change in noise from increased vehicle traffic would not be audible.

The noise study found that noise levels from on-site operations of the project could exceed 65dB(A) at nearby residential property lines. That study found that project noise would be reduced to a less than significant level with implementation of the mitigation measures contained in the Environmental Checklist and Initial Study. With mitigation, worst case noise levels at the residential property lines would range from 43 dB(A) (north of the car service building) to 60 dB(A) at a point along the rear property line of 4112 Ostrom Avenue, which is west of the site. Worst case noise levels include 1) all components of the carwash operating including the dryer, 2) all vacuums being utilized, 3) activity in the parking lot such as conversation, doors slamming, engines starting and stopping, and vehicle passage, and 4) use of the car service building as a tire store with all five bays operating and generating noise associated with the operation of air compressors, air impact wrenches, car lifts, tire balancer machines and a variety of other tools.

- 3. The site for a conditional use shall be adequate in size and shape to accommodate the yards, walls, fences, parking and loading facilities, landscaping and other development features required by this Chapter, or as required as a condition in order to integrate said uses with the uses in the neighborhood.*

Properties in the C-3 zone are not required to have minimum setbacks if there are no properties classified for "R" purposes within the same block as the site and the site does not abut any R-1- or R-A-zoned properties. The project will have a 50-foot front yard setback, a four-foot setback at the car service building's east side, and 11'-6" west side yard and 10-foot rear yard setbacks following the required five-foot alley dedications. The project does not propose any new fences or boundary walls.

The project will have 27 parking spaces including two ADA accessible parking spaces. There will also be one 10' x 25' loading zone space near the northwest corner of the building. The 16 spaces on the east side of the carwash building will be used as self-service vacuum stations. The Lakewood Municipal Code does not contain a specific parking standard for carwashes or auto repair business.

Section 9490.1 provides that "where the parking requirements for a use are not specifically defined in this chapter, the same shall be determined by the Director of Community

Development or may be referred to him by the Planning and Environment Commission for such determination. Any determination made by the Director of Community Development shall be subject to review by the Planning and Environment Commission. All such determinations shall be based upon the requirements for the most comparable use specified herein and within the spirit and intent of this chapter.” The project requires a Conditional Use Permit and approval by the Planning and Environment Commission.

For service stations, LMC Section 9490.X requires one parking space for each bay plus two additional spaces for employee parking and that standard was used here for the proposed car service building. The proposed car service building will have five service bays. The project will have 16 vacuum station spaces (including one ADA space), 11 open spaces next to the car service building (including a second ADA space), and one 10' x 25' loading zone space. The applicant has indicated that the project will have a total of six to eight employees (see Architectural Sheet A2.0). Applying LMC Section 9490.X of one parking space for each service bay plus two additional spaces for employees would yield seven parking spaces. Providing an additional two employee parking spaces for the carwash would require a total of nine parking spaces. The project proposes 11 open parking spaces and anticipates up to eight employees. There will be adequate parking to accommodate the project whether it is based on the number of employees or service bays.

4. *The site for the conditional use shall be served by highways or streets adequate in width and improved as necessary to carry the kind and quantity of traffic such use would generate.*

The subject site is served by Carson Street and a public alley. The portion of Carson Street adjacent to the site is within the City of Long Beach and the alley is in Lakewood. A traffic study was prepared for this project. The traffic analysis found that the project will have a less than significant impact with respect to traffic and site queuing. Five-foot alley dedications are required along the site's north and west property lines to comply with current City standards. The dedicated alley must be improved and paved to the satisfaction of the Director of Public Works.

5. *That all other conditions and limitations imposed by this Chapter in connection with the proposed application for a CUP have been made. LMC Sections 9347.D.5 and 9350.B.2 allow Commercial Recreational uses provided that a CUP has been obtained and that the following conditions and standards are met and maintained at all times:*

The analysis which appears above has covered all relevant Lakewood Municipal Code requirements.

CEQA

An Initial Study has been prepared for the proposed project pursuant to Section 15063 of the California Environmental Quality Act (CEQA) Guidelines, as amended. A Mitigated Negative Declaration has been prepared for the project, pursuant to Section 15070 et seq., of the Guidelines. The project was found to have no significant effect on the environment following implementation of the mitigation measures contained therein.

Notification

Notification of the public hearing for this Conditional Use Permit was posted on the City's webpage, mailed to property owners within a 300-foot radius of the subject property, posted at the subject site and in three public places on Thursday, June 22, 2017, pursuant to Section 9422, et seq., of the Lakewood Municipal Code and State Law.

SUMMARY

The applicant is applying for a Conditional Use Permit for the establishment of a carwash facility with covered outdoor vacuum stations and a car service building. The proposed use will be in compliance with the principles and standards under Section 9401 of the Lakewood Municipal Code.

RECOMMENDATION

Staff recommends that the Planning and Environment Commission hold a public hearing and following the hearing move to adopt the attached resolution approving Conditional Use Permit No. 948 subject to the findings and conditions contained therein and approve the associated Mitigated Negative Declaration.



Paul Kuykendall, AICP
Senior Planner



Sonia Dias Southwell, AICP
Director of Community Development



OFFICE OF THE SHERIFF

COUNTY OF LOS ANGELES

HALL OF JUSTICE

JIM McDONNELL, SHERIFF



June 1, 2017

Carol Flynn Jacoby
City of Lakewood
5050 Clark Avenue
Lakewood, California 90712

Dear Mrs. Jacoby:

The purpose of this letter is to advise you regarding the review of the Conditional Use Permit 948 for a "Car Wash and Car Service Establishment."

REVIEW OF CONDITIONAL USE PERMIT (CUP) 948 - Review of the application for Conditional Use Permit at "6741 Carson Street, "Car Wash and Car Service Establishment."

We have conducted a review of calls for service for a two year time period for the business complex located at 6741 Carson Street. We did not find any incidents that directly reflect negatively on the proposed business. There were no complaints to this property. There are no records of any complaints of parking issues directly related to the business/property. However, based on past histories with these types of businesses, we have some concerns regarding these types of establishments.

- Parking should be configured for and maintained with sufficient lighting to illuminate to appearance and conduct of all persons in parking areas.
- Emphasize the importance of effective communication between the managers of the establishment regarding professional business practices.

211 WEST TEMPLE STREET, LOS ANGELES, CALIFORNIA 90012

A Tradition of Service
— Since 1850 —

Mrs. Carol Flynn Jacoby
City of Lakewood
June 1, 2017
Page 2

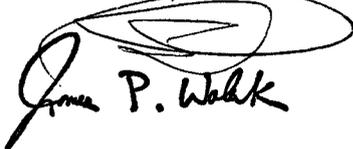
- Management should have an ongoing liaison relationship with members of the Sheriff's Department, so that communication can be easily facilitated if problems occur.
- The establishment should be required to have a working "State of the art" video surveillance system in place to allow Sheriff's personnel to assist in criminal investigations. The storage medium should be secured in such a manner as to not to facilitate the easy removal from unauthorized personnel or employees under duress.
- The establishment should be required to have a "State of the art" silent robbery alarm system in place to allow employees to promptly report crimes in progress, if they are safely able to do so.
- No alcohol allowed, including refusal of services to any intoxicated person, or person who is under the influence of a controlled substance.
- This CUP shall be subject to a six month review after the initial opening of the carwash facility allowing input from the Sheriff's Department for any concerns that may arise.

If this request is approved, we recommend the proposed business of Car Wash and Car Service management should have an ongoing liaison relationship with the Sheriff's Department and the city of Lakewood, to ensure a strong level of communication for crime prevention and problem solving efforts.

If there are any further questions, you may contact Lieutenant Richard Harpham at (562) 623-3603.

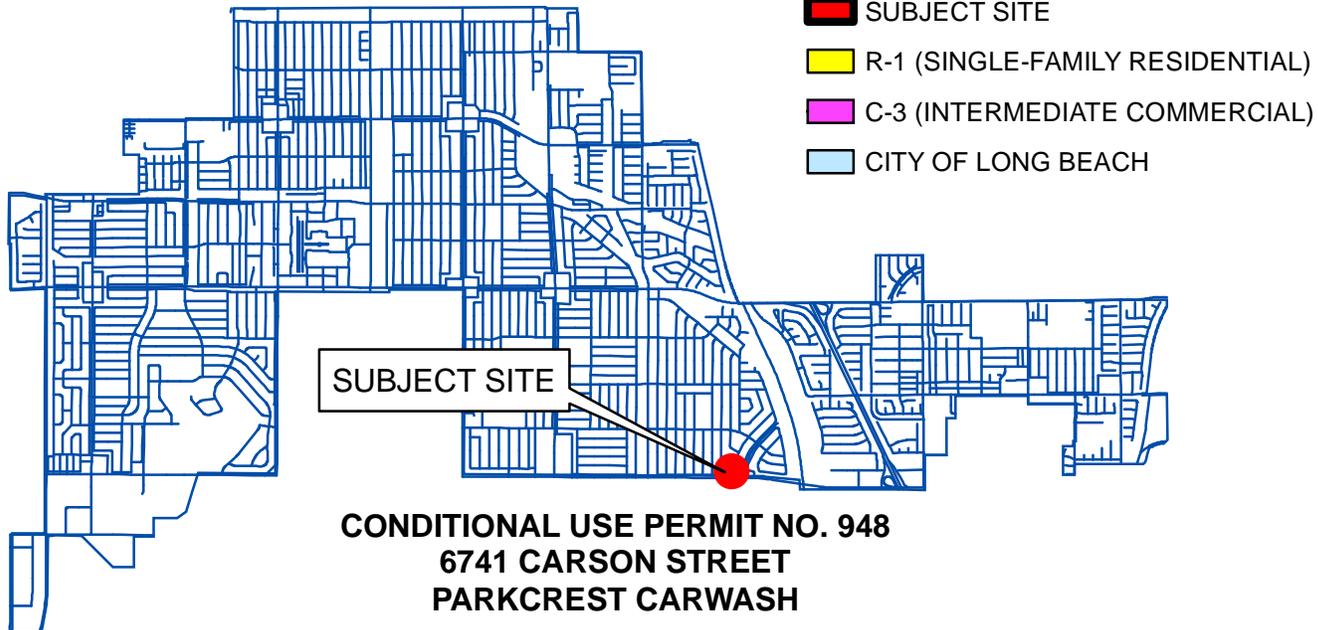
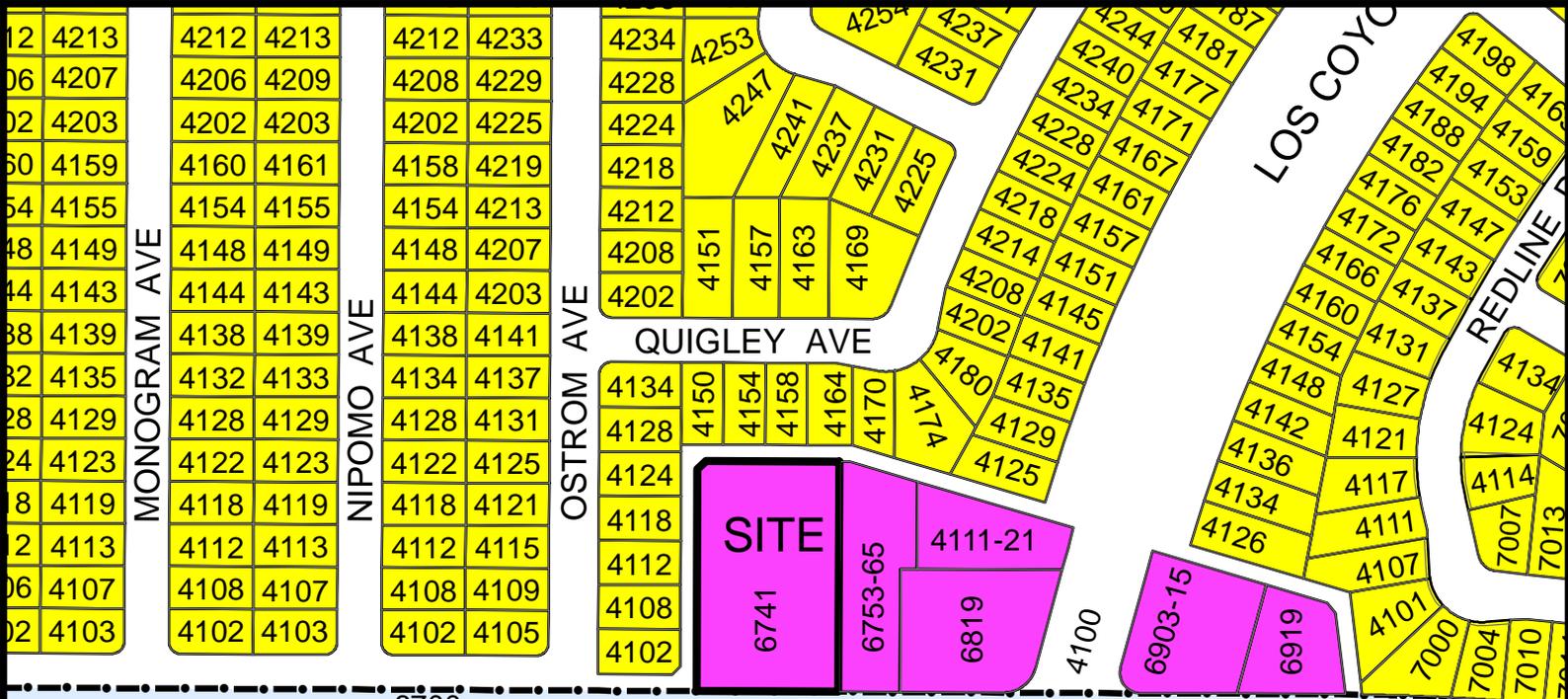
Sincerely,

JIM McDONNELL, SHERIFF

A handwritten signature in black ink that reads "James P. Wolak". The signature is written in a cursive style and is positioned below the typed name "JIM McDONNELL, SHERIFF".

James P. Wolak, Captain
Commander, Lakewood Station

VICINITY MAP



CONDITIONAL USE PERMIT NO. 948
 6741 CARSON STREET
 PARKCREST CARWASH

AERIAL VIEW

SITE

CONDITIONAL USE PERMIT NO. 948
6741 CARSON STREET
PARKCREST CARWASH



EXHIBIT "A"



SITE PLAN KEY NOTES:

- (1) NEW TRUCK ENCLOSURE
- (2) NEW ACCESSIBLE PARKING STALL
- (3) NEW VAN ACCESSIBLE PARKING STALL
- (4) NEW ACCESSIBLE DRIVEWAYS
- (5) NEW VAN BASH PARKING STALLS
- (6) NEW PARKING STALLS
- (7) NEW BUMP
- (8) NEW CURBING
- (9) NEW DRIVEWAY
- (10) NEW CONCRETE CURB
- (11) NEW PLANTING AREA
- (12) NEW CANOPY ABOVE
- (13) EXISTING PLANTING AREA
- (14) EXISTING DRIVEWAY (NO CHANG)
- (15) EXISTING PLANTING AREA
- (16) EXISTING TRANSFORMER
- (17) EXISTING AC. PAVEMENT
- (18) EXISTING CMU WALL
- (19) EXISTING SIGN & FLAG POLES TO REMAIN
- (20) 10'-0" x 25'-0" LOADING AREA

LEGEND:

- — — — — PROPERTY LINE
- — — — — ADA PATH OF TRAVEL
- ◀ — — — — — DOUBLE HEADED POLE
- — — — — CUT OFF WALL RACK
- — — — — LINEAR "WATERPROOF" MOUNTED UNDER CANOPY
- — — — — FORWARD THROW LIGHT POLE CUT OFF
- — — — — PENDANT TYPE "X"
- — — — — UP/DOWN SCIENCE ON MAIN FACADE



2254 S. Figueroa St.
Los Angeles, CA 90007
p: 213.747.1199

www.srkarchitectsinc.com

AUTOMATED CAR WASH AND AUTO REPAIR CENTER

6741 CARSON STREET
LAKEWOOD, CA.



ISSUE	DATE OF LAMENGE OR SUBMITAL	DESCRIPTION	DATE

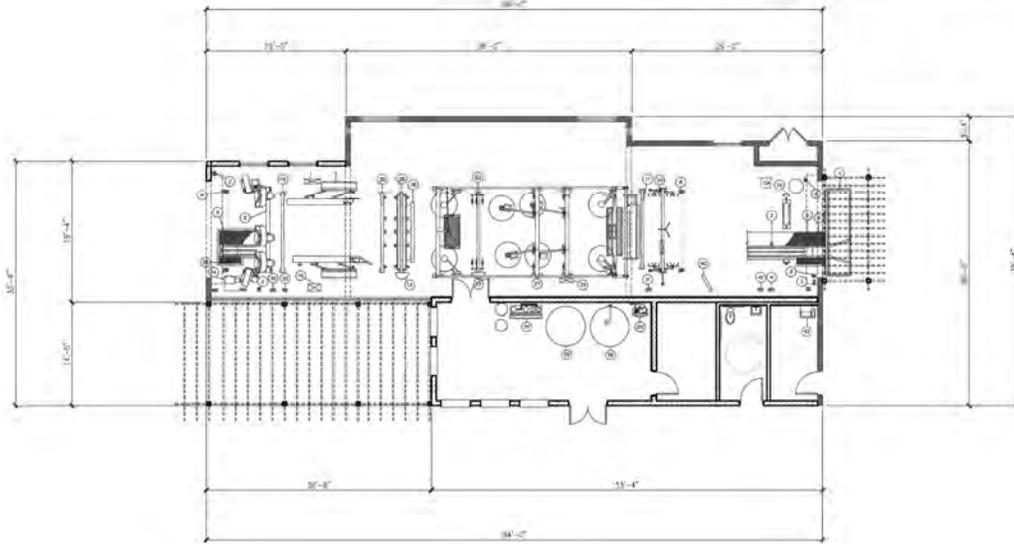
TITLE: SITE PLAN
A1.0

1 SITE PLAN
A1.0

SCALE: 1/16" = 1'-0"



EXHIBIT "C"



CARWASH EQUIPMENT LIST:							
Q	PART NO.	DESCRIPTION	SUPPLIED BY	Q	PART NO.	DESCRIPTION	SUPPLIED BY
1	803-011	WIRE CONDUIT FOR 8" DIA. 8" DIA. EXTERIOR ROLLER HOLES	N/A CORPORATION	23	803-009	WHEEL CONTACT ROLLER FOR TUBULAR BRUSH SYSTEM - 8" DIA. BRUSHES/BRUSHES	N/A CORPORATION
2	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	24	803-008	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
3	N/A	ROLLER CALL-UP AND AIR TRIP FOR SWACHER	N/A CORPORATION	27	803-011	WHEEL CONTACT ROLLER FOR TUBULAR BRUSH SYSTEM - 8" DIA. BRUSHES/BRUSHES	N/A CORPORATION
4	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	28	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
5	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	29	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
6	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	30	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
7	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	31	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
8	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	32	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
9	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	33	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
10	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	34	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
11	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	35	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
12	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	36	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
13	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	37	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
14	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	38	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
15	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	39	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
16	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	40	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
17	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	41	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
18	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	42	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
19	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	43	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
20	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	44	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
21	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	45	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
22	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	46	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
23	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	47	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
24	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	48	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION
25	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP	LEONARD	49	803-010	DRIVE/STOP MOTOR FOR DRIVE/STOP AND STOP/START	N/A CORPORATION

LEGEND:

- EXISTING CMU WALL
- NEW CMU WALL
- NEW WALL



2254 S. Figueroa St.
Los Angeles, CA 90007
p. 213.747.1199

www.srkarchitectsinc.com

AUTOMATED CAR WASH AND AUTO REPAIR CENTER

6741 CARSON STREET
LAKEWOOD, CA



City of Lakewood Civil Submittal 07/15/17
Issue Description Date

Drawn: MT Checked: BC Design: Pymont

Job No. 160440 Scale: AS NOTED

EQUIPMENT LAYOUT CAR WASH

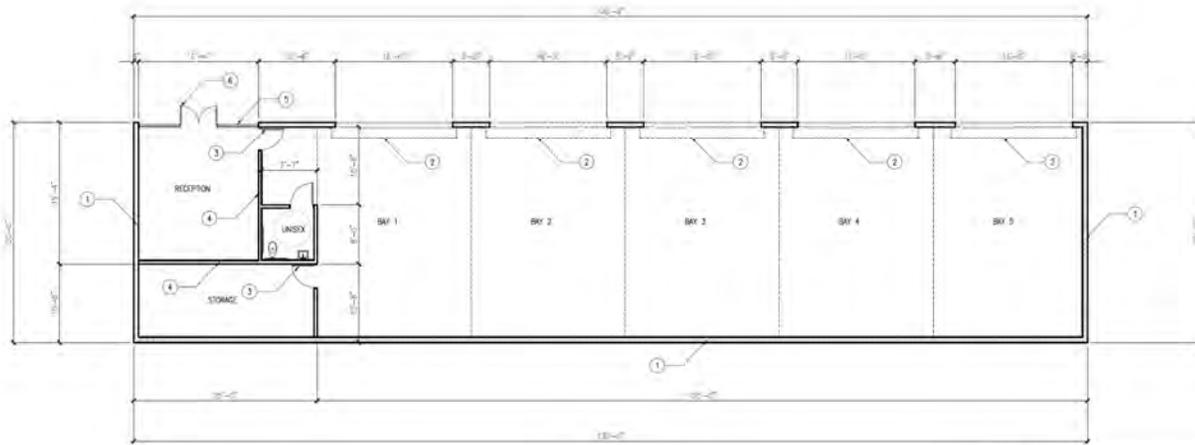
A2.0a



EXHIBIT "D"

PLAN KEY NOTES:

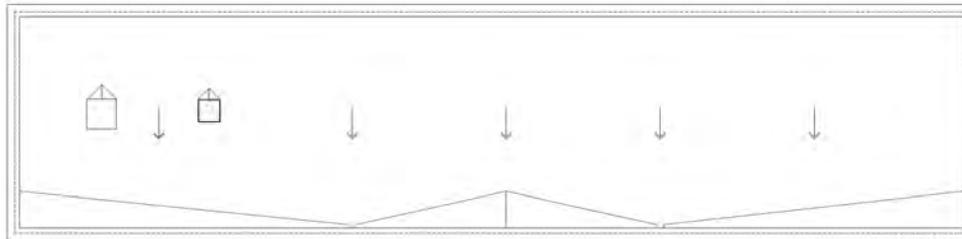
- 1 NEW DSG WALL
- 2 NEW METAL ROLL-UP DOOR
- 3 NEW DOOR
- 4 NEW WALL
- 5 NEW WINDOW CLEAR ANODIZED ALUMINUM FRAME WITH 1/2" TINTED GREEN GLASS
- 6 NEW STORAGE DOOR
- 7 NEW METAL ROLL-UP DOOR WITH NOISE DAMPING



NOTE:
 TYPE OF SERVICE: MECHANIC SHOP
 HOURS AND DAYS OF OPERATION: MONDAY THRU SUNDAY
 7:00am - 10:30pm

1 FLOOR PLAN - CAR SERVICE
 A3.0

SCALE: 1/8" = 1'-0"



2 ROOF PLAN - CAR SERVICE
 A3.0

SCALE: 1/8" = 1'-0"



LEGEND:

- NEW CMU WALL
- NEW WALL



2254 S. Figueroa St.
 Los Angeles, CA 90007
 p: 213.747.1199

www.srkarchitectsinc.com

AUTOMATED CAR WASH AND AUTO REPAIR CENTER

6741 CARSON STREET
 LAKEWOOD, CA



Issue: CITY OF LAKEWOOD CIVIL SUBMITTAL
 Description:
 Date: 05/15/17

Drawn: MT
 Check: DR
 Detail Approval:
 Date:
 Job No. 162450
 Scale: AS NOTED

FLOOR PLAN
 AND ROOF PLAN
 CAR SERVICE

Sheet: **A3.0**

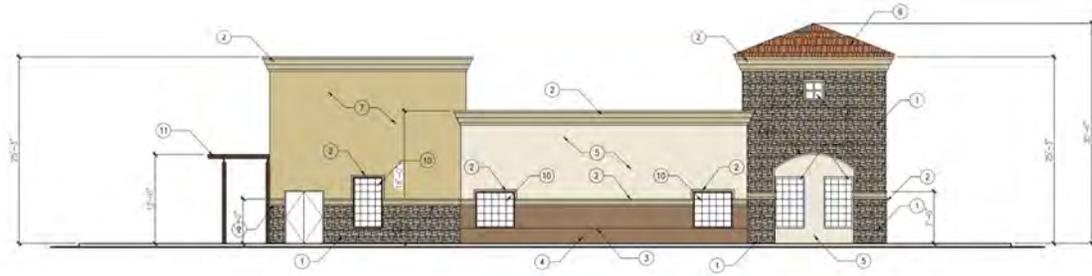
EXHIBIT "E"



1
A4.0

EAST ELEVATION - CAR WASH

SCALE: 1/8" = 1'-0"



2
A4.0

WEST ELEVATION - CAR WASH

SCALE: 1/8" = 1'-0"



3
A4.0

NORTH ELEVATION - CAR WASH

SCALE: 1/8" = 1'-0"



4
A4.0

SOUTH ELEVATION - CAR WASH

SCALE: 1/8" = 1'-0"

KEY NOTES:

- 1 STONE VENER BY CORONADO STONE, VIRGINIA (L202 HILLSIDE)
- 2 FORM MOLDING, WITH STUCCO COLOR COAT FINISH DUANE EDWARDS, DE 6000 HAND WOVEN
- 3 "TINY" REVER, COLOR TO MATCH ADJACENT WALL
- 4 LA HABRA STUCCO, DUANE EDWARDS, DE 6118, SHERIFF
- 5 LA HABRA STUCCO, X-82 HACONDA
- 6 DALE CONCRETE ROOF TILE, 8/8S, PER SQ FT, 5-1995 CAYSTRAND PANDA, 08-6004
- 7 LA HABRA STUCCO, PANT DUANE EDWARDS, DE 6142, TOSTADO WASHMALLOW
- 8 WINDOW IN CLEAR ANODIZED ALUMINUM FRAME WITH LT. TINTED GREEN GLASS
- 9 METAL ROLL-UP DOOR, COLOR TO MATCH ADJACENT WALL
- 10 PAINTED METAL GRID SCREEN, DUANE EDWARDS, DE 6000, HAND WOVEN
- 11 WOOD CANOPY
- 12 OPENING FOR VENDING MACHINE



2254 S. Figueroa St.
Los Angeles, CA 90007
p: 213.747.1199

www.srkarchitectsinc.com

AUTOMATED CAR WASH AND AUTO REPAIR CENTER

6741 CARSON STREET
LAKEWOOD, CA

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE AND IS RELEASED UNDER EXECUTIVE ORDER 13526, WHICH IS APPLIED RETROACTIVELY TO ALL INFORMATION CONTAINED HEREIN.



ISSUE: CITY OF LAKEWOOD CIP SUBMITTAL 02/15/17
Description: Date

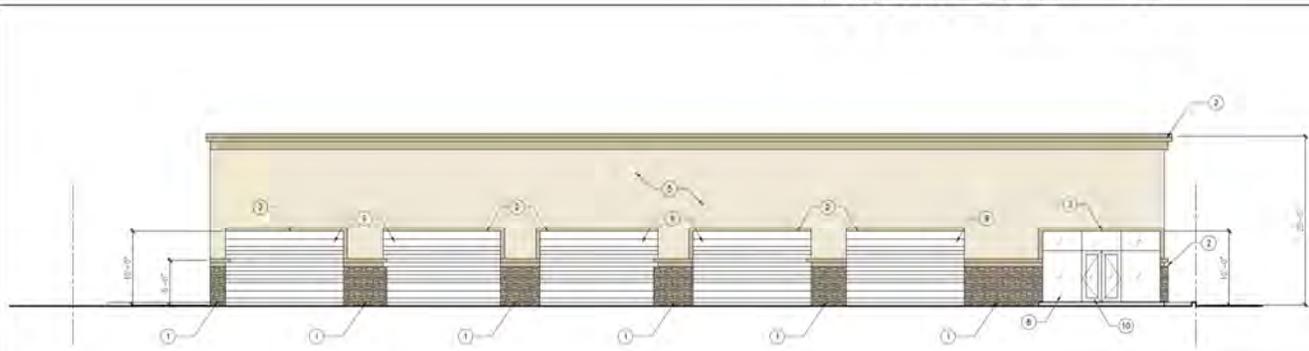
Drawn: BT Check: JK Designer Approval:

Scale: 1/8" = 1'-0" Date: 02-15-17

ELEVATIONS
CAR WASH

A4.0

EXHIBIT "F"



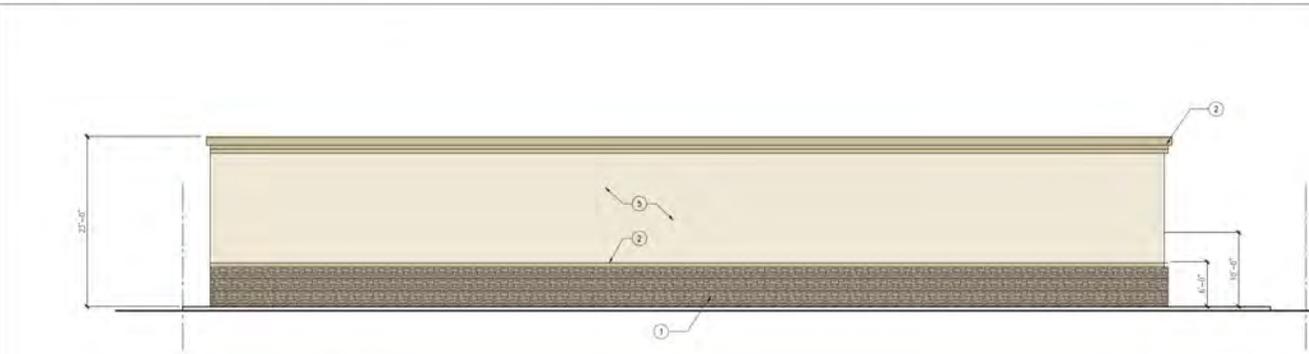
1
A5.0

SOUTH ELEVATION - CAR SERVICE

SCALE: 1/8" = 1'-0"

KEY NOTES:

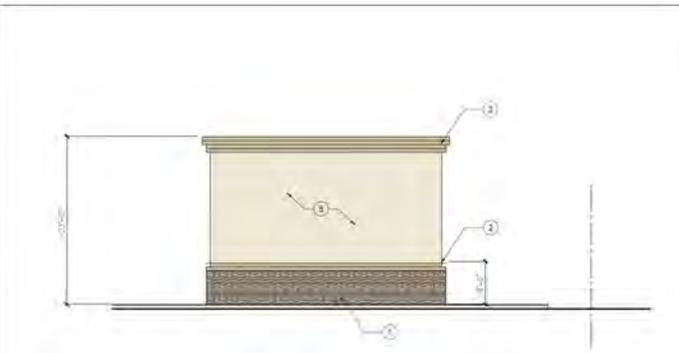
- 1 STONE VENEER BY CORNWALL STONE, VIRGINIA (LEDGE HILL) 20
- 2 EDGEMOULDING, WITH STUCCO COLOR COAT FINISH (DUNK EDWARDS, DC 6200 HIND WOVEN)
- 3 TRIM REVEAL COLOR TO MATCH ADJACENT WALL
- 4 LA HABRA STUCCO, DARK EDWARDS, DC 6115, SANDY
- 5 LA HABRA STUCCO, K-82 HAZARD
- 6 GALLI CONCRETE, ROY 154, BLUE, PER 50' FT., S-TYPE CHRISTMAS #2004, 20-2024
- 7 LA HABRA STUCCO, PAINT DUNK EDWARDS, DC 6145, "DUSTY MIST" #1000
- 8 WINDOW IN CLEAR ANODIZED ALUMINUM FRAME WITH 1/2" TINTED GREEN GLASS
- 9 METAL ROLL-UP DOOR, COLOR TO MATCH ADJACENT WALL
- 10 6'-0" x 7'-0" STOREFRONT DOOR



2
A5.0

NORTH ELEVATION - CAR SERVICE

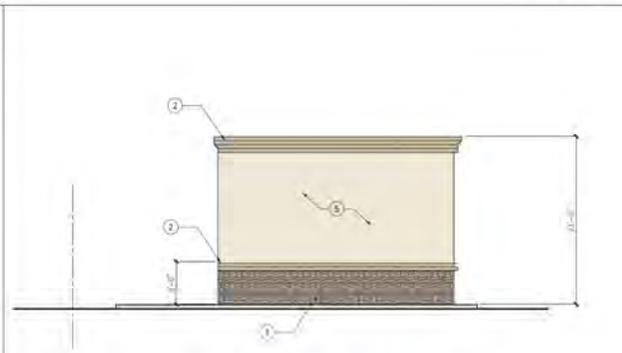
SCALE: 1/8" = 1'-0"



3
A5.0

EAST ELEVATION - SERVICE

SCALE: 1/8" = 1'-0"



4
A5.0

WEST ELEVATION - CAR SERVICE

SCALE: 1/8" = 1'-0"



2254 S. Figueroa St.
Los Angeles, CA 90007
p: 213.747.1199

www.srkarchitectsinc.com

AUTOMATED CAR WASH AND AUTO REPAIR CENTER

6741 CARSON STREET
LAKEWOOD, CA

ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF SRK ARCHITECTS, INC.



Issue	CITY OF LAKEWOOD SUBMITTAL Description	ISSUE DATE	ISSUE DATE

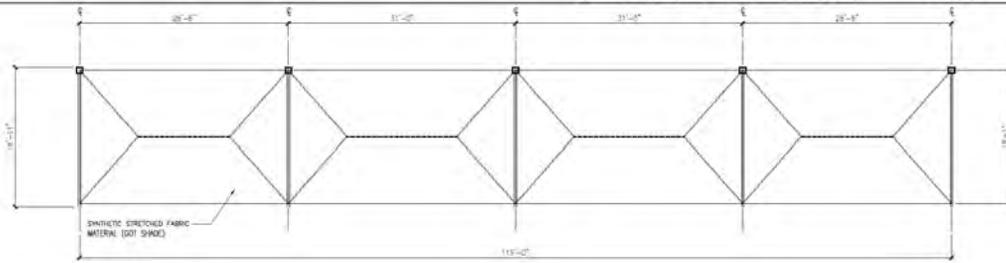
Drawn: WT Check: DR Client Approval: _____

Scale: 1/8" = 1'-0" Date: 05/15/17

ELEVATIONS
CAR SERVICE

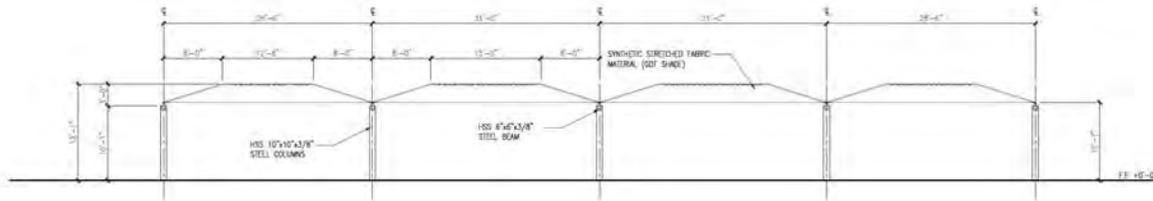
A5.0

EXHIBIT "G"



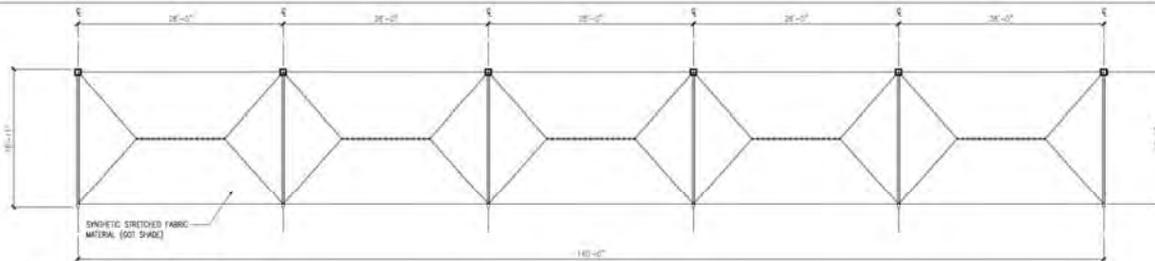
1 EAST CANOPY - LAYOUT PLAN

SCALE: 1/8" = 1'-0"



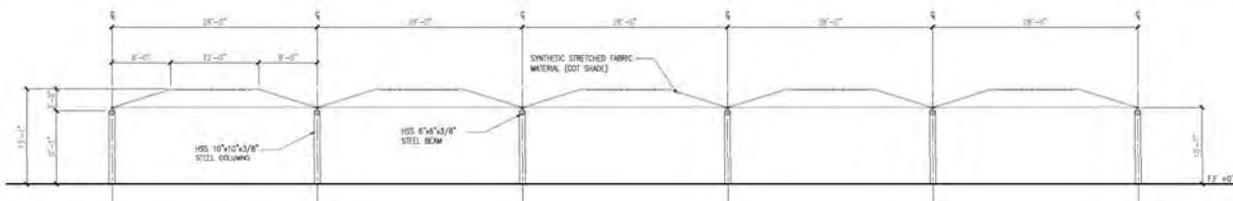
2 EAST CANOPY - ELEVATION

SCALE: 1/8" = 1'-0"



3 WEST CANOPY - LAYOUT PLAN

SCALE: 1/8" = 1'-0"



4 WEST CANOPY - ELEVATION

SCALE: 1/8" = 1'-0"



A



B



C



D



2254 S. Figueroa St.
Los Angeles, CA 90007
p: 213.747.1199

www.srkarchitectsinc.com

**AUTOMATED CAR WASH
AND
AUTO REPAIR CENTER**

6741 CARSON STREET
LAKEWOOD, CA

THESE ARCHITECTURAL DRAWINGS ARE THE PROPERTY OF SRK ARCHITECTS, INC. AND ARE TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. ANY REUSE OR REPRODUCTION OF THESE DRAWINGS WITHOUT THE WRITTEN CONSENT OF SRK ARCHITECTS, INC. IS STRICTLY PROHIBITED.



CITY OF LAKEWOOD TOP SUBMITTAL 02/15/17
Issue Description Date

Drawn: [] Check: [] Client Approval: []

Job No: 15024-03 Scale: AS NOTED

CANOPY PLAN
AND ELEVATIONS

Sheet
A8.0

EXHIBIT "H"



PLANT PALETTE:

TREES

- MEIALEUCA QUINQUENERVIA
PAPERBARK TREE
- PIRUS CALERYANA 'REDSPIRE'
REDSPIRE FLOWERING PEAR
- RHUS LANCEA
AFRICAN SUMAC

- EXISTING EUCALYPTUS TO REMAIN

MEDIUM SIZE SHRUBS, 3'-4' TALL

- ALOE ARBORESCENS
TORCH ALOE
- CALLISTEMON VIMINALIS 'LITTLE JOHN'
DWARF CALLISTEMON
- DIETES X 'NOLA ALBA'
KATRINA AFRICAN IRIS
- PHORMIUM TENAX 'AUTROPURPUREUM'
BRONZE NEW ZEALAND FLAX
- RUPELLIA PENINSULARIS
DESERT RUELIA
- WESTRINGIA FRUTICOSA 'GREY BOX'
DWARF COAST ROSEMARY

SMALL SHRUBS, 2'-3' TALL

- ALOE 'BLUE ELF'
ALOE 'BLUE ELF'
- ALOE RUDIKOPPE 'LITTLE GEM'
LITTLE GEM ALOE
- DIANELLA C. 'LITTLE BECCA'
LITTLE BECCA
- HESPERALOE PARVIFLORA
RED YUCCA
- MISCANTHUS T. 'SENTINEL'
SENTINEL
- RUSSELLIA EQUISETIFORMIS
FIRECRACKER PLANT

GROUND COVERS, 1'-2' TALL

- ARCTOSTAPHYLOS 'GREEN CARPET'
GREEN CARPET MANZANITA
- DIANELLA TASMANICA 'VARIEGATA'
WHITE STRIPED TASMAN FLAX LILY
- LANTANA M. 'SPREADING SUNSET'
SPREADING SUNSET LANTANA
- SEDUM ADOLPHII 'FIRESTORM'
STONECROP
- TRADESCANTIA PILLADA 'PURPLE HEART'
PURPLE HEART

PLANTING NOTES:

1. EXISTING EUCALYPTUS TREE TO REMAIN, PENDING ON ARBORIST'S RECOMMENDATIONS
2. EXISTING PINEY PALMS TO BE SAVED AND RELOCATED PER OWNER'S INSTRUCTIONS
3. EXISTING FLAG POLES TO REMAIN

GENERAL NOTES:

1. ALL PLANTING AREAS WILL BE IRRIGATED WITH A LOW FLOW IRRIGATION SYSTEM. A NEW SHUT OFF CONTROLLED, MASTER VALVE, FLOW SENSOR, REMOTE CONTROL, VALVES, PIPES AND OTHER EQUIPMENT WILL BE INSTALLED.
2. PRIOR TO PLANTING, PERFORM AGRONOMIC SOIL TESTING AND SOIL AMENDMENTS PER RECOMMENDATION BY SOIL LABORATORIES.
3. INSTALL 3 INCHES OF SHREDDED WOOD OR BERT MATERIAL AS MULCH IN ALL NEWLY PLANTED AREAS UPON COMPLETION OF PLANTING.

LANDSCAPE AREA:

TOTAL LANDSCAPE AREA = 6,845 SQUARE FEET



2254 S. Figueroa St.
Los Angeles, CA 90007
p: 213.747.1199

www.srkarchitectsinc.com

AUTOMATED CAR WASH AND AUTO REPAIR CENTER

6741 CARSON STREET
LAKEWOOD, CA

BY ACCEPTING THESE PLANS, THE CLIENT AGREES TO HOLD SRK ARCHITECTS INC. HARMLESS FROM ALL LIABILITY FOR ANY DAMAGE TO ANY PROPERTY OR PERSONS ARISING FROM THE USE OF THESE PLANS.

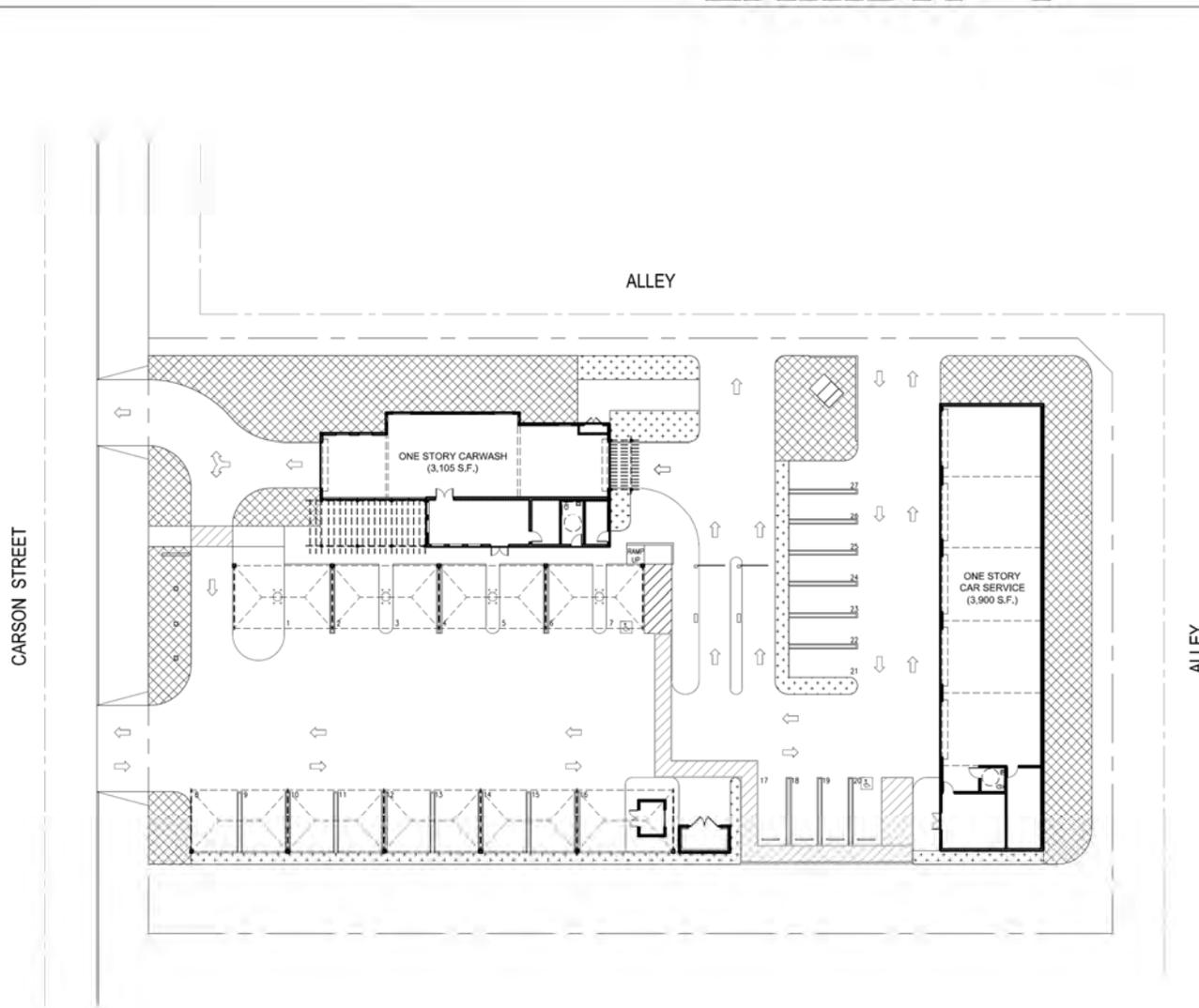
LYNN CAPOUYA INC.
LANDSCAPE ARCHITECTS

Issue	City of Lakewood CIP SUBMITAL Description	ISSUE/DATE
Drawn: [Signature]	Checked: [Signature]	Client Approval: [Signature]
Job No: 10024-01	Scale: AS SHOWN	

PLANTING PLAN
L1.0



EXHIBIT "1"



IRRIGATION METHOD:

-  HIGH EFFICIENT OVERHEAD ROTARY SPRAY SYSTEM
-  LOW FLOW / DRIP SYSTEM



2254 S. Figueroa St.
Los Angeles, CA 90007
p: 213.747.1199

www.srkarchitectsinc.com

AUTOMATED CAR WASH AND AUTO REPAIR CENTER

6741 CARSON STREET
LAKEWOOD, CA.

© 2010 PROJECT BY SRK ARCHITECTS INC. ALL DIMENSIONS AND MATERIALS SHOWN ARE APPROXIMATE. SRK ARCHITECTS INC. AND THE STATE OF CALIFORNIA DISCLAIM LIABILITY FOR THE ORIGINAL AND APPROXIMATE NATURE OF SRK ARCHITECTS INC. AND THE STATE OF CALIFORNIA. SRK ARCHITECTS INC. AND THE STATE OF CALIFORNIA SHALL BE RESPONSIBLE FOR THE USE OF INFORMATION OF SRK ARCHITECTS INC.



Issue	Description	Date

Drawn: [] Check: [] Other Approve: []

Job No: 10274.00 Scale: AS NOTED

File: IRRIGATION PLAN

Sheet: **L6.0**

1 IRRIGATION PLAN
L6.0

SCALE: 1/16" = 1'-0"



NORTH

RESOLUTION NO. -2017

A RESOLUTION OF THE PLANNING AND ENVIRONMENT COMMISSION OF THE CITY OF LAKEWOOD APPROVING THE APPLICATION FOR CONDITIONAL USE PERMIT CASE NO. 948 FOR THE ESTABLISHMENT OF A CARWASH FACILITY WITH COVERED OUTDOOR VACUUM STATIONS AND A CAR SERVICE BUILDING ON A PROPERTY LOCATED AT 6741 CARSON STREET, LAKEWOOD, CALIFORNIA

THE PLANNING AND ENVIRONMENT COMMISSION OF THE CITY OF LAKEWOOD DOES HEREBY FIND, RESOLVE AND DETERMINE AS FOLLOWS:

SECTION 1. The Planning and Environment Commission of the City of Lakewood, having had submitted to it the application of Mr. Mario S. Torres of SRK Architects, 2254 S. Figueroa Street, Los Angeles, California 90007, representing the owner of an interest in the following described real property, requesting a Conditional Use Permit for the establishment of a carwash facility with covered outdoor vacuum stations and a car service building, pursuant to the provisions of Sections 9341.B, 9347.A, 9347.B.3, 9347.D.11, and 9490.1 of the Lakewood Municipal Code on that certain real property within the City of Lakewood described as a Portion of Lot 556 of Tract Map No. 17830 as per map recorded in Book 452, Pages 3-11 in the Office of the County Recorder of Los Angeles County, and more particularly described as 6741 Carson Street, Lakewood, California; all as shown in the attached minutes and report of the Planning and Environment Commission, attached hereto and made a part hereof as though set forth in full, the Planning and Environment Commission does hereby find and determine as provided in this Resolution.

SECTION 2. The Planning and Environment Commission finds that an Initial Study has been prepared for the proposed project pursuant to Section 15063 of the California Environmental Quality Act Guidelines, as amended. A Mitigated Negative Declaration has been prepared for this project, pursuant to Section 15070, et sequitur, of the Guidelines. The project was found to have no significant effect on the environment, after implementation of the mitigation measures contained in the Initial Study prepared for this project. Therefore, said Mitigated Negative Declaration is hereby approved.

SECTION 3. The Planning and Environment Commission of the City of Lakewood does hereby report that a public hearing was held before the Planning and Environment Commission in respect to said application on the 6th day of July, 2017, and the Planning and Environment Commission does hereby find and determine that said application, subject to the conditions hereinafter specified, should be granted for the following reasons:

A. The request is for approval of Conditional Use Permit No. 948 all as shown on Exhibits "A," "B," "C," "D," "E," "F," "G," "H," and "I."

B. The subject use will not to be in conflict with the goals of the General Plan, nor is the proposed use in conflict with the Commercial land use designation of the General Plan.

C. The nature, condition, and development of adjacent uses, buildings, and structures have been considered, and it has been found that the industrial school will not adversely affect or is materially detrimental to adjacent uses, buildings, or structures provided that the conditions contained have been met and maintained.

D. Carson Street and the adjacent public alley are adequate to serve the traffic generated by the site. Thus, no adverse effect is anticipated on existing roads and circulation as a consequence of this application.

E. The project will have 27 parking spaces including two ADA accessible parking spaces. There will also be one 10' x 25' loading zone space near the northwest corner of the building. The 16 spaces on the east side of the carwash building will be used as covered outdoor vacuum stations.

F. Notification of a public hearing has been made, pursuant to Section 9422, et seq., of the Lakewood Municipal Code and State law.

SECTION 4. The Planning and Environment Commission of the City of Lakewood, based upon the aforementioned findings and determinations, hereby grants the use as requested in Conditional Use Permit No. 948 provided the use is operated in compliance with the following conditions at all times:

A. The conditions, unless otherwise specified herein, shall be complied with within upon the initial opening of a business on this site, and not thereafter violated or deviated from except where authorized by amendment to this Resolution adopted in accordance with the provisions of this Resolution and the Municipal Code. The granting of said Conditional Use Permit and this Resolution, and any modification or change thereof, shall not be effective for any purpose until a certified copy of this Resolution (Exhibits excluded) has been recorded in the Office of the Los Angeles County Recorder. The granting of said Amendment, subject to the conditions herein set forth, are binding on their heirs, assigns, and successors in interest of the applicant and their heirs, assigns, and successors in interest.

B. The City shall require that all construction comply with SCAQMD regulations, including Rule 402 which specifies that there be no dust impacts off-site sufficient to cause a nuisance, and SCAQMD Rule 403, which restricts visible emissions from construction.

C. Moisten soil prior to grading.

D. Water exposed surfaces at least once daily to keep soil moist.

E. Water exposed surfaces at least twice a day, or as often as needed, during very dry weather or periods of high wind in order to maintain a surface crust and prevent release of visible emissions from the construction site.

F. Treat any area that will be exposed for extended periods with a soil conditioner to stabilize soil or temporarily plant with vegetation.

- G. Wash mud-covered tires and under carriages of trucks leaving construction sites.
- H. Provide for street sweeping, as needed, on adjacent roadways to remove dirt dropped by construction vehicles or mud which would otherwise be carried off by trucks departing project sites.
- I. Securely cover loads of dirt with a tight fitting tarp on any truck leaving the construction sites to dispose of excavated soil.
- J. Cease grading during periods when winds exceed 25 miles per hour.
- K. Provide for permanent sealing of all graded areas, as applicable, at the earliest practicable time after soil disturbance.
- L. Provide temporary fencing with windscreen material to control windborne dust. Plant hedges or other plant buffers on any site where construction activities could expose neighboring residences and commercial sites to prolonged exposure to windblown dust.
- M. During grading, periodic monitoring shall be scheduled by a City Inspector or a City planner to verify compliance of measures of dust control.
- N. During grading, final inspection shall be scheduled by a City Inspector or a City planner to verify permanent sealing of all graded areas has been provided for and that hedges or other plant buffers are planted to avoid exposing neighboring residences to prolonged exposure to windblown dust.
- O. The applicant shall retain a qualified archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards and who shall conduct an archaeological monitoring program during any earthmoving involving excavations into younger Quaternary Alluvial deposits.
- P. The archaeological monitoring program shall be conducted in a manner consistent with archaeological standards and, in this case, conducted on a full-time or part-time basis, at the discretion of the Lead Agency. Should evidence of archaeological resources be uncovered, the archaeological monitoring program shall continue on a full-time basis until it is determined no more younger alluvium is being impacted.
- Q. If, at any time, evidence of human remains are uncovered during the development of this project, all activity shall cease immediately and the project contractor shall immediately notify the Los Angeles County Coroner's Office of the find pursuant to State law. The Los Angeles County Coroner shall be permitted to examine the find in situ. If the remains are determined to be of Native American descent, the Native American Heritage Commission shall be contacted pursuant to Public Resources Code Section 5097.98 and the Most Likely Descendent (MLD) named. In consultation with the MLD, City, Coroner, and archaeological consultant, the disposition of the remains will be determined.

R. If evidence of Native American remains or resources are identified, a Native American Monitor of Gabrieleno descent shall be contacted and given the opportunity to be added to the remainder of the monitoring program. Discoveries which may be encountered may include, but not be limited to, dwelling sites, stone implements or other artifacts, animal bones, and human bones.

S. If any archaeological sites are encountered during grading or construction of the project, all grading or construction efforts which would disturb these sites shall cease and an archaeologist shall be notified and provisions for recording and excavating the site shall be made in compliance with Section 15064.5 of the CEQA Guidelines, as amended.

T. During excavation and grading activities of any future development project, if archaeological or paleontological resources are discovered, the project contractor shall stop all work and contact the City. The applicant shall retain a qualified archaeologist or paleontologist and contact a representative of the Gabrieleno Band of Mission Indians – Kizh Nation to evaluate the significance of the finding and appropriate course of action. Salvage operations requirements pursuant to Section 15064.5 of the CEQA Guidelines shall be followed. If it is determined due to the types of deposits discovered that a Native American monitor is required, the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites as established by the Native American Heritage Commission shall be followed.

U. Comply with the recommendations of the geotechnical report contained in Appendix “E” of the Initial Study prepared for this project.

V. Refrigerants shall be properly removed before an appliance is dropped off or collected for disposal at solid waste landfills, metal recyclers, or similar facilities.

W. Demolition and renovation work that would disturb hazardous materials should be performed utilizing safe work practices for identified metals.

X. Contractors engaged in disturbance of these materials should be notified of their potential content.

Y. California certified abatement contractor must be used for the abatement of asbestos-containing materials. A project manual for the abatement design should also be generated prior to the planned abatement activities.

Z. During all project site excavation and grading on-site, construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer standards.

AA. The contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the project site.

BB. Equipment shall be shut off and not left to idle when not in use.

CC. The contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and sensitive receptors nearest the project site during all project construction.

DD. In order to minimize construction noise levels it is recommended that a temporary barrier, sufficient in height to block the line of sight between first and second story windows of adjacent single-family detached residential dwelling units (as applicable) and construction equipment shall be placed along the northern and western property lines during project construction.

EE. The western side of the car wash must be solid with no windows, holes or openings.

FF. The Whisper Drying System or a drying system with a noise level of 80 dB(A) at the exit of the car wash shall be used. After installation, the noise level of the installed equipment shall be verified by an experienced acoustical professional utilizing a Type 1 or Type 2 precision noise meter. Their findings shall be provided in a letter report and shall be submitted to the City of Lakewood Community Development Department prior to final inspection.

GG. All vacuum equipment shall be housed in structures that can provide for a closed door condition. The vacuum systems shall be kept in rooms with no exterior facing windows. Vacuum hoses and hose ends are an exception to this requirement.

HH. The openings of all rooftop vents associated with buildings that house car wash and/or vacuum equipment shall be slanted away from nearby residential land uses to the greatest degree possible.

II. The permitted hours of operation for the carwash shall be Monday through Saturday from 7:30 AM to 8:00 PM or 30 minutes after dusk whichever comes first, and on Sundays from 8:00 AM to 8:00 PM or 30 minutes after dusk whichever comes first.

JJ. The permitted hours of operation for the car service building shall be Monday through Saturday from 7:30 AM to 7:00 PM and on Sundays from 9:00 AM to 7:00 PM.

KK. Parking shall be configured for and maintained with sufficient lighting to illuminate the appearance and conduct of all persons in parking areas. All exterior lighting shall be designed and arranged so as not to reflect direct or indirect light upon abutting or adjacent properties, with a maximum light spill of point .5 foot candles at grade level.

LL. Managers shall emphasize the importance of effective communication between the managers of the establishment regarding professional business practices.

MM. Management shall have an ongoing liaison relationship with members of the Los Angeles County Sheriff's Department, so that communication may be easily facilitated if problems occur and to ensure a strong level of communication for crime prevention and problem solving efforts.

NN. The carwash and car service buildings shall have working "state of the art" video surveillance system in place to assist Los Angeles County Sheriff's personnel in their criminal investigations. The storage medium shall be secured in such a manner as to not to facilitate the easy removal from unauthorized personnel or employees under duress.

OO. The carwash and car service buildings shall have a "state of the art" silent robbery alarm system in place to allow employees to promptly report crimes in progress, if they are safely able to do so.

PP. Management shall ensure that no alcoholic beverages are allowed on the site and shall refuse services to any intoxicated person, or person who is under the influence of a controlled substance.

QQ. This CUP shall be subject to a six-month review after the initial opening of the carwash facility to ensure that the facility has complied with the requirements contained in this Resolution and to allow input from the Sheriff's Department for any concerns that may arise.

RR. Comply with the recommended conditions of approval for Development Review Board (DRB) Case No. 8607.

SS. Five-foot alley dedications shall be provided along the site's north and west property lines to comply with current City standards. The dedicated alleys shall be improved and paved to the satisfaction of the Director of Public Works.

TT. The applicant shall sign a written statement stating that he has read, understands, and agrees to the conditions of the granting of this Conditional Use Permit within twenty (20) days of the adoption of the Resolution approving the same, or this approval shall become null and void.

UU. This Conditional Use Permit may be modified or revoked by the City Council or the Planning and Environment Commission should they determine that the proposed uses or conditions under which it is being operated or maintained is detrimental to the public health, welfare or materially injurious to property or improvements in the vicinity or if the property is operated or maintained so as to constitute a public nuisance.

VV. The applicant agrees to indemnify, hold harmless and defend the City, its officers, agents and employees, from any and all liability or claims that may be brought against the City arising out of its approval of this permit, or arising out of the operation of the business, save and except that caused by City's active negligence.

WW. By signing or orally accepting the terms and provisions of this permit, entered into the minutes of these proceedings, the Permittee acknowledges all of the conditions imposed and accepts this permit subject to those conditions with a full awareness that the violation of any of said permits could subject Permittee to further hearings before the Planning and Environment Commission on the issue of revocation or modification.

SECTION 5. A certified copy of the excerpts of the minutes applicable to this case and this Resolution shall be delivered to the applicant.

ADOPTED AND APPROVED this 6th day of July, 2017, by the Planning and Environment Commission of the City of Lakewood voting as follows:

AYES:	COMMISSIONERS: McKinnon, Stuckey, Manis
NOES:	COMMISSIONERS: Samaniego
ABSENT:	COMMISSIONERS: Quarto
ABSTAIN:	COMMISSIONERS:

Linda Manis, Chairperson

ATTEST:

Sonia Dias Southwell, AICP, Secretary

STATEMENT OF ACCEPTANCE

The foregoing Conditional Use Permit No. 948 and Resolution No. 14-2017 are hereby accepted and each and all conditions and provisions are accepted and each and all conditions and provisions are approved by and consented to by the undersigned Permittee, who expressly promises to perform and be bound by each of its items.

Signature

Office Use Only

Date received _____

Received by _____ (Community Development Department)

RESOLUTION NO. -2017

A RESOLUTION OF THE PLANNING AND ENVIRONMENT COMMISSION OF THE CITY OF LAKEWOOD DENYING THE APPLICATION FOR CONDITIONAL USE PERMIT CASE NO. 948 FOR THE ESTABLISHMENT OF A CARWASH FACILITY WITH COVERED OUTDOOR VACUUM STATIONS AND A CAR SERVICE BUILDING ON A PROPERTY LOCATED AT 6741 CARSON STREET, LAKEWOOD, CALIFORNIA

THE PLANNING AND ENVIRONMENT COMMISSION OF THE CITY OF LAKEWOOD DOES HEREBY FIND, RESOLVE AND DETERMINE AS FOLLOWS:

SECTION 1. The Planning and Environment Commission of the City of Lakewood, having had submitted to it the application of Mr. Mario S. Torres of SRK Architects, 2254 S. Figueroa Street, Los Angeles, California 90007, representing the owner of an interest in the following described real property, requesting a Conditional Use Permit for the establishment of a carwash facility with covered outdoor vacuum stations and a car service building, pursuant to the provisions of Sections 9341.B, 9347.A, 9347.B.3, 9347.D.11, and 9490.1 of the Lakewood Municipal Code on that certain real property within the City of Lakewood described as a Portion of Lot 556 of Tract Map No. 17830 as per map recorded in Book 452, Pages 3-11 in the Office of the County Recorder of Los Angeles County, and more particularly described as 6741 Carson Street, Lakewood, California; all as shown in the attached minutes and report of the Planning and Environment Commission, attached hereto and made a part hereof as though set forth in full, the Planning and Environment Commission does hereby find and determine as provided in this Resolution.

SECTION 2. The Planning and Environment Commission of the City of Lakewood does hereby report that a public hearing was held before the Planning and Environment Commission in respect to said application on the 6th day of July, 2017, and the Planning and Environment Commission does hereby find and determine that said application, subject to the conditions hereinafter specified, should be denied for the following reasons:

- A. The proposed use is in conflict with the General Plan as follows:_____.
- B. The nature, condition and development of adjacent uses, buildings, and structures have been considered and it has been found that the proposed use will jeopardize, or adversely affect, or be detrimental to the public health, safety and welfare, or to the surrounding property and residences for the following reasons:_____.
- C. The Applicant has failed to show that the proposed conditional use meets the principles and standards specified in Section 9401.A of the Lakewood Municipal Code, and Section _____.
- D. (Here, set forth any additional applicable grounds for denying the application.).

SECTION 3. A certified copy of the excerpts of the minutes applicable to this case and this Resolution shall be delivered to the applicant.

ADOPTED AND APPROVED this 6th day of July, 2017, by the Planning and Environment Commission of the City of Lakewood voting as follows:

AYES:	COMMISSIONERS:
NOES:	COMMISSIONERS:
ABSENT:	COMMISSIONERS:
ABSTAIN:	COMMISSIONERS:

Linda Manis, Chairperson

ATTEST:

Sonia Dias Southwell, AICP, Secretary

CONDITIONAL USE PERMIT NO. 948

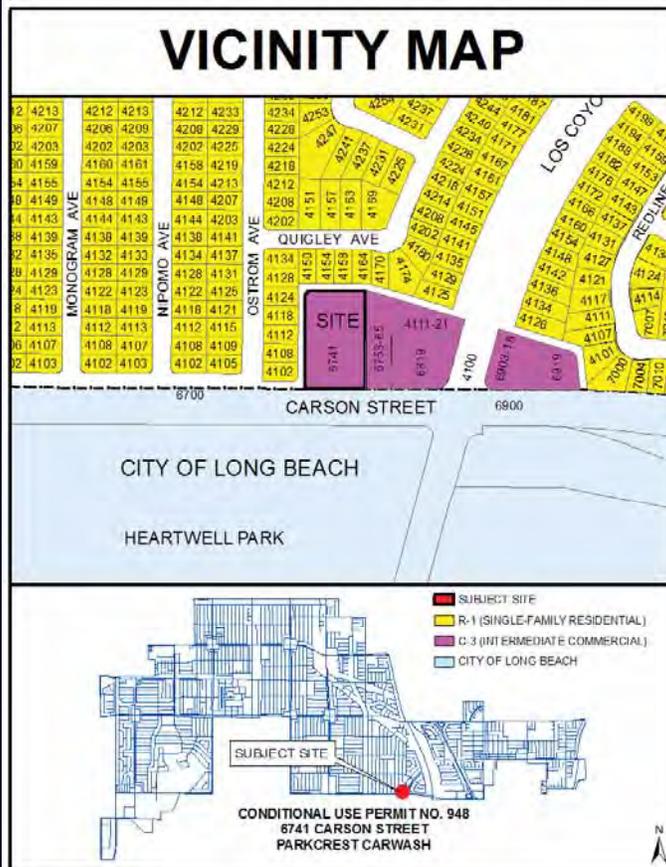












EXHIBIT "A"



SITE PLAN KEY NOTES:

- 1. V.A. WALL SIGNAGE
- 2. V.A. SIGNAGE, INTERIOR WALL
- 3. V.A. SIGNAGE, EXTERIOR WALL
- 4. V.A. SIGNAGE, INTERIOR WALL
- 5. V.A. SIGNAGE, EXTERIOR WALL
- 6. V.A. SIGNAGE, INTERIOR WALL
- 7. V.A. SIGNAGE, EXTERIOR WALL
- 8. V.A. SIGNAGE, INTERIOR WALL
- 9. V.A. SIGNAGE, EXTERIOR WALL
- 10. V.A. SIGNAGE, INTERIOR WALL
- 11. V.A. SIGNAGE, EXTERIOR WALL
- 12. V.A. SIGNAGE, INTERIOR WALL
- 13. V.A. SIGNAGE, EXTERIOR WALL
- 14. V.A. SIGNAGE, INTERIOR WALL
- 15. V.A. SIGNAGE, EXTERIOR WALL
- 16. V.A. SIGNAGE, INTERIOR WALL
- 17. V.A. SIGNAGE, EXTERIOR WALL
- 18. V.A. SIGNAGE, INTERIOR WALL
- 19. V.A. SIGNAGE, EXTERIOR WALL
- 20. V.A. SIGNAGE, INTERIOR WALL



2254 S. Figueroa St.
Los Angeles, CA 90007
p. 213.747.1155

www.srkarchitectsinc.com

PERMITS

PERMITS
ALTO REPAIR CENTER

6741 CARSON STREET
LANEWOOD, CA

DATE: 01/15/2019

SCALE: 1/8" = 1'-0"



DATE: 01/15/2019

SCALE: 1/8" = 1'-0"

DATE: 01/15/2019

SCALE: 1/8" = 1'-0"

DATE: 01/15/2019

SCALE: 1/8" = 1'-0"

DATE: 01/15/2019

LEGEND:

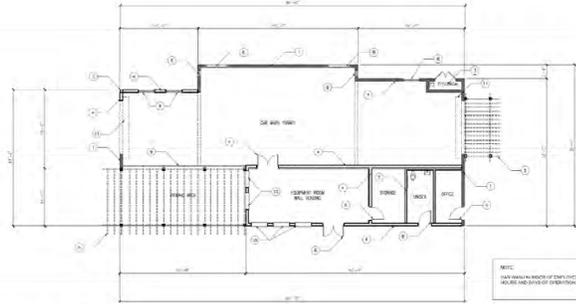
- 1. RECEPT SIGN
- 2. SIGNAGE
- 3. SIGNAGE
- 4. SIGNAGE
- 5. SIGNAGE
- 6. SIGNAGE
- 7. SIGNAGE
- 8. SIGNAGE
- 9. SIGNAGE
- 10. SIGNAGE
- 11. SIGNAGE
- 12. SIGNAGE
- 13. SIGNAGE
- 14. SIGNAGE
- 15. SIGNAGE
- 16. SIGNAGE
- 17. SIGNAGE
- 18. SIGNAGE
- 19. SIGNAGE
- 20. SIGNAGE

1 SITE PLAN

SCALE: 1/8" = 1'-0"

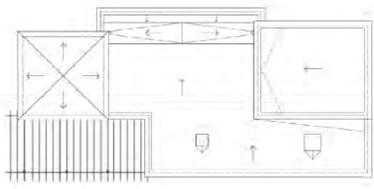


EXHIBIT "B"



1 FLOOR PLAN - CAR WASH

SCALE: 1/8" = 1'-0"



1 ROOF PLAN - CAR WASH

SCALE: 1/8" = 1'-0"



PLAN KEY NOTES:

- 1. SIGNAGE
- 2. SIGNAGE
- 3. SIGNAGE
- 4. SIGNAGE
- 5. SIGNAGE
- 6. SIGNAGE
- 7. SIGNAGE
- 8. SIGNAGE
- 9. SIGNAGE
- 10. SIGNAGE
- 11. SIGNAGE
- 12. SIGNAGE
- 13. SIGNAGE
- 14. SIGNAGE
- 15. SIGNAGE
- 16. SIGNAGE
- 17. SIGNAGE
- 18. SIGNAGE
- 19. SIGNAGE
- 20. SIGNAGE



2254 S. Figueroa St.
Los Angeles, CA 90007
p. 213.747.1155

www.srkarchitectsinc.com

PERMITS

PERMITS
ALTO REPAIR CENTER

6741 CARSON STREET
LANEWOOD, CA

DATE: 01/15/2019

SCALE: 1/8" = 1'-0"



DATE: 01/15/2019

SCALE: 1/8" = 1'-0"

DATE: 01/15/2019

SCALE: 1/8" = 1'-0"

DATE: 01/15/2019

SCALE: 1/8" = 1'-0"

DATE: 01/15/2019

LEGEND:

- 1. SIGNAGE
- 2. SIGNAGE
- 3. SIGNAGE
- 4. SIGNAGE
- 5. SIGNAGE
- 6. SIGNAGE
- 7. SIGNAGE
- 8. SIGNAGE
- 9. SIGNAGE
- 10. SIGNAGE
- 11. SIGNAGE
- 12. SIGNAGE
- 13. SIGNAGE
- 14. SIGNAGE
- 15. SIGNAGE
- 16. SIGNAGE
- 17. SIGNAGE
- 18. SIGNAGE
- 19. SIGNAGE
- 20. SIGNAGE

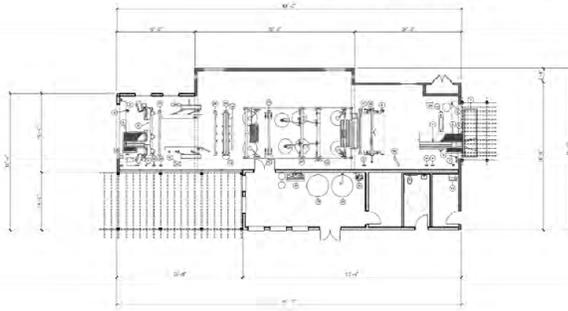
1 FLOOR PLAN

ROOF PLAN

CAR WASH

A2.0

EXHIBIT "C"



NO.	DESCRIPTION	QUANTITY	UNIT	MANUFACTURER	NOTES
1	BRUSHES	1	EA	BRUSHES	
2	BRUSHES	1	EA	BRUSHES	
3	BRUSHES	1	EA	BRUSHES	
4	BRUSHES	1	EA	BRUSHES	
5	BRUSHES	1	EA	BRUSHES	
6	BRUSHES	1	EA	BRUSHES	
7	BRUSHES	1	EA	BRUSHES	
8	BRUSHES	1	EA	BRUSHES	
9	BRUSHES	1	EA	BRUSHES	
10	BRUSHES	1	EA	BRUSHES	
11	BRUSHES	1	EA	BRUSHES	
12	BRUSHES	1	EA	BRUSHES	
13	BRUSHES	1	EA	BRUSHES	
14	BRUSHES	1	EA	BRUSHES	
15	BRUSHES	1	EA	BRUSHES	
16	BRUSHES	1	EA	BRUSHES	
17	BRUSHES	1	EA	BRUSHES	
18	BRUSHES	1	EA	BRUSHES	
19	BRUSHES	1	EA	BRUSHES	
20	BRUSHES	1	EA	BRUSHES	
21	BRUSHES	1	EA	BRUSHES	
22	BRUSHES	1	EA	BRUSHES	
23	BRUSHES	1	EA	BRUSHES	
24	BRUSHES	1	EA	BRUSHES	
25	BRUSHES	1	EA	BRUSHES	
26	BRUSHES	1	EA	BRUSHES	
27	BRUSHES	1	EA	BRUSHES	
28	BRUSHES	1	EA	BRUSHES	
29	BRUSHES	1	EA	BRUSHES	
30	BRUSHES	1	EA	BRUSHES	
31	BRUSHES	1	EA	BRUSHES	
32	BRUSHES	1	EA	BRUSHES	
33	BRUSHES	1	EA	BRUSHES	
34	BRUSHES	1	EA	BRUSHES	
35	BRUSHES	1	EA	BRUSHES	
36	BRUSHES	1	EA	BRUSHES	
37	BRUSHES	1	EA	BRUSHES	
38	BRUSHES	1	EA	BRUSHES	
39	BRUSHES	1	EA	BRUSHES	
40	BRUSHES	1	EA	BRUSHES	
41	BRUSHES	1	EA	BRUSHES	
42	BRUSHES	1	EA	BRUSHES	
43	BRUSHES	1	EA	BRUSHES	
44	BRUSHES	1	EA	BRUSHES	
45	BRUSHES	1	EA	BRUSHES	
46	BRUSHES	1	EA	BRUSHES	
47	BRUSHES	1	EA	BRUSHES	
48	BRUSHES	1	EA	BRUSHES	
49	BRUSHES	1	EA	BRUSHES	
50	BRUSHES	1	EA	BRUSHES	
51	BRUSHES	1	EA	BRUSHES	
52	BRUSHES	1	EA	BRUSHES	
53	BRUSHES	1	EA	BRUSHES	
54	BRUSHES	1	EA	BRUSHES	
55	BRUSHES	1	EA	BRUSHES	
56	BRUSHES	1	EA	BRUSHES	
57	BRUSHES	1	EA	BRUSHES	
58	BRUSHES	1	EA	BRUSHES	
59	BRUSHES	1	EA	BRUSHES	
60	BRUSHES	1	EA	BRUSHES	
61	BRUSHES	1	EA	BRUSHES	
62	BRUSHES	1	EA	BRUSHES	
63	BRUSHES	1	EA	BRUSHES	
64	BRUSHES	1	EA	BRUSHES	
65	BRUSHES	1	EA	BRUSHES	
66	BRUSHES	1	EA	BRUSHES	
67	BRUSHES	1	EA	BRUSHES	
68	BRUSHES	1	EA	BRUSHES	
69	BRUSHES	1	EA	BRUSHES	
70	BRUSHES	1	EA	BRUSHES	
71	BRUSHES	1	EA	BRUSHES	
72	BRUSHES	1	EA	BRUSHES	
73	BRUSHES	1	EA	BRUSHES	
74	BRUSHES	1	EA	BRUSHES	
75	BRUSHES	1	EA	BRUSHES	
76	BRUSHES	1	EA	BRUSHES	
77	BRUSHES	1	EA	BRUSHES	
78	BRUSHES	1	EA	BRUSHES	
79	BRUSHES	1	EA	BRUSHES	
80	BRUSHES	1	EA	BRUSHES	
81	BRUSHES	1	EA	BRUSHES	
82	BRUSHES	1	EA	BRUSHES	
83	BRUSHES	1	EA	BRUSHES	
84	BRUSHES	1	EA	BRUSHES	
85	BRUSHES	1	EA	BRUSHES	
86	BRUSHES	1	EA	BRUSHES	
87	BRUSHES	1	EA	BRUSHES	
88	BRUSHES	1	EA	BRUSHES	
89	BRUSHES	1	EA	BRUSHES	
90	BRUSHES	1	EA	BRUSHES	
91	BRUSHES	1	EA	BRUSHES	
92	BRUSHES	1	EA	BRUSHES	
93	BRUSHES	1	EA	BRUSHES	
94	BRUSHES	1	EA	BRUSHES	
95	BRUSHES	1	EA	BRUSHES	
96	BRUSHES	1	EA	BRUSHES	
97	BRUSHES	1	EA	BRUSHES	
98	BRUSHES	1	EA	BRUSHES	
99	BRUSHES	1	EA	BRUSHES	
100	BRUSHES	1	EA	BRUSHES	

1 EQUIPMENT LAYOUT - CAR WASH

SCALE: 1/8" = 1'-0"

LEGEND:
 - NEW WALL
 - NEW WALL WITH GLASS PARTITION



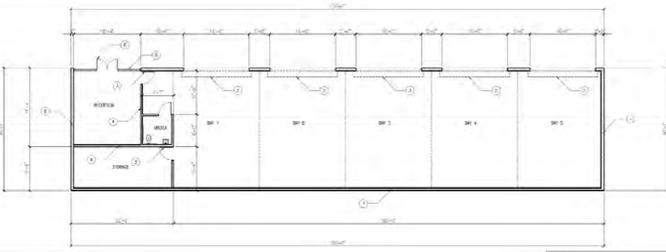
2254 S. Figueroa St.
 Los Angeles, CA 90007
 p: 213.747.1199
 www.srkarchitects.com



AUTOMATED CAR WASH AND AUTO REPAIR CENTER
 8741 CARSON STREET
 LAKELAND, CA

EQUIPMENT LAYOUT CAR WASH
 A2.0a

EXHIBIT "D"



1 FLOOR PLAN - CAR SERVICE

SCALE: 1/8" = 1'-0"

PLAN KEY NOTES:
 1. NEW WALL
 2. NEW WALL WITH GLASS PARTITION
 3. NEW WALL
 4. NEW WALL WITH GLASS PARTITION
 5. NEW WALL WITH GLASS PARTITION
 6. NEW WALL WITH GLASS PARTITION
 7. NEW WALL WITH GLASS PARTITION

2 ROOF PLAN - CAR SERVICE

SCALE: 1/8" = 1'-0"

LEGEND:
 - NEW WALL
 - NEW WALL WITH GLASS PARTITION



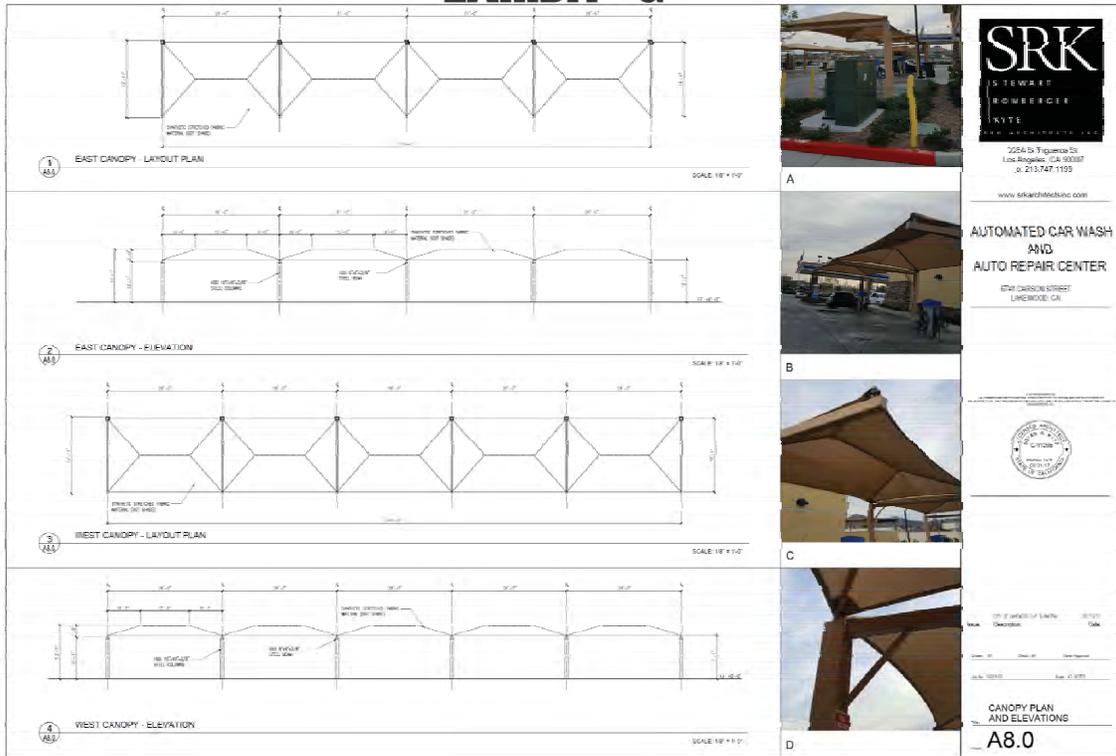
2254 S. Figueroa St.
 Los Angeles, CA 90007
 p: 213.747.1199
 www.srkarchitects.com



AUTOMATED CAR WASH AND AUTO REPAIR CENTER
 8741 CARSON STREET
 LAKELAND, CA

FLOOR PLAN AND ROOF PLAN CAR SERVICE
 A3.0

EXHIBIT "G"



2254 S. Figueroa St.
Los Angeles, CA 90007
p: 213.747.1199

www.srkarchitect.com

**Automated Car Wash
and
Auto Repair Center**
8741 Carson Street
Lanette, CA



No.	Description	Date
1	Issue for Construction	11/11/11
2	Issue for Construction	11/11/11

**CANOPY PLAN
AND ELEVATIONS**
A8.0

EXHIBIT "H"



- PLANT PALETTE:**
- TREES**
 - MILWAUKEE GARDENLAMP
 - PAPYRUS TREE
 - PAUL CALDERMAN REDSPICE
 - REDSPICE FLOWERING PLUM
 - PAUL LANCE
 - AFRICAN SWAMP
 - EXTENSIVE EUCALYPTUS TO FORM
 - MEDIUM SIZE SHRUBS, 3-4 TALL**
 - ALICE BRIDGES
 - TORUS ALICE
 - CALLISTEMO UNIKALD (LITTLE JOHN)
 - ORANGE CALIFORNIA
 - ORANGE & RED ALICE
 - MATERIAL AFRICAN, RIS
 - SMALL SHRUBS**
 - ORANGE CALIFORNIA
 - ORANGE & RED ALICE
 - MATERIAL AFRICAN, RIS
 - DRYWAY COAST ROSEMARY**
 - ROSE SHUBS**
 - ALICE BRIDGE
 - ALICE BRIDGE
 - ALICE BRIDGE
 - ROSE SHUBS**
 - ALICE BRIDGE
 - ALICE BRIDGE
 - ALICE BRIDGE
 - MISC. SHRUBS**
 - MISC. SHRUBS
 - MISC. SHRUBS
 - MISC. SHRUBS
 - GROUND COVERS, 1-2 TALL**
 - MISC. SHRUBS
 - GREEN CARPET MAINTENANCE
 - ORANGE CALIFORNIA
 - WHITE STRIPED THORN PLUM



2254 S. Figueroa St.
Los Angeles, CA 90007
p: 213.747.1199

www.srkarchitect.com

**Automated Car Wash
and
Auto Repair Center**
8741 Carson Street
Lanette, CA



No.	Description	Date
1	Issue for Construction	11/11/11
2	Issue for Construction	11/11/11

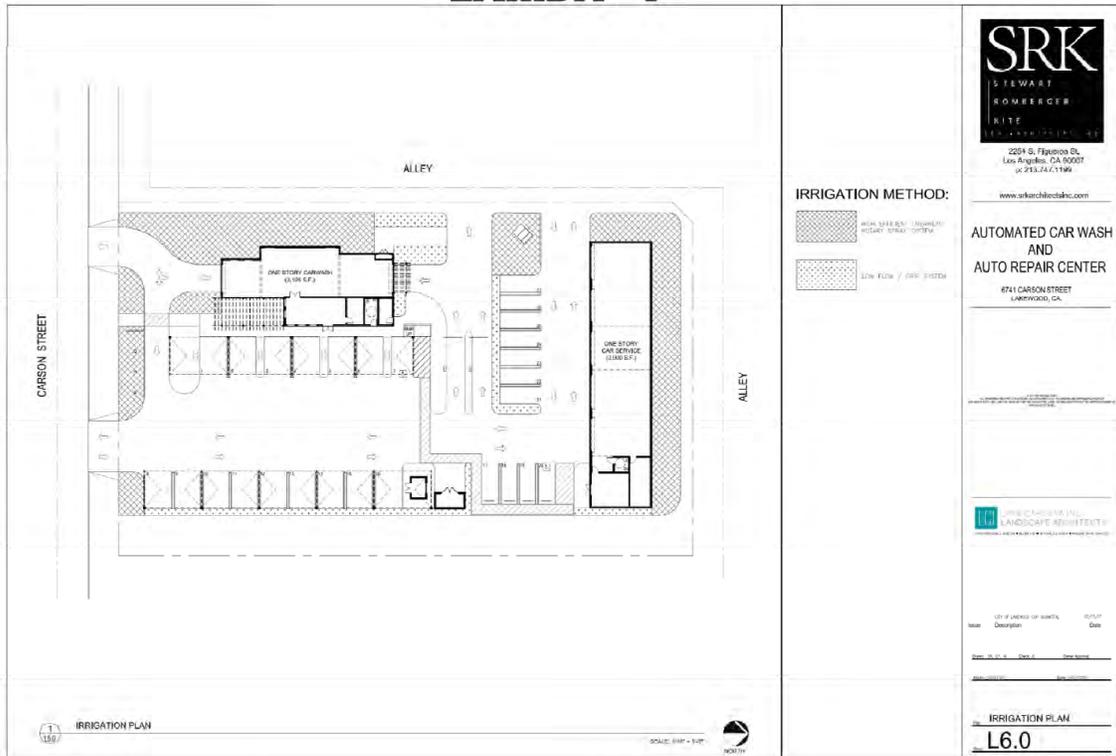
- PLANTING NOTES:**
1. SEEING LANDSCAPE PLAN TO BE PLANTED IN ORDER TO VERIFY THE PLANTING NOTES.
 2. PLANTING NOTES TO BE PLANTED IN ORDER TO VERIFY THE PLANTING NOTES.
 3. PLANTING NOTES TO BE PLANTED IN ORDER TO VERIFY THE PLANTING NOTES.

- GENERAL NOTES:**
1. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH THE PLANTING NOTES.
 2. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH THE PLANTING NOTES.
 3. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH THE PLANTING NOTES.

LANDSCAPE AREA:
100,000 sq. ft. - 1/8" = 1'-0"

PLANTING PLAN
L1.0

EXHIBIT "T"



IRRIGATION METHOD:

- HIGH PRESSURE / TRIGGER / CATCH SYSTEM
- LOW FLOW / ARI SYSTEM



2254 S. Figueroa St.
Los Angeles, CA 90007
310.213.2419

www.srkarchitects.com

**AUTOMATED CAR WASH
AND
AUTO REPAIR CENTER**

6741 CARSON STREET
LAKEMOOD, CA

THE CARSON FILE
LANDSCAPE ARCHITECTS

NO.	DATE	DESCRIPTION	BY	DATE

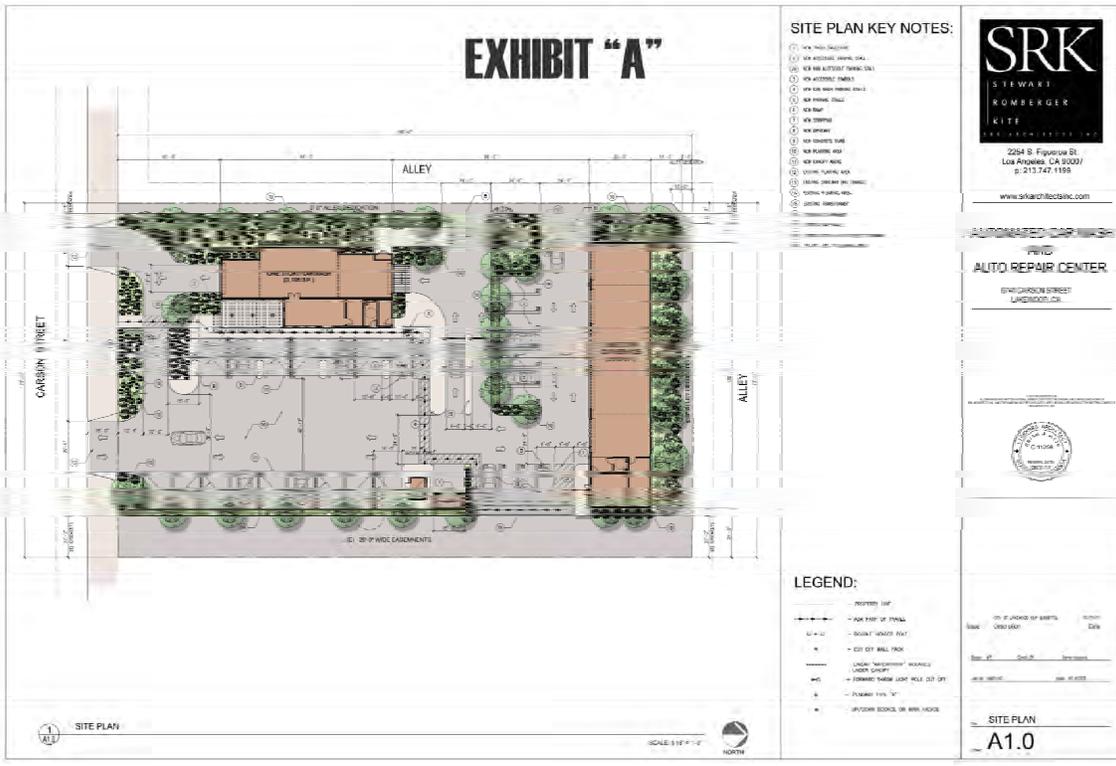
IRRIGATION PLAN
L6.0

1 IRRIGATION PLAN

SCALE: 1/8" = 1'-0"

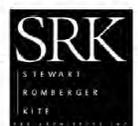


EXHIBIT "A"



SITE PLAN KEY NOTES:

- 1. SEE PLAN SHEET
- 2. SEE ARCHITECTURAL PLAN
- 3. SEE ARCHITECTURAL PLAN
- 4. SEE ARCHITECTURAL PLAN
- 5. SEE ARCHITECTURAL PLAN
- 6. SEE ARCHITECTURAL PLAN
- 7. SEE ARCHITECTURAL PLAN
- 8. SEE ARCHITECTURAL PLAN
- 9. SEE ARCHITECTURAL PLAN
- 10. SEE ARCHITECTURAL PLAN
- 11. SEE ARCHITECTURAL PLAN
- 12. SEE ARCHITECTURAL PLAN
- 13. SEE ARCHITECTURAL PLAN
- 14. SEE ARCHITECTURAL PLAN
- 15. SEE ARCHITECTURAL PLAN
- 16. SEE ARCHITECTURAL PLAN
- 17. SEE ARCHITECTURAL PLAN
- 18. SEE ARCHITECTURAL PLAN
- 19. SEE ARCHITECTURAL PLAN
- 20. SEE ARCHITECTURAL PLAN



2254 S. Figueroa St.
Los Angeles, CA 90007
310.213.2419

www.srkarchitects.com

**AUTOMATED CAR WASH
AND
AUTO REPAIR CENTER**

6741 CARSON STREET
LAKEMOOD, CA



NO.	DATE	DESCRIPTION	BY	DATE

SITE PLAN
A1.0

1 SITE PLAN

SCALE: 1/8" = 1'-0"



Staff Recommendation

- Hold a Public Hearing
- Adopt the Resolution of Approval
- Approve the Mitigated Negative Declaration

**ORIGINAL****NOTICE OF DETERMINATION**

To: Office of Planning & Research
 P.O. Box 3044
 Sacramento, CA 95812-3044

From:
 Director of Community Development
 City of Lakewood
 5050 Clark Avenue
 Lakewood, CA 90712

Los Angeles County Clerk
 Environmental Findings
 12400 E. Imperial Highway, #1201
 Norwalk, CA 90650

Lead Agency (if different from above):
 N/A

Subject: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

n/a	Paul Kuykendall, AICP	(562)866-9771, ext. 2344	pkuykend@lakewoodcity.org
State Clearinghouse No.	Lead Agency	Area Code/Phone/Extension	E-mail Address
(If submitted to Clearinghouse)	Contact Person		

Project Title: Parkcrest Car Wash and Car Service

Project Applicant: Mr. Mario S. Torres – SRK Architects

Project Location: 6741 Carson Street, Lakewood, California

THIS NOTICE WAS POSTED

ON July 11 2017

UNTIL August 10 2017

REGISTRAR – RECORDER/COUNTY CLERK

Project Description: The site is on the north side of Carson Street, west of the intersection of Los Coyotes Diagonal and Carson Street. To the north and west of the site are single-family homes in the R-1 zone. To the east is a commercial strip center in the C-3 zone. To the south is the Heartwell golf course in Long Beach. The site will have a net area of 1.06 acres following alley dedications along portions of the north and west property lines. The site is developed with a former McDonald's drive-thru restaurant. The existing restaurant will be converted to a 3,100 sq. ft. carwash building with a main car wash tunnel, equipment and storage rooms, bathroom, an office, and other improvements. A new 3,900 square-foot car service building will be built at the north side of the property and will include five service bays. Auto services may include auto services as allowed by Section 9347.B.3 of the Lakewood Municipal Code. The site has two driveways on Carson Street and will have two access points to the alley. Trash and vacuum equipment enclosures will be located on the east side of the site. The project will have 27 parking spaces and a loading zone. Of the 27 parking spaces, 16 spaces will be used as self-service vacuum stations covered with canopies. The proposed carwash hours will be Monday to Saturday from 7:30AM to 8:00PM or dusk, whichever comes first and on Sundays from 8:00AM to 8:00PM or dusk, whichever comes first. The proposed car service building hours will be Monday to Saturday from 7:30AM to 7:00PM and on Sundays from 9:00AM to 7:00PM. There is an existing freestanding sign and three flag poles adjacent to Carson Street which the applicant intends to utilize for this project.

I declare that I have examined the proposed specific plan amendment, and on the basis of the Initial Study and Environmental Checklist on file in my office as a public document, it is my opinion that the proposed project will have no significant impact upon the environment within the meaning of the California Environmental Quality Act of 1970, as amended.

This is to advise that the City of Lakewood, as Lead Agency, has approved the above-described project on July 6, 2017 and has made the following determinations regarding the above described project:

1. The project [will will not] have a significant effect on the environment.
2. An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
 A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [were were not] made a condition of the approval of this project.
4. A mitigation reporting or monitoring plan [was was not] adopted for this project.

ORIGINAL

- 4. A statement of Overriding Consideration [was was not] adopted for this project.
- 5. Findings [were were not] made pursuant to the provisions of CEQA.

An electronic copy of the Negative Declaration or Mitigated Negative Declaration will be made available electronically upon request. This is to certify that the final MND with comments and responses and record of project approval is available to the General Public at:

City of Lakewood
 5050 Clark Avenue
 Lakewood, California 90712

[Handwritten Signature]
 Signature (Public Agency)

[Handwritten Signature]
 Date received for filing at OPR:

July 10, 2017 Director of Community Development
 Date Title

for
Sandra Dices Soutwell

2017 178103

 FILED
 Jul 11 2017
 Dean C. Logan, Registrar - Recorder/County Clerk
 Electronically signed by DEMETRIA ATKINS

State of California—Natural Resources Agency
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
2017 ENVIRONMENTAL FILING FEE CASH RECEIPT

RECEIPT # 201707110550019
STATE CLEARING HOUSE # (if applicable)

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY

LEAD AGENCY DIRECTOR OF COMMUNITY DEVELOPMENT CITY OF LAKEWOOD	DATE 07/11/2017
COUNTY/STATE AGENCY OF FILING L.A.C.C	DOCUMENT NUMBER 2017178103

PROJECT TITLE
PARKCREST CAR WASH AND CAR SERVICE

PROJECT APPLICANT NAME PAUL KUYKENDALL	PHONE NUMBER (562)866-9771
---	-------------------------------

PROJECT APPLICANT ADDRESS 5050 CLARK AVENUE	CITY LAKEWOOD	STATE CA	ZIP CODE 90712
--	------------------	-------------	-------------------

PROJECT APPLICANT (Check appropriate box):

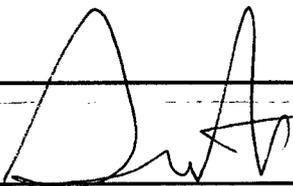
- Local Public Agency
 School District
 Other Special District
 State Agency
 Private Entity

CHECK APPLICABLE FEES:

<input type="checkbox"/> Environmental Impact Report (EIR)	\$3,078.25	\$	0.00
<input checked="" type="checkbox"/> Negative Declaration (ND)(MND)	\$2,216.25	\$	2,216.25
<input type="checkbox"/> Application Fee Water Diversion (State Water Resources Control Board Only)	\$850.00	\$	0.00
<input type="checkbox"/> Projects Subject to Certified Regulatory Programs (CRP)	\$1,046.50	\$	0.00
<input checked="" type="checkbox"/> County Administrative Fee	\$50.00	\$	75.00
<input type="checkbox"/> Project that is exempt from fees			
<input type="checkbox"/> Notice of Exemption			
<input type="checkbox"/> CDFW No Effect Determination (Form Attached)			
<input type="checkbox"/> Other _____		\$	0.00

PAYMENT METHOD:

- Cash
 Credit
 Check
 Other _____
 \$ 2,291.25

SIGNATURE X 	TITLE IC
---	-------------

ORIGINAL

MITIGATED NEGATIVE DECLARATION

Date of Posting of Preliminary Negative Declaration (Notice of Intent): June 15, 2017

Lead Agency: City of Lakewood
5050 N. Clark Avenue
Lakewood, California 90712

Agency Contact Person: Paul Kuykendall, AICP, Senior Planner
Telephone Number: (562) 866-9771, extension 2344
E-mail Address: pkuykend@lakewoodcity.org
Prepared by: City of Lakewood, Community Development Department

Project Title: Parkcrest Car Wash and Car Service

Project Sponsor: Mr. Mario S. Torres – SRK Architects
Project Contact Person: Paul Kuykendall, AICP, Senior Planner (562) 866-9771, extension 2344

Project Address: 6741 Carson Street, Lakewood, California
City and County: City of Lakewood, County of Los Angeles
State Clearinghouse No.: N/A

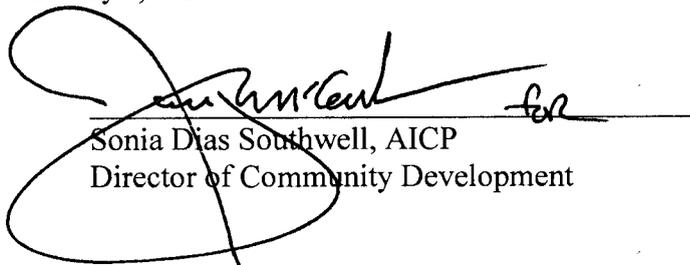
Project Description: The site is on the north side of Carson Street, west of the intersection of Los Coyotes Diagonal and Carson Street. To the north and west of the site are single-family homes in the R-1 zone. To the east is a commercial strip center in the C-3 zone. To the south is the Heartwell golf course in Long Beach. The site will have a net area of 1.06 acres following alley dedications along portions of the north and west property lines. The site is developed with a former McDonald's drive-thru restaurant. The existing restaurant will be converted to a 3,100 sq. ft. carwash building with a main car wash tunnel, equipment and storage rooms, bathroom, an office, and other improvements. A new 3,900 square-foot car service building will be built at the north side of the property and will include five service bays. Auto services may include auto services as allowed by Section 9347.B.3 of the Lakewood Municipal Code. The site has two driveways on Carson Street and will have two access points to the alley. Trash and vacuum equipment enclosures will be located on the east side of the site. The project will have 27 parking spaces and a loading zone. Of the 27 parking spaces, 16 spaces will be used as self-service vacuum stations covered with canopies. The proposed carwash hours will be Monday to Saturday from 7:30AM to 8:00PM or dusk, whichever comes first and on Sundays from 8:00AM to 8:00PM or dusk, whichever comes first. The proposed car service building hours will be Monday to Saturday from 7:30AM to 7:00PM and on Sundays from 9:00AM to 7:00PM. There is an existing freestanding sign and three flag poles adjacent to Carson Street which the applicant intends to utilize for this project.

I declare that I have examined the proposed specific plan amendment, and on the basis of the Initial Study and Environmental Checklist on file in my office as a public document, it is my opinion that the proposed project will have no significant impact upon the environment within the meaning of the California Environmental Quality Act of 1970, as amended.

THE PROJECT COULD NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT.

-Please Refer to the Following Initial Study-

Final Mitigated Negative Declaration adopted and issued on: July 6, 2017


Sonia Dias Southwell, AICP
Director of Community Development

2017 155584
FILED
Jun 15 2017
Dean C. Logan, Registrar - Recorder/County Clerk
Electronically signed by LAKEISHA MCCOY

THIS NOTICE WAS POSTED

ON June 15 2017

UNTIL July 17 2017

REGISTRAR - RECORDER/COUNTY CLERK



NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION FOR:

Project Title: Parkcrest Car Wash and Car Service
Project Applicant: Mr. Mario S. Torres - SRK Architects
Project Location: 6741 Carson Street, Lakewood, California
Notice Requested By: City of Lakewood, 5050 Clark Avenue, Lakewood, California 90712
Contact Person & Phone: Paul Kuykendall, AICP, Senior Planner, (562) 866-9771, extension 2344

Description of the Proposed Project:

The site is on the north side of Carson Street, west of the intersection of Los Coyotes Diagonal and Carson Street. To the north and west of the site are single-family homes in the R-1 zone. To the east is a commercial strip center in the C-3 zone. To the south is the Heartwell golf course in Long Beach. The site will have a net area of 1.06 acres following alley dedications along portions of the north and west property lines. The site is developed with a former McDonald's drive-thru restaurant. The existing restaurant will be converted to a 3,100 sq. ft. carwash building with a main car wash tunnel, equipment and storage rooms, bathroom, an office, and other improvements. A new 3,900 square-foot car service building will be built at the north side of the property and will include five service bays. Auto services may include auto services as allowed by Section 9347.B.3 of the Lakewood Municipal Code. The site has two driveways on Carson Street and will have two access points to the alley. Trash and vacuum equipment enclosures will be located on the east side of the site. The project will have 27 parking spaces and a loading zone. Of the 27 parking spaces, 16 spaces will be used as self-service vacuum stations covered with canopies. The proposed carwash hours will be Monday to Saturday from 7:30AM to 8:00PM or dusk, whichever comes first and on Sundays from 8:00AM to 8:00PM or dusk, whichever comes first. The proposed car service building hours will be Monday to Saturday from 7:30AM to 7:00PM and on Sundays from 9:00AM to 7:00PM. There is an existing freestanding sign and three flag poles adjacent to Carson Street which the applicant intends to utilize for this project.

I declare that I have examined the plans for the above-captioned project as submitted by the applicant, and on the basis of the "Assessment of Environmental Impact Questionnaire" on file in my office as a public document, it is my opinion that this project, after mitigation, will have no significant impact upon the environment within the meaning of the California Environmental Quality Act of 1970, as amended. Further, the project site is not on any list enumerated under Section 65962.5 of the California Government Code.

Any person may file comments to the mitigated negative declaration with the Department of Community Development prior to the issuance of the permit or approval of the project. The comments must be in writing and must state the environmental factors on which the comments are based. The comments shall be reviewed by the Director of Community Development or his/her agent. If he/she finds that the comments are based on one or more significant environmental factors not previously considered, or which, in the opinion of the reviewer, should be reconsidered and which may have a substantial adverse effect on the environment, the permit shall be suspended and an EIR shall be processed. All persons interested in reviewing the Mitigated Negative Declaration and submitting written comments may find a copy of the document on file in the Community Development Department, Lakewood City Hall, 5050 Clark Avenue, Lakewood, California. An electronic copy of the Negative Declaration or Mitigated Negative Declaration will be made available electronically upon request and is available on the City's website: <http://www.lakewoodcity.org/council/planning.asp>. **The public review and comment period for this project shall extend through the public hearing which is to be held in conjunction with the proposed Conditional Use Permit No. 948 before the Planning and Environment Commission on July 6, 2017 at 7:00 P.M., in the Lakewood City Council Chambers at the Centre at Sycamore Plaza, 5000 Clark Avenue, Lakewood, California. The comment period shall be no less than 20 days from the posting date of this notice.**

June 15, 2017
Date

Sonia Dias Southwell, AICP
Director of Community Development

REMOVE POSTED NOTICE ON JULY 7, 2017

JUN 15 2017



NOTICE OF INTENT LOS ANGELES, COUNTY CLERK TO ADOPT A MITIGATED NEGATIVE DECLARATION FOR:

Project Title: Parkcrest Car Wash and Car Service
Project Applicant: Mr. Mario S. Torres – SRK Architects
Project Location: 6741 Carson Street, Lakewood, California
Notice Requested By: City of Lakewood, 5050 Clark Avenue, Lakewood, California 90712
Contact Person & Phone: Paul Kuykendall, AICP, Senior Planner, (562) 866-9771, extension 2344

Description of the Proposed Project:

The site is on the north side of Carson Street, west of the intersection of Los Coyotes Diagonal and Carson Street. To the north and west of the site are single-family homes in the R-1 zone. To the east is a commercial strip center in the C-3 zone. To the south is the Heartwell golf course in Long Beach. The site will have a net area of 1.06 acres following alley dedications along portions of the north and west property lines. The site is developed with a former McDonald's drive-thru restaurant. The existing restaurant will be converted to a 3,100 sq. ft. carwash building with a main car wash tunnel, equipment and storage rooms, bathroom, an office, and other improvements. A new 3,900 square-foot car service building will be built at the north side of the property and will include five service bays. Auto services may include auto services as allowed by Section 9347.B.3 of the Lakewood Municipal Code. The site has two driveways on Carson Street and will have two access points to the alley. Trash and vacuum equipment enclosures will be located on the east side of the site. The project will have 27 parking spaces and a loading zone. Of the 27 parking spaces, 16 spaces will be used as self-service vacuum stations covered with canopies. The proposed carwash hours will be Monday to Saturday from 7:30AM to 8:00PM or dusk, whichever comes first and on Sundays from 8:00AM to 8:00PM or dusk, whichever comes first. The proposed car service building hours will be Monday to Saturday from 7:30AM to 7:00PM and on Sundays from 9:00AM to 7:00PM. There is an existing freestanding sign and three flag poles adjacent to Carson Street which the applicant intends to utilize for this project.

I declare that I have examined the plans for the above-captioned project as submitted by the applicant, and on the basis of the "Assessment of Environmental Impact Questionnaire" on file in my office as a public document, it is my opinion that this project, after mitigation, will have no significant impact upon the environment within the meaning of the California Environmental Quality Act of 1970, as amended. Further, the project site is not on any list enumerated under Section 65962.5 of the California Government Code.

Any person may file comments to the mitigated negative declaration with the Department of Community Development prior to the issuance of the permit or approval of the project. The comments must be in writing and must state the environmental factors on which the comments are based. The comments shall be reviewed by the Director of Community Development or his/her agent. If he/she finds that the comments are based on one or more significant environmental factors not previously considered, or which, in the opinion of the reviewer, should be reconsidered and which may have a substantial adverse effect on the environment, the permit shall be suspended and an EIR shall be processed. All persons interested in reviewing the Mitigated Negative Declaration and submitting written comments may find a copy of the document on file in the Community Development Department, Lakewood City Hall, 5050 Clark Avenue, Lakewood, California. An electronic copy of the Negative Declaration or Mitigated Negative Declaration will be made available electronically upon request and is available on the City's website: <http://www.lakewoodcity.org/council/planning.asp>. **The public review and comment period for this project shall extend through the public hearing which is to be held in conjunction with the proposed Conditional Use Permit No. 948 before the Planning and Environment Commission on July 6, 2017 at 7:00 P.M., in the Lakewood City Council Chambers at the Centre at Sycamore Plaza, 5000 Clark Avenue, Lakewood, California. The comment period shall be no less than 20 days from the posting date of this notice.**

June 15, 2017

Date

Sonia Dias Southwell, AICP

Director of Community Development



NOTICE OF PROPOSED CONDITIONAL USE PERMIT

CONDITIONAL USE PERMIT NO. 948 FOR THE ESTABLISHMENT OF A CARWASH FACILITY WITH COVERED OUTDOOR VACUUM STATIONS AND A CAR SERVICE BUILDING PURSUANT TO LAKEWOOD MUNICIPAL CODE SECTIONS 9341.B, 9347.A, 9347.B.3, 9347.D.11, and 9490.1 AT 6741 CARSON STREET, LAKEWOOD, CALIFORNIA, AND THE ENVIRONMENTAL ASSESSMENT (MITIGATED NEGATIVE DECLARATION).

NOTICE IS HEREBY GIVEN that a public hearing will be held before the Lakewood Planning and Environment Commission on the application of Mr. Mario S. Torres with SRK Architects pertaining to a Conditional Use Permit for the establishment of a carwash facility with covered outdoor vacuum stations and a car service building on a property located in the C-3 (Intermediate Commercial) zone at:

6741 CARSON STREET, LAKEWOOD, CALIFORNIA

pursuant to Lakewood Municipal Code Sections 9341.B, 9347.A, 9347.B.3, 9347.D.11, and 9490.1 on **THURSDAY, JULY 6th, 2017, at 7:00 P.M.**, in the Lakewood City Council Chambers at the Centre at Sycamore Plaza, 5000 Clark Avenue, Lakewood, California. The environmental assessment, a Mitigated Negative Declaration, will be considered at the public hearing.

All persons interested may appear at that time and testify in this matter. The proposal, maps and exhibits thereof may be inspected by the public prior to the hearing at the office of the Community Development Department of Lakewood City Hall, 5050 Clark Avenue, Lakewood, California.

NOTICE IS FURTHER GIVEN that if you challenge the aforementioned action in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence delivered to the City at, or prior to, the public hearing.

DATED this 21st day of June, 2017

Sonia Dias Southwell, AICP
Director of Community Development

Lakewood

CUP 948



NOTICE OF PROPOSED CONDITIONAL USE PERMIT

CONDITIONAL USE PERMIT NO. 948 FOR THE ESTABLISHMENT OF A CARWASH FACILITY WITH COVERED OUTDOOR VACUUM STATIONS AREA, ONE SERVICE BUILDING PURSUANT TO LAKEWOOD MUNICIPAL CODE SECTIONS 9341.0, 9307.0, 9347.0, 9347.01, AND 9490.1 AT 6741 CARSON STREET, LAKEWOOD, CALIFORNIA, AND THE ENVIRONMENTAL ASSESSMENT (MITIGATED NEGATIVE DECLARATION).

NOTICE IS HEREBY GIVEN that a public hearing will be held before the Lakewood Planning and Environmental Commission on the application of Mr. Mario S. Torres with SRG Architects pertaining to a Conditional Use Permit for the establishment of a carwash facility with covered outdoor vacuum stations and cycle service building on a property located in the C-3 (Intermediate Commercial) zone.

6741 CARSON STREET, LAKEWOOD, CALIFORNIA

6741 Carson Street, Lakewood Municipal Code Sections 9341.0, 9307.0, 9347.0, 9347.01, and 9490.1 on THURSDAY, JULY 6th, 2017, at 7:00 P.M., in the Lakewood City Council Chambers at the City of Lakewood, 5050 Clark Avenue, Lakewood, California. The environmental assessment, a Mitigated Negative Declaration, will be considered at the public hearing.

All parties concerned with the project should appear at the time and place in this notice. The proposal, maps and exhibits thereof may be inspected by the public prior to the hearing at the office of the Community Development Department of Lakewood City Hall, 5050 Clark Avenue, Lakewood, California.

NOTICE IS FURTHER GIVEN that if you challenge the aforementioned action in court, you may be liable for making every effort to mitigate the action at the public hearing described in this notice, or in written correspondence delivered to the City at or prior to the public hearing.

DATE: June 21st day of June, 2017

Please return on July 7

[Signature]
Kerrie Ann Goodwin, AICP
Director of Community Development

Lakewood

City of Lakewood, California • 5050 Clark Avenue • Lakewood, CA 90412 • Phone: (714) 942-2000 • Fax: (714) 942-2001 • Website: www.lakewoodca.gov

06/23/2017 09:10



**NOTICE OF INTENT
TO ADOPT A MITIGATED
NEGATIVE DECLARATION FOR**

Project Title: Parkview Car Wash and Car Service
Project Applicant: Mr. Mario S. Torres - 3884 S. Lakewood
Project Location: 4741 Carline Street, Lakewood, California
Notice Requested By: City of Lakewood, 2270 Clark Avenue, Lakewood, California 90712
Contact Person & Phone: Paul Schroeder, AICP, Senior Planner, (310) 564-7777, ext. 204

Description of the Proposed Project:
 The site is the property of Canyon Green, Inc. and is currently an unimproved lot. The site is located on the east side of Carline Street, between Clark Avenue and the intersection of Carline Street and Clark Avenue. The site is currently vacant and is zoned R-1. The project consists of a car wash and car service building with a total area of approximately 10,000 square feet. The building will include a car wash, a car service area, and a waiting area. The project will also include a parking lot for approximately 10 cars. The project is located in an area that is currently undeveloped and is surrounded by other residential and commercial properties. The project is expected to be completed within six months of the start of construction. The project will not have any significant impacts on the environment or the community. The project is consistent with the City of Lakewood's Comprehensive General Plan and the Lakewood Municipal Code. The project is also consistent with the City of Lakewood's Environmental Impact Report. The project is expected to provide jobs and increase the tax base of the City of Lakewood. The project is also expected to improve the appearance of the area and provide a convenient location for car wash and car service services. The project is expected to be a positive addition to the community and the City of Lakewood.

Conclusion: I have examined the plans for the above captioned project as directed by the applicant and on the basis of the information provided and the information available to me, I conclude that the project is consistent with the City of Lakewood's Comprehensive General Plan and the Lakewood Municipal Code. The project is also consistent with the City of Lakewood's Environmental Impact Report. The project is expected to provide jobs and increase the tax base of the City of Lakewood. The project is also expected to improve the appearance of the area and provide a convenient location for car wash and car service services. The project is expected to be a positive addition to the community and the City of Lakewood. I recommend that the City of Lakewood approve the project and issue a Mitigated Negative Declaration for the project. The project is consistent with the City of Lakewood's Comprehensive General Plan and the Lakewood Municipal Code. The project is also consistent with the City of Lakewood's Environmental Impact Report. The project is expected to provide jobs and increase the tax base of the City of Lakewood. The project is also expected to improve the appearance of the area and provide a convenient location for car wash and car service services. The project is expected to be a positive addition to the community and the City of Lakewood.

Paul Schroeder
 Senior Planner
 City of Lakewood

REMOVE FROM SIGNAGE ON JULY 1, 2012



NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION FOR

Project: [Illegible]
Location: [Illegible]
Applicant: [Illegible]

1. Introduction
2. Project Description
3. Environmental Setting
4. Mitigation Measures
5. Conclusion

6. Public Hearing
7. Comments
8. Decision

9. Final Decision
10. Appeal
11. Contact Information



Store Closed
Please Call
[Illegible]
[Illegible]

STAHMAZ
DONUTS

RESOLUTION NO. 14-2017

A RESOLUTION OF THE PLANNING AND ENVIRONMENT COMMISSION OF THE CITY OF LAKEWOOD APPROVING THE APPLICATION FOR CONDITIONAL USE PERMIT CASE NO. 948 FOR THE ESTABLISHMENT OF A CARWASH FACILITY WITH COVERED OUTDOOR VACUUM STATIONS AND A CAR SERVICE BUILDING ON A PROPERTY LOCATED AT 6741 CARSON STREET, LAKEWOOD, CALIFORNIA

THE PLANNING AND ENVIRONMENT COMMISSION OF THE CITY OF LAKEWOOD DOES HEREBY FIND, RESOLVE AND DETERMINE AS FOLLOWS:

SECTION 1. The Planning and Environment Commission of the City of Lakewood, having had submitted to it the application of Mr. Mario S. Torres of SRK Architects, 2254 S. Figueroa Street, Los Angeles, California 90007, representing the owner of an interest in the following described real property, requesting a Conditional Use Permit for the establishment of a carwash facility with covered outdoor vacuum stations and a car service building, pursuant to the provisions of Sections 9341.B, 9347.A, 9347.B.3, 9347.D.11, and 9490.1 of the Lakewood Municipal Code on that certain real property within the City of Lakewood described as a Portion of Lot 556 of Tract Map No. 17830 as per map recorded in Book 452, Pages 3-11 in the Office of the County Recorder of Los Angeles County, and more particularly described as 6741 Carson Street, Lakewood, California; all as shown in the attached minutes and report of the Planning and Environment Commission, attached hereto and made a part hereof as though set forth in full, the Planning and Environment Commission does hereby find and determine as provided in this Resolution.

SECTION 2. The Planning and Environment Commission finds that an Initial Study has been prepared for the proposed project pursuant to Section 15063 of the California Environmental Quality Act Guidelines, as amended. A Mitigated Negative Declaration has been prepared for this project, pursuant to Section 15070, et sequitur, of the Guidelines. The project was found to have no significant effect on the environment, after implementation of the mitigation measures contained in the Initial Study prepared for this project. Therefore, said Mitigated Negative Declaration is hereby approved.

SECTION 3. The Planning and Environment Commission of the City of Lakewood does hereby report that a public hearing was held before the Planning and Environment Commission in respect to said application on the 6th day of July, 2017, and the Planning and Environment Commission does hereby find and determine that said application, subject to the conditions hereinafter specified, should be granted for the following reasons:

A. The request is for approval of Conditional Use Permit No. 948 all as shown on Exhibits "A," "B," "C," "D," "E," "F," "G," "H," and "I."

B. The subject use will not to be in conflict with the goals of the General Plan, nor is the proposed use in conflict with the Commercial land use designation of the General Plan.

C. The nature, condition, and development of adjacent uses, buildings, and structures have been considered, and it has been found that the industrial school will not adversely affect or is materially detrimental to adjacent uses, buildings, or structures provided that the conditions contained have been met and maintained.

D. Carson Street and the adjacent public alley are adequate to serve the traffic generated by the site. Thus, no adverse effect is anticipated on existing roads and circulation as a consequence of this application.

E. The project will have 27 parking spaces including two ADA accessible parking spaces. There will also be one 10' x 25' loading zone space near the northwest corner of the building. The 16 spaces on the east side of the carwash building will be used as covered outdoor vacuum stations.

F. Notification of a public hearing has been made, pursuant to Section 9422, et seq., of the Lakewood Municipal Code and State law.

SECTION 4. The Planning and Environment Commission of the City of Lakewood, based upon the aforementioned findings and determinations, hereby grants the use as requested in Conditional Use Permit No. 948 provided the use is operated in compliance with the following conditions at all times:

A. The conditions, unless otherwise specified herein, shall be complied with within upon the initial opening of a business on this site, and not thereafter violated or deviated from except where authorized by amendment to this Resolution adopted in accordance with the provisions of this Resolution and the Municipal Code. The granting of said Conditional Use Permit and this Resolution, and any modification or change thereof, shall not be effective for any purpose until a certified copy of this Resolution (Exhibits excluded) has been recorded in the Office of the Los Angeles County Recorder. The granting of said Amendment, subject to the conditions herein set forth, are binding on their heirs, assigns, and successors in interest of the applicant and their heirs, assigns, and successors in interest.

B. The City shall require that all construction comply with SCAQMD regulations, including Rule 402 which specifies that there be no dust impacts off-site sufficient to cause a nuisance, and SCAQMD Rule 403, which restricts visible emissions from construction.

C. Moisten soil prior to grading.

D. Water exposed surfaces at least once daily to keep soil moist.

E. Water exposed surfaces at least twice a day, or as often as needed, during very dry weather or periods of high wind in order to maintain a surface crust and prevent release of visible emissions from the construction site.

F. Treat any area that will be exposed for extended periods with a soil conditioner to stabilize soil or temporarily plant with vegetation.

- G. Wash mud-covered tires and under carriages of trucks leaving construction sites.
- H. Provide for street sweeping, as needed, on adjacent roadways to remove dirt dropped by construction vehicles or mud which would otherwise be carried off by trucks departing project sites.
- I. Securely cover loads of dirt with a tight fitting tarp on any truck leaving the construction sites to dispose of excavated soil.
- J. Cease grading during periods when winds exceed 25 miles per hour.
- K. Provide for permanent sealing of all graded areas, as applicable, at the earliest practicable time after soil disturbance.
- L. Provide temporary fencing with windscreen material to control windborne dust. Plant hedges or other plant buffers on any site where construction activities could expose neighboring residences and commercial sites to prolonged exposure to windblown dust.
- M. During grading, periodic monitoring shall be scheduled by a City Inspector or a City planner to verify compliance of measures of dust control.
- N. During grading, final inspection shall be scheduled by a City Inspector or a City planner to verify permanent sealing of all graded areas has been provided for and that hedges or other plant buffers are planted to avoid exposing neighboring residences to prolonged exposure to windblown dust.
- O. The applicant shall retain a qualified archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards and who shall conduct an archaeological monitoring program during any earthmoving involving excavations into younger Quaternary Alluvial deposits.
- P. The archaeological monitoring program shall be conducted in a manner consistent with archaeological standards and, in this case, conducted on a full-time or part-time basis, at the discretion of the Lead Agency. Should evidence of archaeological resources be uncovered, the archaeological monitoring program shall continue on a full-time basis until it is determined no more younger alluvium is being impacted.
- Q. If, at any time, evidence of human remains are uncovered during the development of this project, all activity shall cease immediately and the project contractor shall immediately notify the Los Angeles County Coroner's Office of the find pursuant to State law. The Los Angeles County Coroner shall be permitted to examine the find in situ. If the remains are determined to be of Native American descent, the Native American Heritage Commission shall be contacted pursuant to Public Resources Code Section 5097.98 and the Most Likely Descendent (MLD) named. In consultation with the MLD, City, Coroner, and archaeological consultant, the disposition of the remains will be determined.

R. If evidence of Native American remains or resources are identified, a Native American Monitor of Gabrieleno descent shall be contacted and given the opportunity to be added to the remainder of the monitoring program. Discoveries which may be encountered may include, but not be limited to, dwelling sites, stone implements or other artifacts, animal bones, and human bones.

S. If any archaeological sites are encountered during grading or construction of the project, all grading or construction efforts which would disturb these sites shall cease and an archaeologist shall be notified and provisions for recording and excavating the site shall be made in compliance with Section 15064.5 of the CEQA Guidelines, as amended.

T. During excavation and grading activities of any future development project, if archaeological or paleontological resources are discovered, the project contractor shall stop all work and contact the City. The applicant shall retain a qualified archaeologist or paleontologist and contact a representative of the Gabrieleno Band of Mission Indians – Kizh Nation to evaluate the significance of the finding and appropriate course of action. Salvage operations requirements pursuant to Section 15064.5 of the CEQA Guidelines shall be followed. If it is determined due to the types of deposits discovered that a Native American monitor is required, the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites as established by the Native American Heritage Commission shall be followed.

U. Comply with the recommendations of the geotechnical report contained in Appendix "E" of the Initial Study prepared for this project.

V. Refrigerants shall be properly removed before an appliance is dropped off or collected for disposal at solid waste landfills, metal recyclers, or similar facilities.

W. Demolition and renovation work that would disturb hazardous materials should be performed utilizing safe work practices for identified metals.

X. Contractors engaged in disturbance of these materials should be notified of their potential content.

Y. California certified abatement contractor must be used for the abatement of asbestos-containing materials. A project manual for the abatement design should also be generated prior to the planned abatement activities.

Z. During all project site excavation and grading on-site, construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer standards.

AA. The contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the project site.

BB. Equipment shall be shut off and not left to idle when not in use.

CC. The contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and sensitive receptors nearest the project site during all project construction.

DD. In order to minimize construction noise levels it is recommended that a temporary barrier, sufficient in height to block the line of sight between first and second story windows of adjacent single-family detached residential dwelling units (as applicable) and construction equipment shall be placed along the northern and western property lines during project construction.

EE. The western side of the car wash must be solid with no windows, holes or openings.

FF. The Whisper Drying System or a drying system with a noise level of 80 dB(A) at the exit of the car wash shall be used. After installation, the noise level of the installed equipment shall be verified by an experienced acoustical professional utilizing a Type 1 or Type 2 precision noise meter. Their findings shall be provided in a letter report and shall be submitted to the City of Lakewood Community Development Department prior to final inspection.

GG. All vacuum equipment shall be housed in structures that can provide for a closed door condition. The vacuum systems shall be kept in rooms with no exterior facing windows. Vacuum hoses and hose ends are an exception to this requirement.

HH. The openings of all rooftop vents associated with buildings that house car wash and/or vacuum equipment shall be slanted away from nearby residential land uses to the greatest degree possible.

II. The permitted hours of operation for the carwash shall be Monday through Saturday from 7:30 AM to 8:00 PM or 30 minutes after dusk whichever comes first, and on Sundays from 8:00 AM to 8:00 PM or 30 minutes after dusk whichever comes first.

JJ. The permitted hours of operation for the car service building shall be Monday through Saturday from 7:30 AM to 7:00 PM and on Sundays from 9:00 AM to 7:00 PM.

KK. Parking shall be configured for and maintained with sufficient lighting to illuminate the appearance and conduct of all persons in parking areas. All exterior lighting shall be designed and arranged so as not to reflect direct or indirect light upon abutting or adjacent properties, with a maximum light spill of point .5 foot candles at grade level.

LL. Managers shall emphasize the importance of effective communication between the managers of the establishment regarding professional business practices.

MM. Management shall have an ongoing liaison relationship with members of the Los Angeles County Sheriff's Department, so that communication may be easily facilitated if problems occur and to ensure a strong level of communication for crime prevention and problem solving efforts.

NN. The carwash and car service buildings shall have working "state of the art" video surveillance system in place to assist Los Angeles County Sheriff's personnel in their criminal investigations. The storage medium shall be secured in such a manner as to not to facilitate the easy removal from unauthorized personnel or employees under duress.

OO. The carwash and car service buildings shall have a "state of the art" silent robbery alarm system in place to allow employees to promptly report crimes in progress, if they are safely able to do so.

PP. Management shall ensure that no alcoholic beverages are allowed on the site and shall refuse services to any intoxicated person, or person who is under the influence of a controlled substance.

QQ. This CUP shall be subject to a six-month review after the initial opening of the carwash facility to ensure that the facility has complied with the requirements contained in this Resolution and to allow input from the Sheriff's Department for any concerns that may arise.

RR. Comply with the recommended conditions of approval for Development Review Board (DRB) Case No. 8607.

SS. Five-foot alley dedications shall be provided along the site's north and west property lines to comply with current City standards. The dedicated alleys shall be improved and paved to the satisfaction of the Director of Public Works.

TT. The applicant shall sign a written statement stating that he has read, understands, and agrees to the conditions of the granting of this Conditional Use Permit within twenty (20) days of the adoption of the Resolution approving the same, or this approval shall become null and void.

UU. This Conditional Use Permit may be modified or revoked by the City Council or the Planning and Environment Commission should they determine that the proposed uses or conditions under which it is being operated or maintained is detrimental to the public health, welfare or materially injurious to property or improvements in the vicinity or if the property is operated or maintained so as to constitute a public nuisance.

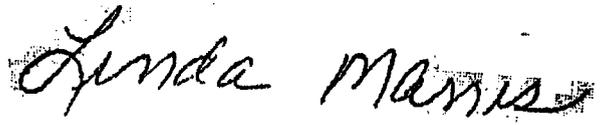
VV. The applicant agrees to indemnify, hold harmless and defend the City, its officers, agents and employees, from any and all liability or claims that may be brought against the City arising out of its approval of this permit, or arising out of the operation of the business, save and except that caused by City's active negligence.

WW. By signing or orally accepting the terms and provisions of this permit, entered into the minutes of these proceedings, the Permittee acknowledges all of the conditions imposed and accepts this permit subject to those conditions with a full awareness that the violation of any of said permits could subject Permittee to further hearings before the Planning and Environment Commission on the issue of revocation or modification.

SECTION 5. A certified copy of the excerpts of the minutes applicable to this case and this Resolution shall be delivered to the applicant.

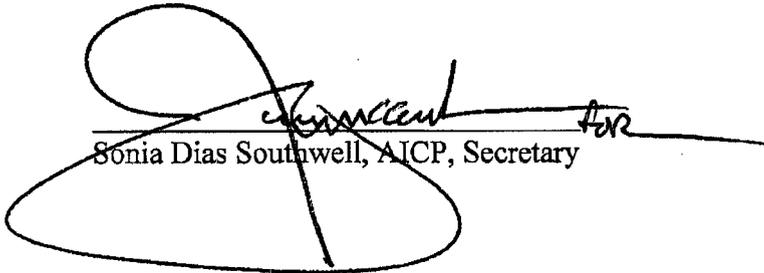
ADOPTED AND APPROVED this 6th day of July, 2017, by the Planning and Environment Commission of the City of Lakewood voting as follows:

AYES:	COMMISSIONERS: McKinnon, Stuckey, Manis
NOES:	COMMISSIONERS: Samaniego
ABSENT:	COMMISSIONERS: Quarto
ABSTAIN:	COMMISSIONERS:



Linda Manis, Chairperson

ATTEST:



Sonia Dias Southwell, AICP, Secretary

CONDITIONAL USE PERMIT NO. 948, REQUESTING APPROVAL FOR A CAR WASH AND CAR SERVICE ON PROPERTY LOCATED AT 6741 CARSON STREET (Mario Torres on behalf of Andy Sehremelis for Parkcrest Car Wash)

Director Sonia Southwell delivered the oral report all as contained in the written report and slide presentation, as contained in the file for Conditional Use Permit No. 948.

Commissioner Samaniego asked if the back wall would be closed off and if that is why the trees and shrubbery will be there.

Director Southwell responded that the applicant's first proposal to the Development Review Board included a request to exit onto the alley, but they were required to modify that and exiting through the building into the alley was disallowed. The current proposal includes a solid wall facing the alley with landscaping. Director Southwell added that the auto repair business is an allowed use in this commercial district and that it is only the car wash business that requires the Conditional Use Permit.

Commissioner Samaniego asked if there would be a wall on the east side where the eucalyptus trees are located.

Director Southwell replied that there would be no wall, only trees, with vacuum station canopies and a planter. Additional trees will be added.

Commissioner Samaniego asked if any of the light poles would be removed.

Director Southwell replied that the light poles would remain as they are.

Commissioner Samaniego asked if there would be an additional wall in the more populated area on the west side.

Director Southwell responded that there would not be a six-foot wall on the west side, but there is a retaining wall in that area to address grading issues.

Commissioner Samaniego asked if an additional retaining wall would be constructed on the west side.

Director Southwell replied that structurally, this would be a Public Works issue. If a five-foot street dedication were to be indicated, and if the Director of Public Works requires the improvements at the outset of this project, there could be different grading options. If the grading remains as it is currently, a retaining wall would probably be required.

Commissioner Samaniego asked if the demolition of the McDonald's building has begun.

Director Southwell replied that, as of today, the building remains there.

Commissioner Samaniego inquired about the significant amount of correspondence between the City of Lakewood and the Gabrielino Indian Tribe.

Director Southwell explained that the City is required by state law to notify the Gabrielino-Tongva tribe of certain City projects, particularly those involving excavation, and they have the

right to respond that they wish to monitor the project.

Commissioner Samaniego asked what the relevance is, e.g. Indian burial ground.

Director Southwell replied that this is the historical area of this tribe primarily, and Gabrielino-Tongva is an active tribe.

Attorney Tsai confirmed that the communication between the City of Lakewood and the Gabrielino-Tongva tribe is a state requirement.

There being no further questions of staff, Chairperson Manis opened the public hearing.

Andy Sehremelis, 2910 Archibald's Avenue, Suite A-250, Ontario, California 91761, addressed the Commission, identifying himself as the applicant and owner. Mr. Sehremelis explained that he is a former resident of Lakewood who has worked with the Indian tribes on past projects, and he is the founder of Archibald Restaurants. He has also operated car washes and gas stations for the last 20 years. Mr. Sehremelis stated that when he became aware of the availability of this property, he was drawn to it, because he felt that it was in his own backyard. Measures have been taken to show consideration of neighbors, e.g. a higher end blower (whisper system) developed in Italy, to reduce noise. Mr. Sehremelis concluded his remarks by stating that he operates all of his businesses with consideration of the people in the area and that he was accompanied by his automotive group in order to answer any questions.

Commissioner Stuckey asked if the car wash is fully self-serve.

Mr. Sehremelis replied that there is an attendant to maintain the vacuums.

Commissioner Stuckey asked if the cost of using the vacuum is included in the price of the carwash.

Mr. Sehremelis responded affirmatively.

Commissioner Samaniego asked if there would be detail work.

Mr. Sehremelis replied that they would not be doing any detail work.

Commissioner Samaniego asked if there would be multiple one-bay businesses within the auto repair building, each owned and operated separately.

Mr. Sehremelis replied that there will only be one tenant.

Commissioner Samaniego asked if the two structures would be uniform in color and overall appearance.

Mr. Sehremelis responded affirmatively, stating that there would be conformity and the business will blend well with the surrounding neighborhood.

Brian Kite with SRK Architexts, 2254 S. Figueroa Street, Los Angeles, California, 90007, addressed the Commission, explaining that his company has worked hard to create architecture that is compatible. All elements of the service bays will help to buffer and anchor the site. It is

currently somewhat open-ended and this will make it more of an enclave. The light standards on the east side will be removed and the landscape architect has designed more modern and energy efficient fixtures.

Commissioner Samaniego referenced the property lines in the parking lot of the Regal Inn, the Bike Store and the Golf Shop, and asked if issues were anticipated regarding the location of the car wash territory lines in the parking lot areas assigned to other businesses.

Mr. Kite replied that it has not been an issue and explained that there is already an easement and a right to utilize that property.

Commissioner Samaniego responded that he was not aware of the easement.

Arthur Pinette, 4323 Quigley Avenue, addressed the Commission, stating that he lives on Quigley Avenue where it is quiet and he would like for it to stay that way. Mr. Pinette stated that his daughter and grandchildren live at 4174 Quigley which is on the back side facing the alley. There are already enough noise issues with traffic, trash trucks, delivery trucks, etc. Mr. Pinette stated that he has been a mechanic most of his life and knows how noisy these shops can be, e.g. tire changing, air tools, smog test functions, cars running on a dynamometer producing fumes, etc. Noise, fumes and congestion will all be issues. Mr. Pinette stated that he has spoken to all but three of the neighbors whose residences border this proposed business and referenced five of these residents in attendance at the meeting: Mrs. Haynes, Vince, Laura, Jessie, and Larry. Mr. Pinette stated that all of them are in agreement that there is no need for another car wash. It is not about how it looks; it is the noise and the fumes. The small side alley which is entered from Los Coyotes Diagonal and Carson Street as well as Ostrom Avenue, is used by people to get around the poorly designed access to the store on the corner. The traffic here will increase if this project is approved. McDonald's created their own turn lane, but that doesn't alleviate the problem of people waiting or the mechanics shop in the back, open on the Carson side; noise will still transmit to the neighborhood. The alley is fairly narrow and if the business decides to widen it, trees would have to be removed. Residents like the trees, and the business will have to replace them. Mr. Pinette stated that there is already a car wash on that corner; the Shell station has an automated drive-through car wash. The blowers are loud and can be heard at the houses bordering the alley. How it looks or even the lighting is not as important as the noise and fumes. Mr. Pinette concluded his remarks by stating that many of the neighbors were not notified about this meeting. Most of them said that they never received a public notice.

Laura Nelson, 4150 Quigley Avenue, Lakewood, California, addressed the Commission, stating that her greatest concern is that every noise will be funneled right into that corner. Ms. Nelson stated that her 91-year-old grandmother lives at the kitty corner. When McDonald's was there, customers could be heard at the drive-through. Now, every drunken fight at the Regal can be heard. Ms. Nelson asked about the days and hours of operation.

Director Southwell responded that the business would operate from Monday to Saturday from 7:30 a.m. to 8:00 p.m. or 30 minutes after dusk, whichever comes first, and on Sundays from 9:00 a.m. to 7:00 p.m. or 30 minutes after dusk, whichever comes first.

Ms. Nelson asked Director Southwell to bring up the site map on the PowerPoint screen to indicate what the property will look like when construction is complete. Ms. Nelson referred to the upper right corner, stating that the property is quite open and with the building and trees

being proposed, it is going to make that alley hidden. People from the Regal Inn tend to party in the alley and this will enable them to party even longer. Ms. Nelson asked if the Sheriff's Department has been consulted regarding the proposed project.

Director Southwell stated that the Sheriff's Department has been consulted and their recommended conditions of approval are included in the Conditional Use Permit also.

Ms. Nelson asked if the Sheriff's Department will be increasing their presence on weekends and at night.

Director Southwell replied that she cannot answer that question. However, the protocol would be to call the Sheriff's Department if there is a noise problem.

Assistant Director McGuckian explained that the applicant is required to have an ongoing liaison with the Sheriff's Department.

Ms. Nelson asked, considering the cover at that building, if illegal dumping will be a problem and inquired as to who is responsible for the landscaping.

Director Southwell responded that any improvement to a private property is the responsibility of the private property owner. The only relevant area that would be handled by the City is the private alley.

Ms. Nelson asked if the trees by the alley would remain.

Director Southwell responded that trees will be added on the west side by the alley.

Loretta Croom, 4158 Quigley Avenue, Lakewood, California, addressed the Commission, stating that she lives with her 84-year-old mother, and that her property is directly in the middle section of the alley near the proposed car wash. Ms. Croom stated that she is already struggling with noise from the Regal Inn and formerly with noise from McDonald's. Ms. Croom asked how the applicant would minimize the noise and the light, adding that she is already calling the Sheriff 20 times each night.

Assistant Director McGuckian stated that the Sheriff's report for this property did not find any incidents that directly reflect negatively on the proposed business. There is no history of complaints, but the preventive recommendations of the Sheriff's Department have been incorporated into the Resolution nonetheless.

Commissioner Stuckey asked about the calls being placed to the Sheriff's Department, and specifically asked if the calls were specifying that the reported problem is with the Regal Inn. The Regal Inn is a separate issue and if there are problems with Regal, it is important to contact the Community Development Department and make them aware. Also, this new business will be subject to a six-month review.

Ms. Croom asked about the completion date for this project.

Director Southwell responded that the applicant would be given the opportunity to return to the podium after the public hearing has closed, in order to respond to comments and provide answers to additional questions such as this one.

Jesus Parra, 4102 Ostrom Avenue, Lakewood, California, addressed the Commission, stating that he is opposed to this new car wash. Mr. Parra stated that he lives southwest of the location and that it is bad enough as it is. There are already a lot of issues with that lot, it is already too noisy, and this will make it worse.

There being no one else wishing to be heard on the matter, Chairperson Manis closed the public hearing and invited the applicant to return to the podium to respond to the comments that had been made.

Andy Sehremelis, the applicant, returned to the podium, and stated that he is sympathetic to the people living around the proposed business. Mr. Sehremelis explained that this is the reason why they have designed the circulation of the project so that cars will not come around and exit onto Ostrom Avenue. Mr. Sehremelis added that he works in conjunction with Lakewood Sheriff Jim McDonnell on the homeless action that Sheriff McDonnell just initiated and, if there is a problem with the Regal Inn, he will capture it on his cameras and report it.

Various members of the audience began speaking to the applicant from their seats, at which time attorney Tsai explained that the public hearing had been closed and this was only an opportunity for the applicant to address all comments that were made during the open public hearing in response to his application. Since the public hearing has been closed, no further comments are permitted. Attorney Tsai added that Mr. Sehremelis stated that he would be available after the meeting if anyone had further questions or comments.

Commissioner Stuckey moved and Vice Chairperson McKinnon seconded that RESOLUTION NO. 14-2017, A RESOLUTION OF THE PLANNING AND ENVIRONMENT COMMISSION OF THE CITY OF LAKEWOOD, APPROVING CONDITIONAL USE PERMIT NO. 948 ON PROPERTY LOCATED AT 6741 CARSON STREET, be approved as submitted.

AYES: COMMISSIONERS: Stuckey, McKinnon, Manis
NOES: COMMISSIONERS: Samaniego
ABSENT: COMMISSIONERS: Quarto
ABSTAIN: COMMISSIONERS: None

BUILDING REHABILITATION BOARD

Chairperson Manis called to order the meeting of the Planning and Environment Commission sitting as the Building Rehabilitation Board.

Neighborhood Preservation Manager, Charles Carter, welcomed the new City Prosecutor, Adrienne Mendoza, and then introduced Community Conservation Representative George Bouwens, who presented the public nuisance case, for 6236 Ibbetson Avenue.

Public Nuisance

**6236 IBBETSON AVENUE
(Donald and Marlene Porter)**

CCR Bouwens delivered the oral report summarizing the written staff report and slide presentation, as contained in the file for this Code Enforcement Case and requested approval of staff recommendation to declare the property at 6236 Ibbetson to be a public nuisance.

5723 '17 SEP -5 P1:21

To the members of Lakewood City Council,

My name is Art Pinette, I'm writing this letter to the elected Lakewood City Council on behalf of the neighbors that border the C-3 zoned property at 6741 Carson street where a car wash/ auto service facility is proposed and approved to be constructed. I have family and friends in the R-1 homes along Ostrom Ave., Quigley Ave. and Los Coyotes diagonal, I live further away on Quigley.

Greetings, a confidant graced me with your email addresses, I hope you are not offended. Communication is very important to make good ideas happen and help keep bad ideas from happening with bad results along with wasted time and resources. Had communication occurred with the nearby neighbors before this project was proposed, the fix we're in could have been avoided.

Firstly, we neighbors are not opposed to new thriving businesses in our commercially zoned areas in our community. Business is a recognized valuable asset to our economy that provides jobs, financial resources and revenue to our local population, infrastructure and government.

Our government oversees laws and development that benefits all citizens and businesses in Lakewood and is exemplary and admired by many other communities. We have learned that we can depend on our city Governments to provide wise, informed and educated decisions and actions to enforce the laws and codes . Essentially we expect protection under the law as well. This includes ensuring our rights are not abridged. We depend on your common sense to seek justice and be prudent.

History

A permit was approved 29 years ago by the city to an entrepreneur wanting to add a restaurant franchise to his growing chain of restaurants. He received his permit in spite of the bordering neighbors protests and petition against him. The neighbors feared the introduction of a drive-thru lane just the other side of their shared 20 foot wide alley that included entrances to their garages and backyard space. The drive-thru would yield a row of idling, creeping cars emitting noise and exhaust that wrapped its way around the building into the parking area. A speaker/ microphone would be installed and used for two-way ordering, could be heard by the neighbors. For 28 years , many of the same neighbors and some newer neighbors suffered daily, the noise, fumes and the lesser nuisance of smells of burgers and fries being cooked and fried daily and into the evening. This required keeping shut the rear widows and doors as their only barriers. The neighbors did see this as an abridgment to their right to the enjoyment of quiet in their homes and yards. The petition, obviously was not successful but it does show how the neighbors rejected noise then as they do now and it should be considered relevant evidence to today's issues with what's ahead.

Present

Unlike the noise levels of the previous Drive-thru, a very different and louder business can be expected with the noise of machinery associated with a car wash and an auto repair facility condensed in a small area very close to our homes, so close that it is unprecedented in Lakewood. Car washes and auto shops in other Lakewood locations are not as close as the proposed operation to homes.

Adjacent to the proposed site in the same business corner, is an automated car wash, there many years. Also 80 decibels at the exit , it's loud, we don't like it, we put up with it. We've learned.

I doubt these folks are agreeable to be coerced into accepting even more noise and other grievances, having had the experience of the last 28 years. You can say, "Well they've put up with McDonalds drive-thru for 28 years and the Carson Street traffic is louder than ever, they can stand as much and even more." Well, this just isn't the case. They are tired of it and hope for a more peaceful future.

A bordering neighbor drafted a new petition on which we have obtained a great amount of signatures from the bordering neighbors and nearby Carson Park neighbors that don't live as close to lot but support the ones that do. It may not be accepted as evidence or even be successful but demonstrates opposition to the car wash/ auto repair facility. It demonstrates public opinion on this type of business we would not want close to our homes. It is not our choice which business is allowed to operate in this commercial lot. But it is our right to protest a plan that will potentially diminish our quality of life. A poll taken on a local community site, also shows that a majority of neighbors are not in favor of the plan and would prefer a business that doesn't yield noise, fumes, traffic and parking problems. Pretty much everyone agrees having this type of business this close to homes is a bad idea.

One point we all agree on, is cleaning up the abandoned lot and replacing the building with something suitable to our community that doesn't negatively affect the neighborhood.

The neighbors have been quoted saying they have been enjoying the break since the Previous drive-thru restaurant closed . Long time residents remember the businesses even before it came as very quiet markets. Even the grocery delivery trucks came and went in short order. The deliveries to the drive were more often and sometimes waited in the alley emitting fumes until there was a break in the line of cars being served. The truck drivers were at fault in this situation, not the restaurateur.

The Public Hearing 7/6/2017

The bordering neighbors notified and allowed to participate in the CUP hearing assume their presence and spoken opinion must have some heft. Why else for the invitation.

The required notification of the public hearing on negative declaration of the car wash/ auto repair plan for permit approval went out to residents only 300 feet from the property lines of the lot, 14 days prior to the hearing. I was not one of those residents. I didn't hear about it until a concerned bordering neighbor asked me for a ride to city hall to look at the plans, 1 1/2 days before the hearing. After seeing

the plans on what these bordering neighbors were in for, I quickly delivered reminders to them of the pending meeting. Except for those that were away, all expressed their opinions in opposition to the plan. Eight of us were rallied to attend the meeting and did. An audio recording of a ninth bordering neighbor was brought but not heard.

The section of the hearing began with the community development director introducing the title of the proposed plan and asked if the commissioners had a chance to read the ream of papers that consist of all of the studies on the project. We were not supplied with the study or even know of its existence until this meeting. The printout we received at the public works desk was very minimal.

She summarized project details to the audience and the panel of four commissioners in a matter of minutes . Some things she spoke of got my attention right away, like, the code calls for 10 feet added to the 20 foot wide alleys but we are asking for 5 feet. And the auto shop portion of plan would normally be approved without a hearing. Also she mentioned that the plans regarding the alleys went to the DOT several times and stated that an alley entrance on the northeast corner would be sealed and landscaped because of noise. She said " the first proposal to the DOT included a wall, then the architect said " we required the redesign " eliminating the walls.

What about the alley entrance and exits on the west side? Will they be sealed and landscaped because of noise? How does landscape replace a wall when it comes to noise!, When she was asked about the west side that borders the neighbors " Will there be a wall? , she said "There will be no walls".

Strategically placed questions from commissioners, avoided some details in other areas that were important to us. We were mistaken assuming their diligence to us. Very little attention was given to alley use, except for altering the code of 30 feet wide to 25 feet wide , which was self serving.

She invited the developer applicant to put on his show with backup from his architect. They had ample visual aids showing the artists' renderings of the proposed project. The architect showed us the thick 458 page plan and study, stating how much work and time went into it and referred to its complexity. The up-selling of the plan began and the developer was very convincing as he put on a great show firstly mentioning all his other triumphs in development and owning and operating many businesses at many locations. He continued with telling us that he once was our neighbor on Los Coyotes what a great neighbor he wants to become. He lives in Los Alamitos. His business is in Ontario.

He started out explaining how quiet the blowers will be calling them the Whisper System and how he could have had walls to mitigate the noise in the design but decided to go with landscaping and shrubbery because it's more pleasant to look at. (Trees and shrubbery are way less expensive than tall block walls but not at all as effective at blocking noise). Ask the neighbors which they would prefer: trees and shrubs with noise or a tall wall with way less noise?, they

would choose the wall. And what we mean by A Wall, is tall and continuous with the entrance and exits into the public alley closed off by a wall or gates containing sound reducing materials.

The community development director's statement on how the auto repair shop would not have required a hearing as it would by itself be an 'over the counter' permit, downplayed the probable impacts of auto repair facilities, chiefly noise, then dust, fumes and traffic. Having my experience and education of mechanics and operation of shops, many red flags were spotted looking at the plans and after visiting and comparing other auto shops in Lakewood, none of which are in such close proximity to homes. The developer uses examples in other cities, we don't care about other cities, this is our neighborhood and we like it the way it is.

Our turn

This process has been difficult for us because of short notice and not even knowing what we were up against, not having plans to study and discuss between us before the notices came. Where the developer had the unfair advantage of planning with the cooperation of the city's community development director and had the studies completed and a presentation all prepared before any neighbors knew what was coming.

We, neighbors were unfamiliar with the pace and short order of business of a public hearing. We were individually instructed to come to the podium to speak, recording our name and address. Tho some of us managed to fumble through speaking at the podium, our efforts didn't seem effective at getting any questions or feedback from the commissioners, It would have been nice to be prompted with questions regarding our perspective. It was as if they didn't want to hear anymore than what we presented. We spoke our concerns, Mr.Parra and I spoke mostly about the noise and traffic issues, Mrs. Nelson spoke of the noise and disturbances associated with the Regal Inn, including parties, homeless and illegal dumping in the alley. Mrs.Croom's speech was similar and added complaints about lighting. They didn't realize that speaking of issues with adjacent businesses and the homeless situation was not helpful to our case because it didn't directly relate to the plan, which used valuable time. Four out of the eight of us spoke then, distracting comments from the audience were corrected by advising her to come to the podium. She didn't. *We were then asked if anyone had anything different to say that wasn't already said?* Anyone else? I turned around and looked at the other four that hadn't come forward yet, they looked as if they perhaps, were intimidated and didn't respond. They didn't realize or know how important it was to be individually heard. None came forward.

Immediately, the developer was back at the podium for rebuttals to our arguments.

* edited from the audio or the mic was turned off*

Heard

When Jesus Parra came forward and spoke. He made some very important statements, Mr. Parra's passionate speech was not transcribed in it's entirety into

the resolution yet it is on the audio disc that I purchased from the city clerk for \$30 dollars. When I purchased the transcripts from the hearing, I assumed that all that was said would be in it and not just a summary of the portions that were favorable to recall.

The part where Mr Parra's speech that was not transcribed is as follows: "I want to live where my house isn't going to be that noisy, I was already to the point where I thought about selling my house because of the noise and I think this carwash is going to make it a lot worse."-- This should have been considered 'a life changing statement' and should have been included in the transcriptions. He may be compelled to move away because of additional noises added to what his family is enduring currently. Moving is a major decision in anyone's life and should be addressed.

How this hearing was conducted, its content and quick motion to accept and approve this plan is what inspired us to petition against the decision. I would also like to bring to the attention to the council, the editing of the audio recording of the hearing. We can refer to specific sections missing.

I was advised by the office of the city clerk that at the appeal meeting, discussion on items not presented at the public hearing, could not be presented as evidence. Likewise for the petition that we now have. Had we obtained a petition before July 6th, it would have been accepted as evidence then and now. To bad we didn't have a watchdog to keep us abreast of plans that could negatively affect us. Our petition is being date stamped as received and recorded by the Lakewood city clerk.

The plans were discussed at the hearing, therefore, this is where we will discuss the content of the plan that concerns us. The points listed below:

- * 1 The used of ambient noise levels at various times of day to determine a baseline level for purposes of establishing a threshold decibel level to which exceeding by 3dB(A) is not a significant impact and exceeding by 5dB(A) is an audible increase that may be considered an impact on the hearing environment.
- * 2 Adding to the accepted threshold level by including the property in question into an Airport Influence Area by 1/100 of mile = 53 feet which raises the CNEL (Community Noise Equivalent Level) to 70 CNEL.
- * 3 The sound plan figure 5 that describes tested reception of noise and states-volumetric levels of equipment in location at the the proposed operational business plan and the estimated reception levels of bordering neighbors property lines and the Time Weighting of noise level findings.
- * 4 Impacts on shared public alleys and their intersections with main roadways.
- * 5 a.Terminate the permitted plan b. Modify the permitted plan

* 1 Referring to the Noise study and Consultation that utilized "Ambient Noise levels" currently being suffered by these residents is not reasonable as the noise was unwarranted and developed increases over time as lanes were added and daily traffic increased. These ambient noise levels are not now or ever will be acceptable to us as a 'threshold' that a developer might choose to label as a status quotient of noise that we should be able to tolerate and be used as a baseline to justify inflicting more outlandish noise on the neighboring residents.

* 2 We know that the sound study firm was paid for by the applicant . They've found every possible loop hole biased towards success. The mere fact that the properties' southwest corner is supposedly one/ one hundredth of a mile inside of "A two mile Airport Influence Zone" which raises the CNEL demonstrates this. The increased CNEL standard of 70dB(A) will then allow daily operation of the car wash/auto repair to produce as much noise plus 3 dB(A) more without consequence. We scarcely hear aircraft anymore due to innovations in jet engines and the end of military jets produced at Boeing. This 1.99 mile measurement is debatable anyway as some readings actually come out over two miles. The fact of 1/100 of a mile (52.8 feet) as a reason to raise our CNEL (community noise equivalent level) is ludicrous and should not warrant consideration for a- threshold equivalent standard for these residents that mostly hear the traffic from Carson street all of the day and half the evening.

* 3 The sound plan states facts that the car wash tunnel entrance has a possible 89dB(A) sound level and the car wash tunnel exit an 80 dB(A) sound level which is referred to as a worst case scenario in the findings. This must be during the drying cycle. In what world are those decibels considered low, insignificant and acceptable? The sound plan (figure 5) shows the estimated reductions in decibel equivalents at the rear property lines of the R-1 residents without the benefits of masonry walls, the readings are not realistic. We know this because we have an example of the same noise level at the automated car wash at the Shell station at 6819 Carson. It produces 80 dB(A) at it's exit. At 50 feet away straight ahead is still 80 dB(A) and 50 feet to the side of the exit, it is 75 dB(A). According to several residents adjacent to the tunnel, the first house being 100 feet to the side of the tunnel exit, the homeowners refer to the car wash as extremely noisy. Several of her neighbors even further away are irritated. How can that not be considered : "A significant impact" on our neighborhood environment ? We believe that the sound plan must be inaccurate or mistaken. We also feel that the incremental length of time, that the blowers operate (time weighted) should be considered irrelevant as their disturbance has a lasting effect when exposed to them daily during times of light traffic and lower ambient noise.

Other sources of noise listed on the sound plan such as sixteen vacuum stations @ 65dB(A) and the auto repair facility @ 66dB(A). The homes will be exposed to the noise as there are no plans for walls or gates on the openings. The

auto shop noises such as pneumatic tools and revving engines , tire machines and a smog test dynamometer will be considered nuisances at those decibel levels. The developer said he "would 'try' to mitigate the noise levels " and 'wants' to "be a good neighbor" the words "want" and "try" are subjective, and indicate no actionable intent. Should this project be completed without the addition of sound barrier walls of sufficient height and gates of sound reducing materials across the openings to protect the residents, we will continue to protest the operation. Erecting the sound barrier walls would show good faith in a real effort to mitigate the noise that will be produced. We know walls and gates are far more expensive than shrubs and landscaping, but will be far more effective than plants and trees at protecting the neighbors from the noise the operation produces.

* 4 Impacts of increased pressure on Public alleys

When the developer was asked about the use of the alleys, he diverted with details about the drive-thru lane as not being used and chained off except for being opened to allow an exit for jam in the tunnel. I think this confused attendees about the difference between the drive-thru and the public alley. My research shows that the shared public alley was not included in the traffic study. Our concerns for the amount of use the alley is exposed to, is warranted. The developer stated the "alley use may be even less".

The alley is the conduit between the proposed project and the R-1 residents and will be most likely utilized by the car wash and auto repair facilities. We have concerns about the noise, increased traffic, dust and fumes in the public alley and increased pressure at the alley intersections at Ostrom and Carson streets and at Los Coyotes diagonal which could contribute to more accidents. The plan shows one entrance and two exits on the west side alley.

We would prefer that these openings be covered as in section * 3 and not used, but noting the absence of gates in the plan we assume that the operators will fully make use of the alleys as they are a legal 'right of way', thus an increase of use is eminent.

Use scenario

Carwash customers may exit into alley as they finish at the vacuum stations or use it as a short cut/bypass to the neighborhood. It may be used as an entrance to the auto repair shops, most likely, cars will be test driven by the mechanics at the auto repair facility, in , out and on the alleys posing additional dangers. During rush hours, the alleys will surely be used as an alternative to entering and exiting onto the very busy Carson street. Adding to the congestion, the overflow parking that the 'now' abandoned drive-thru restaurant lot is unintentionally providing, (17 cars counted one day) will come to an end, forcing the shop employees, patrons and gym members to park elsewhere in the already parking deficient business area. The searching for other parking by these persons will increase pressure on the alleys thus increasing accident probability. There are current complaints about the lack of adequate parking, the future with the plan will be problematic. Ask the neighbors about the frequency of accidents and near misses at the alley ends.

Building code calls for thirty feet (30') wide alleys on new construction, we believe this code should be adhered to. For residents whose garages open into the alley, we believe the wider alleys will be a great safety benefit. Trees inside the property line may have to be replaced as the widening may require their removal. The increased distance will also help with noise dissipation. The small footprint of this lot tucked into the space between the existing stores and the bordering residents does not lend well to the proposed assembly line like functions of this type of business. It's easy to see why the developer applicant requests five foot alley dedication instead of the code required 10 foot alley dedication , this would allow them the opportunity to do essentially nothing to the existing dividers and retaining walls and spare the existing trees if they wish. Obviously, again, way less expensive than widening the alleys to code. And , likewise, the omission of walls as sound barriers would also be desired as they would encroach on his useable space.

Option 1

We would prefer that the permit be rejected, end result: peace and quiet for residents and more sensible use of the lot.

Option 2

We ask for a variance of the permit that was approved to include ten foot high masonry walls within the north and west property lines allowing a 30 foot wide alley. We are asking for ten foot high gates on the the three lane openings into the west alley manufactured of sound reducing materials. The secondary effect of the gates will be a reduction in pressure on the alleys.

Dismissal of the appeal would subject the residents on Quigley , Ostrom and Los Coyotes to many years of even worse conditions than before and effect a reduction of their property values.

Thank you for reading this letter, we hope a compromise can be made.

Regards, Art Pinette, a concerned Lakewood resident

Footnote

" A conditional use permit allows the city to consider uses which may be essential or desirable, but which are not allowed as a matter of right within a zoning district , through public hearing process. A conditional use permit can provide flexibility within a zoning ordinance."

We the undersigned wish to express our concerns and objections to the proposed construction of the automatic carwash, the smog testing operation, the vacuum devices and the auto repair facility next to our homes on Ostrom and Quigley.

Our objections include:

1. Noise. To those who have used an automatic carwash, you are well aware of the noise generated at the entrance and exit of the carwash. Additional noise will be generated by the 8 to 10 vacuum cleaners on the facility. This noise will effect all residence on Ostrom and Quigley that border the area.

Lakewood ordinance 75.8

4240 Unnecessary noises. No person shall make, cause or suffer, or permit to be made upon any premises owned, occupied or controlled by him and unnecessary noises or sounds which are physically annoying to persons of ordinary sensitiveness or which so harsh or so prolonged or unnatural or unusual in their use time or place as to occasion physical discomfort to the inhabitants of any neighborhood.

2. Pollution. We already are subject to high levels of pollutions from Carson but we accepted that when we purchased our homes but we don't wish to add any more. Vehicles using the wash will emit car fumes while waiting to enter and in leaving. In addition we can expect additional auto exhaust from the smog testing station. We have not been informed of the type and scope of the auto repair service that may affect the environment.

3. View and appearance. Again most of you are aware of the appearance of a carwash. Less than desirable

4. Property values. It will be difficult to determine the amount of property values that will be affected in the nearby residences. But it is reasonable to assume that placing such an operation 20 feet from your property will not enhance it.

We the undersigned hope the city council will take these objections into consideration when making your decision. Lakewood has always been a family friendly city and we have been proud to live here. Please look around for sites more appropriate for this type of operation. We have been happy to have Mcdonalds as neighbors and hope you can find a similar business for this area.

RECEIVED

5688 *17 AUG 24 PM 2:20

CITY OF LAKEWOOD
CITY CLERK

Name	Address	Signature
BILL SYURSON	4112 OSTROM	Bill Syurson
MYRNA SYURSON	4112 OSTROM	Myrna Syurson
JESUS PARRA	4102 OSTROM	Jesus Parra
ROSA PARRA	4102 OSTROM	Rosa Parra
Vince Chiu	4108 Ostrom	Vince Chiu
Benjamin Schwir	4118 Ostrom	Benjamin Schwir
SORIN CONSTANTIN	4174 Quigley	Sorin Constantin
Erin Pinette	4174 Quigley	Erin Pinette
WALDO PHILLIPSON	4164 QUIGLEY	Waldo Phillipson
ARTHUR PINETTE	4323 Quigley	Arthur Pinette
LAWRENCE FINCHER	4134 OSTROM	Lawrence Fincher
Melby Munoz	4109 OSTROM	Melby Munoz
MIA Champ	4115 ostrom	Mia Champ
Delia Prowant	4137 Ostrom	Delia Prowant
Victor Sanchez	4170 Quigley	Victor Sanchez
Loretta Croom	4158 Quigley Ave	Loretta Croom
Mary Taylor	4154 Quigley Ave	Mary Taylor
JERRY PAINTER	4177 QUIGLEY	Jerry Painter
DANNY PAINTER	4163 Quigley	D.P.
Ken Nelson	4150 Quigley	Ken Nelson
KELLY CARBUJIDO	4128 Ostrom	K.C. Carbujo
JEAN A. HAYNES	4125 LOS COYOTES	Jean A. Haynes
FREDDY PLUMMER	6753 CARSON ST	Freddy Plummer

We, the undersigned, oppose construction of a carwash/auto repair facility at 6741 Carson Street, Lakewood, CA

NAME	ADDRESS
[Signature]	4284 STEVEY AVE 562/394-8644
Mardale Brenna VanderMiden	4284 STEVEY AVE
Rege A. Lopez	B. Q. LEYS 424 Quigley h. hwd. 90713
[Signature]	4224 QVIGLEY AVE 90713
Maurice W. M.	4237 Quigley Ave 90713
Raymond Stephan	4255 Quigley Ave 90713
Susan Galang	6774 Harvey Way 90713
MART T. BUSURA	4225 PETALUMA AVE 90713
Allison Van Wigg	4254 Petaluma Ave 90713
Paul M. [Signature]	4254 Petaluma Ave 90713
Claudia Gonzalez	4231 petaluma Ave 90713
Kaura Luarez	4237 Petaluma Ave 90713
Patti Anthony	4253 Petaluma Ave, 90713
JUSTIN RAMIREZ	4255 PETALUMA AVE. 90713 323) 528-5778
STEVE STROM	4356 Quigley Ave 562-972-8632
Margaret Jones	4357 Quigley Ave, 562-421-1376
[Signature]	6919 Harvey Way
EVELYN PINEDA [Signature]	6923 HARVEY WAY, (310) 941-1074
JOSE PINEDA [Signature]	6923 HARVEY WAY, (310) 941-9848

We, the undersigned, oppose construction of a carwash/auto repair facility at 6741 Carson Street, Lakewood, CA

NAME	ADDRESS
Mary Wilson	4223 Nipomo Ave
Ken J Schultz	4218 Nipomo Ave
Patrick McCauley	4148 Nipomo Ave.
Andrew K. Schiele	4218 Nipomo Ave
Lorraine Robertson	4208 Nipomo Ave
Jim Gouardo	4217 NIPOMO AVE.
Mary E. May	4209 " " "
Sheila Schwab	4209 Nipomo Ave
Diane Rothery	4203 Nipomo Ave.
Jerry Rothery	4203 Nipomo Ave.
Sarah Barton	4202 Nipomo Ave
Nick Moreno	4161 Nipomo Ave
William Young	4155 NIPOMO AVE
Cristina Young	4155 Nipomo Ave
Jennifer Osorio	4231 Quigley Ave.

RECEIVED
5661 '17 AUG 15 A9:27
CITY OF LAKEWOOD
CITY CLERK

We, the undersigned, oppose construction of a carwash/auto repair facility at 6741 Carson Street, Lakewood, CA

NAME	ADDRESS
BRIAN TRIPP	4373 QUIBEY AVE LAKEWOOD CA 90713
Tom Crook	4367 Quigley Ave Lakewood CA 90713
Tom Zgonc	4241 Petaluma Ave Lakewood CA 90713
NEIL SHATNE Ned Shatne	4264 PETALUMA AVE LAKEWOOD, 9071
DAVID AROZ David Aroz	4274 Petaluma Ave Lakewood, 90713
Steve Ritchie	4271 Petaluma Ave Lakewood 90713
Pamela Cruz	4274 Petaluma Ave. Lakewood 90713
Dan Mastren	4241 Petaluma Ave Lakewood 90713
Carol Foote	4287 Petaluma, Lakewood 90713
THOMAS ESGUERRA	5312 PARK AVE GARDEN GROVE 92845
Natalie Lakey	6906 Harvey Way 90713
Joan Hill	6909 HARVEY WAY, 90713
Dayme Rohlf	6913 Harvey Way 90713
John Fajope	7009 MCMAHONS 90713
Jeremy Streit	6914 Harvey way 90713
Carly	6922 HARVEY WAY 90713
Nicole Valdez	4266 Quigley Ave 90713
GERALD K BRODIE	4260 Quigley Ave 90713
Teri Nagay	4228 Quigley AVE 90713
Gene + Anna Erdman	4343 Quigley Ave 90713
Chris + Cheryl Brodie	4340 Quigley Ave 90713
Evelyn + Tim Padian	4360 Quigley Ave 90713
Richard Johnson	4340 QUIGLEY AVE 90713
Alan Gray	4326 Stevely Ave 90713
ROBERT CHAUVERS	4224 OSTRUM AVE 90713
Jesse M. Shu	4265 Ostrum Ave. 90713
Stephan Huthan	4702 Knixville Ave 90713
Rodrielle Garcia	4245 Ostrum Ave. Lakewood CA 90713
Shiquan Zhao	4229 Ostrum Ave Lakewood, CA 90713

We, the undersigned, oppose construction of a carwash/auto repair facility at 6741 Carson Street, Lakewood, CA

NAME	ADDRESS
David Justo	4233 Ostrom Ave
Melanie Gross	4234 Ostrom Ave
RICHARD GREENWALD	4228 Ostrom Ave
Kathy Sanders	4219 Ostrom Ave
Sherrill Clayton	4218 Ostrom Ave. Lakewood
Sally Sun	4208 Ostrom Ave. Lakewood, CA
Gloria A. Rozas	4208 Ostrom Ave Lakewood, CA
Marisa Rozas	4208 Ostrom Ave. Lakewood, CA
Lon Baudreau	4141 Ostrom Ave Lakewood CA 90713
Are Podilla	4131 Ostrom Ave Lakewood CA 90713
Lee Lopez	4115 Ostrom Ave Lakewood CA
Mantho Juarez	4105 Ostrom Ave. h. Ca 90713
Josue Hernandez	4105 Ostrom Ave. h. Ca 90713
Julie Klein-Jaenenworth	4202 Quigley Ave Lakewood CA 90713
Volanda Gonzalez-Villa	4208 Quigley Ave. Lakewood, CA 90713
Sharon Riley	4180 Quigley Ave. Lakewood CA 90713
Margarita de la Torre	4218 Quigley Ave. Lakewood, CA 90713
Jennifer Baker	4415 JOHANNA LN CA 90713
Josh Baker	4415 Johanna Ave Lakewood CA 90713
Andrew Diaz	4234 Quigley Ave, Lakewood, CA 90713
Mark Herrera	4247 Quigley Ave Lakewood CA. 90713
Jack J. Orr	4256 Quigley Ave Lakewood CA. 90713
Andy White	4327 Quigley Ave Lakewood CA 90713
Sandra Myers	4412 NIPOMO AVE LKWD CA 90713
Scott Myers	4412 NIPOMO AVE LKWD CA 90713
Alan Espartero	4248 NIPOMO AVE 90713
Debra Minton	4253 Nipomo Ave Lkwd 90713
Samuel	4249 Nipomo Ave. Lakewood 90713
Josua White	4239 Nipomo Ave. Lakewood 90713

We, the undersigned, oppose construction of a carwash/auto repair facility at 6741 Carson Street, Lakewood, CA

NAME	ADDRESS
André Jeanpierre	4102 Ladoga Ave, Lakewood CA 90713
BILL & CAROLYN COWDREY	4199 Los Coyotes Diag. LAKWOOD 90713
JOE & KATHY Hill	4195 Los Coyotes Diag. Lakewood 90713
Gregory Beck	4187 Los Coyotes Diag Lakewood, 90713
TOM PICKLE	4181 Los Coyotes DIAG. LAKWOOD 90713
Sarah Velasquez	4171 Los Coyotes Diag Uand 90713
Stephanie Garcia	4157 LOS COYOTES Diag. Lakewood, CA 90713
stacy Babe	4151 Los Coyotes Lakewood, (90713)
Marcia McRill	4145 Los Coyotes Lakewood, CA 90713
Gwen M. Dick	4145 Los Coyotes Lakewood CA 90713
Krystia Luttason	4142 Los Coyotes Lakewood CA 90713
Wendy Miller	4148 LOS COYOTES LAKWOOD CA. 90713
Hanne Beck	4134 Los Coyotes, Lakewood, CA
PAM BECK	4160 LOS COYOTES, LAKWOOD, CA 90713
John Astaugh	4172 Los Coyotes, Uand 90713
Victor M. Villanueva	4176 Los Coyotes, Diagonal L.K 90713
Steve Merkel	4198 Los Coyotes DIAGONAL, LKWD 90713
Bonnie Merkel	4198 Los Coyotes Dia LKwd 90713
Cathy Lauriano	4353 Quigley Ave Lakewood 90713

RECEIVED

5685 '17 AUG 24 P12:14

CITY OF LAKWOOD
CITY CLERK

We, the undersigned, oppose construction of a carwash/auto repair facility at 6741 Carson Street, Lakewood, CA

NAME	ADDRESS
Carla Huerta-McCauley	4148 Nipomo Ave Lakewood CA 90713
Johanna Seng	4134 NIPOMO AVE LAKEWOOD, CA 90713
Talisa Raymond	4133 NIPOMO AVE LAKEWOOD, CA 90713
Hazel Bellak	4129 Nipomo Ave Lakewood 90713
Eda Obey	4108 Nipomo Ave Lakewood 90713
Elisabeth Rogers	4103 Nipomo Ave Lakewood 90713
DAVID W. HAYNES David Haynes	4129 LOS COYOTES DR, LKWD, 90713
Aubrey Tilson	4324 Quigley Ave Lakewood 90713
Raphaella Martins	4313 Quigley Ave Lakewood 90713
Ubicajara Martins	4313 Quigley Ave Lakewood 90713
Ardey Wilmore	4327 Quigley Ave Lakewood 90713
Stephanie Wilmore	4327 Quigley Ave Lakewood 90713
Richard Eversley	4212 Knoxville Ave Lakewood 90713
Christine Eversley	4212 Knoxville Ave Lakewood 90713
Ashley	4113 Josie Ave Lakewood 90713
Tom M. LER	4107 JOSIE AVE LAKEWOOD 90713
Crystal Maillet	4337 Quigley Ave. Lakewood 90713
Wells J. Fuller	4346 Quigley Ave Lakewood 90713
Mara Jument	4380 Quigley Ave Lakewood 90713
Sharon	4377 Quigley Ave Lakewood 90713
Rosalie Brown	4370 Quigley Ave Lakewood 90713
Laydi Mary Jensen	4393 Quigley Ave Lakewood 90713
Carmen Depp	4331 Quigley Ave Lakewood 90713
Jabins de la O	4331 Quigley Ave Lakewood 90713
Mimi A. (Hildenbrand)	4412 Petaluma Ave Lakewood, CA 90713
Chris	4102 Lake Ave Lakewood CA 90713
Juni Jones	4102 Ladoga Ave Lakewood, CA 90713
Anna Oprio	4106 Ladoga Ave. Lakewood, CA 90713
Raf M. D.	4106 Ladoga Ave. Lakewood, CA 90713
Steve M. Jean-Luc	4102 LADOGA AVE LAKEWOOD CA 90713

We, the undersigned, oppose construction of a carwash/auto repair facility at 6741 Carson Street, Lakewood, CA

NAME	ADDRESS
Paul Cawood	4218 Quigley Ave, Lakewood, Ca 90713
Scott Neal	4306 Quigley Ave, Lakewood, CA 90713
Antonio G. Proza	4334 Quigley Ave Lakewood CA 90713
KELI GURRY	4347 Quigley Ave Lakewood 90713
Greg Curry	4347 Quigley Ave Lakewood 90713
Megan Summers	4269 Los Coyotes Dgl. Lakewood 90713
Erin Curry	4279 Los Coyotes Dgl LKwd 90713
Jerry Martin	4310 Stevely Ave LKwd 90713
Troy Martin	4310 Stevely ave. LKWD 90713
Chris Pleitez	4273 Los Coyotes dia. LKWD 90713
Sharon R. Craig	4243 Los Coyotes Diag LKwd 90713
Kenneth R. Craig	4243 Los Coyotes Diag LKwd 90713
James F. Brashear	4249 Los Coyotes Diag Lakewood 90713
Albert Rosales	4239 Los Coyotes Diagonal Lakewood CA 90713
Jack Bastard	4233 Los Coyotes Diagonal Lakewood CA 90713
Jennifer Weatherford	4233 Los Coyotes Diagonal LKWD, CA 90713
Charles Walby	4229 Los Coyotes Diagonal, LKwd, 90713
Kelly Walby	4229 Los Coyotes Diagonal, LKwd, 90713
Tim Lucero	4223 Los Coyotes Diag Lakewood 90713
Lucy Alina Lucero	"
Amanda Lucero	"
Chris Brashear	4217 Los Coyotes Diagonal LKWD 90713
Julie Brashear	4217 Los Coyotes Diagonal LKWD 90713
Elizabeth Grace	4213 Los Coyotes Diagonal LKwd 90713
JJ. Mitchell	4213 Los Coyotes Diagonal LKwd 90713
Darlene J. Borg	4207 Los Coyotes Diagonal LKwd 90713
Bessie Rhodes	4203 Los Coyotes Diagonal LKwd 90713
ESLIE JAMES	4203 Los Coyotes Diagonal LKWD 90713

SECRETARY
CITY OF LAKEWOOD

5703 17 AUG 30 AM 11:32

RECEIVED

We, the undersigned, oppose construction of a carwash/auto repair facility at 6741 Carson Street, Lakewood, CA

NAME	ADDRESS
Eric Brady	4147 Redline Drive
Debra Hunt	4134 Redline Dr.
Chyllis Meffender	4131 Redline Drive
Edna J. [unclear]	4124 Redline Drive
Barbara Maffett	4117 Redline Drive
Kyle Cameron	709 Schroll
John [unclear]	7007 Schroll St.
John [unclear]	7013 Schroll St.
Paul [unclear]	7010 SCHROLL ST
[unclear]	7017 SCHROLL ST.
Sharon Brothers	7020 Schroll St
William F. Wolford	7027 SCHROLL ST.
Harry Miles	7037 Schroll St
Bob [unclear]	7033 Schroll ST.
[unclear]	7030 Schroll ST
Janie Miller	7046 Schroll ST.
Gerardo & Mary Mejia	7043 Schroll st
Guizulmy Cuel	7053 Schroll St.
M & M [unclear]	7056 Schroll ST
Kathy Keene	7050 Schroll ST
Bob [unclear]	7065 Schroll ST
Harold [unclear]	7064 Schroll st
[unclear]	7076 Schroll ST
Don B. Horn	7080 SCHROLL ST

5238 17 SEP -7 AM 32
 RECEIVED
 CITY CLERK
 CITY OF LAKEWOOD

We, the undersigned, oppose construction of a carwash/auto repair facility at 6741 Carson Street, Lakewood, CA

NAME	ADDRESS
Shane Duncan	4107 Ladoga Ave. 90713
Patricia Medina	4118 Ladoga Ave 90713
Elizabeth Medina	4118 Ladoga Ave 90713
Maxine Lockman	4112 Ladoga Ave 90713
Anne Furlong	4305 Shadeway Rd. Lakewood 90713
Josefina Felix	4311 Shadeway Rd. Lakewood 90713
JESUS MENA	4326 Shadeway Rd Lakewood, CA 90713
Helen Angell	4348 Shadeway Rd Lakewood, Ca. 90713
Shanaka Senaratne	4337, Shadeway Rd, Lakewood, CA 90713
Amelia Robinson	4347 Shadeway Rd Lakewood 90713
Mary Martin	4347 Shadeway Rd Lakewood 90713
Max Green	4347 SHADWAY RD. LAKWOOD CA
Debra	4403 Shadeway Rd Lakewood CA 90713
Stacy Long	4408 Shadeway Rd Lakewood, CA 90713
Craig Long	4408 SHADWAY LAKWOOD CA 90713
Melissa Long	4376 SHADWAY LAKWOOD, CA 90713
Debra Long	4423 Shadeway Rd
Tou Durrant	4439 Shadeway Rd Lakewood, CA 90713
Mitchell Durrant	4439 Shadeway Rd Lakewood, CA 90713
Jeanette Durrant	4457 Shadeway Rd Lakewood CA 90713
MARK A. MORGAN	4463 SHADWAY RD, LAKWOOD, CA 90713
LARA URIBE	4503 Shadeway Rd Lakewood CA 90713
Kristine Olmstead	4517 Shadeway Rd. Lakewood CA 90713
BRIAN HANAWICKEL	4527 Shadeway RD LAKWOOD CA 90713
Jennifer Fordon	4523 SHADWAY RD LAKWOOD, CA 90713
David Hernandez	4553 Shadeway Rd Lakewood CA 90713
Jane Pasley	4566 Shadeway Rd Lakewood CA 90713
Richard John	4569 Shadeway Rd Lakewood CA 90713
MELVIN PASCEG	4566 Shadeway Rd Lakewood CA 90713

5737
17 SEP 7 AM 11:32
1

RECEIVED

We, the undersigned, oppose construction of a carwash/auto repair facility at 6741 Carson Street, Lakewood, CA

NAME	ADDRESS
James Allen AM	4411 Stevely Ave, Lakewood 90713
Carrie Allen	4411 Stevely Ave, Lakewood 90713
Billy Evans	4214 Los Coyotes diag Lakewood 90713
James Lewis	4220 LOS COYOTES DIAG 90713
Burley Lewis	4220 Los Coyotes Diag 90713
Chad Bell	4230 Los Coyotes Diagonal
NEAL LEVANG	4226 Los Coyotes DIAGONAL
Amy Osborne	4252 Los Coyotes Diagonal
Veronica Trone	4280 Stevely Ave.
Monte Trone	4280 Stevely Ave.
JERED GONZALEZ	4274 STEVELY AVE.
Roland Muller	4270 STEVELY AVE
Jeff Hebrudus	4258 STEVELY AVE
Traci Taylor	4254 Stevely Ave
Jeff Callaghan	4254 Stevely Ave.
Amy Salter	4306 Stevely Ave
Mary Roger	4220 Redline Lakewood CA 90713
Bill Russell	4229 Redline Dr Lakewood 90713
Suzanne Gorman	4239 Redline Dr 90713
Jonda M. Childs	4249 Redline DR. 90713
John R Hulst	7025 HARVEY WAY 90713
Phillip Norris	4242 Redline Dr 90713
DIANE FARRELL	4213 REDLINE DR. 90713
Margie O Brien	4207 Redline Dr. 90713
John Guerrero	4209 Redline Dr 90713
Steve King	4203 Redline Dr. 90713

OFFICE OF THE CITY CLERK
LAKESIDE, CALIFORNIA

5736 17 SEP -7 AM 3:2

RECEIVED

We, the undersigned, oppose construction of a carwash/auto repair facility at 6741 Carson Street, Lakewood, CA

NAME	ADDRESS
Matthew Grinde	4113 Josie Ave Lakewood, CA 90713
GLEN KAHN	4139 JOSIE AVE LAKEWOOD, CA 90713
JAY RHM	4213 Josie Ave Lakewood, CA 90713
Peter maury	4223 JOSIE " " " "
Diana Transue	4239 Josie Ave Lakewood CA 90713
JULIE KNIERJEM	4249 JOSIE " LAKEWOOD 90713
Winnie Horn	4255 Josie Ave Lakewood 90713
Patty Lough	4258 Josie Ave Lakewood 90713
Ryan Moreau	4212 Josie Ave. Lakewood, CA 90713
Kristie Larison	4206 Josie Ave. Lakewood, CA 90713
Glen Larison	4206 Josie Ave. Lakewood, CA 90713
Ray Mendoza	4202 Josie Ave Lakewood CA 90713
Kevin Mendoza	4202 Josie Ave Lakewood, CA 90713

RECEIVED
 5735 17 SEP -7 AM 11:31
 CITY CLERK

8-12-2017

HOMEOWNER APPEAL AUGUST 2017

When we bought our property on Ostrom Ave, it was long before we had to tolerate the idea of a Mc Donald's being practically in our back yard. Before that we had a grocery store, with little traffic & basically no noise. After Mc Donald's was built we had to deal with speakers, car fumes, added alley traffic, and grease coatings on everything from their fryers. These are all issues one does not think about until after the fact. Perhaps we are in for many more surprises if indeed this car wash/mechanics stalls are installed??

The idea of a car wash plus car repair stalls is beyond what we expect in our quiet neighborhood.

Would any of you like to try to enjoy your patio with constant noise from these machines and fumes from the many cars they expect to use this facility??

As it stands now no one from the city cleans the alley except for the once a week street cleaning that does not take care of the litter, debris, leaves, etc. down the center of the alley, next to the property lines and in the parking lot. Lets not lose the appeal of our City of Lakewood!!

With Carson traffic, (that has increased since moving here) already in our midst, we don't need the added noise , fumes and dust (cars using the alley) from an area so close to our homes.

A 30 foot building in view of our back yard is less than desirable.

If this facility should be built, and the noise and fumes levels are dangerous and unacceptable, we reserve the right to appeal to the EPA for relief and personal litigation.

We request that this not be built in our neighborhood so close to homes.

Unfortunately we are unable to attend this meeting on Sept 7th, nor were we able to attend the July 6th meeting!!

8-12-2017

Perhaps the summer months is not a good time to approach a neighborhood of such major, troubling developments! With little or no notice.

CONCERNED NEIGHBORS AND RESIDENTS OF LAKEWOOD FOR ALMOST 50 YEARS

Bill Syverson

Bill Syverson

Myrna Syverson

Myrna Syverson

RECEIVED

5686 '17 AUG 24 P12:16

CITY OF LAKEWOOD
CITY CLERK

4112 Ostrom Ave.

9/2/2017

RECEIVED

5739 '17 SEP -7 AM 11:34

Jesus Parra
4102 Ostrom Avenue
Lakewood, California
90713

CITY OF LAKEWOOD
SEP 7 2017

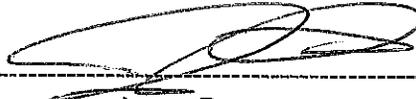
To the Lakewood mayor and city council,

My name is Jesus Parra, I live in last house on Ostrom close to Carson street where it's way too noisy already. We have a 3 year old that has sleeping problems with the noise from the street. If the car wash has fans to dry the cars like the other car washes, their too loud and we don't want it by our house. The mechanics with tools and vacuum cleaners in the back will bother us too. If the noise gets worse than it is, then we might have to sell our house and move and we cant afford to do that. If you can stop that from being built there, it will be appreciated very much.

Thank you for reading this letter,

I authorize Arthur Pinette to deliver this letter to the Lakewood City Clerk to be received as a matter of public record.

Signed,



Jesus Parra

date

9/2/17

RECEIVED

Sept. 3, 2017

5740 17 SEP -7 A11:34

4125 Los Coyotes Diag.
Lakewood, Ca. 90713-3342

CITY OF LAKEWOOD
CITY CLERK

Dear Mayor DuBois:

As a long-time owner of the property at 4174 Quigley Ave, I shall be attending the meeting on Tues. Sept. 12 regarding the proposed Car Wash at 6741 Carson Street and your Council's response to our objection.

I, and other neighbors, do not want such a facility there! Not only will it increase noise and air pollution beginning at 7:30AM and continuing "until 8:00PM or dusk, or whichever comes first" but it will consume enormous amounts of water every hour of operation! (There are much better uses...)

My main complaint, however, is that the twenty-five trees now furnishing good environmental anti-pollution protection will be totally destroyed to facilitate the builder's service bays additional polluting 'services' !!

We already have a car wash at the Shell Station on Carson and Los Coyotes, and it is used even at 2:00AM, and as its nearest neighbor, I know how the noise travels even though the drive-through is enclosed! My friends and my tenant across the alley should not have to be subjected to a business with only a negative neighborhood consensus.

Respectfully submitted,

Jean A Haynes
Ms. Jean A. Haynes

I hereby authorize Arthur Pinette to deliver
this letter to the Lakewood City Clerk to
be received as a matter of Public Record

Jean A Haynes

9/5/2017

Kelly Bardullidos
4128 Ostrom Avenue
Lakewood, California
90713

RECEIVED

5741 '17 SEP -7 AM 11:34

CITY OF LAKEWOOD
CITY CLERK

To the Lakewood City Council,

I think the building of a car wash and mechanic shop in this lot across the alley is a bad idea. It's been a lot quieter since the McDonalds closed, now you're allowing them to come in and start this kind of business that makes all these noises we didn't have before. I'm 87 years old. I live alone and I'm not in good health, I don't need this grief. Please don't let them put this kind of business there. We put up with the fast food drive thru all these years, now this! Put something else that is quiet there.

Thank you for reading my letter,

I authorize Arthur Pinette to deliver this letter to the Lakewood City Clerk to be received as a matter of public record

Signed, Kelly A. Bardullidos 9-5-2017

9/5/2017
Loretta Croom
4158 Quigley avenue
Lakewood, Calif
90713

RECEIVED

5 7 4 2 '17 SEP -7 A11:34

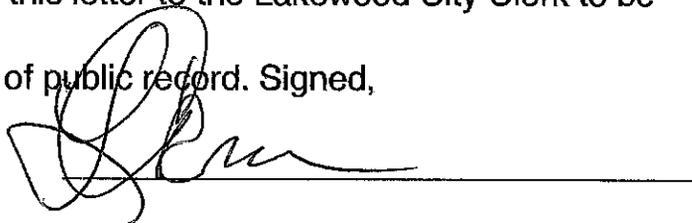
CITY OF LAKEWOOD
CITY CLERK

To the Lakewood city council,

My name is Loretta Croom, this letter is in opposition to the car wash and the auto repair shop, planned to be built just 25 feet from our backyard. My elderly disabled mother's health and safety is my foremost concern. We've lived here for ten years and sleep deprivation has been a problem for us. Our house is the center point on the north alley where we got all the noise from the drive through that was there and we still get noise from traffic in the alleys at all hours. This noise is intolerable and if the carwash and auto repair get built, it'll be much worse than now. Also, loitering is a problem that would be worse if a building is put there, it would hide the alley, giving more cover for the homeless and people smoking pot and other drugs. This will put our security at risk. Bright lights have shined directly into our windows too, we don't want that either . If the city allows this to be built , we hope that you make it satisfactory to the neighbors and their families. We just want peace and quiet.

Thank you, Loretta Croom

I authorize Arthur Pinette to deliver this letter to the Lakewood City Clerk to be received and recorded as a matter of public record. Signed,



Geraldine Kramer
4124 Ostrom
Lakewood, CA 90713

RECEIVED

5743 '17 SEP -7 A11:34

CITY OF LAKEWOOD
CITY CLERK

Lakewood City Council
5050 Clark Ave
Lakewood, CA 90712

RE: CUP 948, Car Wash at 6741 Carson, Lakewood, CA

Dear Council Member,

This letter is to issue a complaint against the permit issued, CUP 948, for a Car Wash to be built at 6741 Carson, Lakewood, CA. Our property is located at 4154 Ostrom Ave., Lakewood, which is situated adjacent to the "Car Wash" property. I am against the car wash being built at that location because it will affect not only the enjoyment of our property, but also our property value.

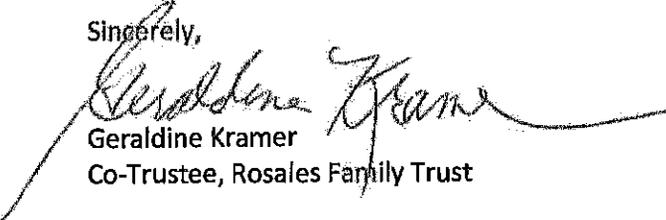
A car wash and auto repair bays at this location is not appropriate next to our residential neighborhood. It will cause noise, pollution and effect access and privacy to our property through the shared alley. When we purchased our property, we looked forward to enjoying the peace and quiet of our back yard. We do not wish to be listening to the conversations of the workers and patrons, the cars coming and going, the sounds of the car wash and the power tools being used in the mechanical bays.

This will also affect our property value as potential buyers will not look favorably at these same issues and the potential enjoyment of the back yard is limited.

This is a very serious issue to our quality of life and I truly hope that the City Council considers the best interests of their constituents. The property should be used in a less intrusive manner for the good of this beautiful Lakewood neighborhood. I love the city of Lakewood and I hope to continue to brag about the city and how it listens to the residents.

Thank you for your consideration of this matter.

Sincerely,


Geraldine Kramer
Co-Trustee, Rosales Family Trust

AUTHORIZATION

I authorize Arthur Pinette to deliver this correspondence to the Lakewood City Clerk to be entered as a matter of public record.


Geraldine Kramer

9/2/2017

RECEIVED

Vincint Chin
4108 Ostrom Avenue
Lakewood, California
90713

5744 '17 SEP -7 AM 11:34

CITY OF LAKEWOOD
CITY CLERK

To the Lakewood City Council,

I went to the public hearing on July 6th 2017. I didn't speak then but I was there to oppose the car wash and auto repair shop. My family and I live across the alley from where the car wash will be, It will be too noisy and make it difficult for my kids to homework and make it not so nice to spend time in our backyard. Also, we'll have to keep our windows closed upstairs and down on days that we don't need air conditioning that cost us extra money. The plan said that the building will be 30 feet tall too, we don't care for that next to my house. Please don't let them build that there, it will be too loud . The auto shop will also make noise and the people using the vacuums, play their radios loud too. It's all just too close and more cars mean more accidents here at the corner.

Thank you,

I authorize Arthur Pinette to deliver this letter to the Lakewood City Clerk to be received as a matter of public record

Signed,



Vincint Chin

date 9-5-17

9/6/2017

RECEIVED

Victor Sanchez
4170 Quigley avenue
Lakewood, Calif
90713

5745 '17 SEP -7 AM 11:34

CITY OF LAKEWOOD
CITY CLERK

To the Lakewood city council,

I live across the alley from where they want to put a car wash and auto repair. We have noise from businesses over there already with people talking loud and loud music from the bar. We have some peace during the day , we don't want an auto repair shop noise from air tools, blow guns, tire and brake machinery. We also don't want fumes, brake dust, aerosol spray cleaners and other chemical pollutants. It will make more traffic in the alleys . The car wash will have loud blowers and other noise from people vacuuming their cars with the doors open and radios on loud.

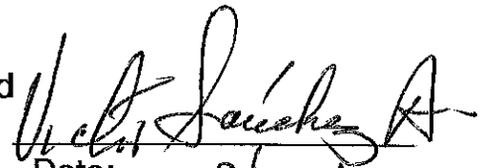
Don't ruin what quiet times we have left, in the day. Don't pollute our air.

Please stop this project before it starts.

Thank you for reading, Victor

I authorize Arthur Pinette to deliver this letter to the Lakewood city clerk to be received and recorded as a matter of public record

Signed


Date: 9/16/17

9/6/2017

RECEIVED

Lawrence Fincher
4134 Ostrom Avenue
Lakewood, Calif.
90713

5746 '17 SEP -7 AM 11:34

CITY OF LAKEWOOD
CITY CLERK

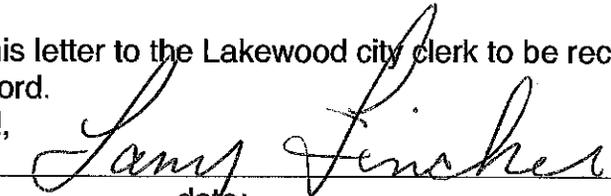
To the Lakewood city council,

Where my backyard does not contact the alleys as I live in the corner house, I am sympathetic to my neighbors on both sides that are exposed to the noise that's funneled their way. For 28 years they've put up with the noise and fumes from McDonalds and now an even noisier business wants to start up, I'm not looking forward to dust and fumes again and more traffic in the alleys. I care about my neighbors and I don't know that I won't be affected by the new louder noise. The blowers on the car wash and air guns changing tires are sure to be noise makers. Please stop this project if you can,

Sincerely, Larry Fincher

I authorize Arthur Pinette to deliver this letter to the Lakewood city clerk to be received and recorded as a matter of public record.

Signed,


date: 9-6-2017

9/7/2017
9/10/2017

Gabrielle Ray
4154 Quigley avenue
Lakewood, Calif
90713

RECEIVED

5747 '17 SEP -7 A11 :34

CITY OF LAKEWOOD
CITY CLERK

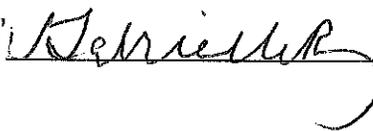
To the Lakewood city council,

I am writing this in opposition of having a car wash/ mechanic shop behind my house I live across from the center of the old McDonalds lot, I have young grandchildren that live with me and others that visit me frequently . I believe that the dust and fumes from a car service shop is a daily health concern. Also added to by the extra traffic to the carwash down the alleys. I believe we live in a quiet neighborhood and this noise wouldn't be the best for myself and my neighbors . We have nuisance from the bar on weekends. I don't feel comfortable with the security in this area, already, I fear for the safety of our neighborhood. Maybe, a family friendly business would be best.

Gabrielle Ray

I authorize Arthur Pinette to deliver this letter to the Lakewood city clerk to be received and recorded as a matter of public record

Signed,



date 9/7/2017

(P)
①

WE THE UNDESIGNED WISH TO EXPRESS OUR OBJECTIONS TO THE PROPOSED LAYOUT OF THE MCDONALDS TO BE LOCATED AT CARSON AND STUDEBAKER.

1. WE WILL EXPERIENCE AN INCREASE IN NOISE FROM CAR ENGINES, CAR RADIOS, AND SPEAKER EQUIPMENT.
2. WE WILL EXPERIENCE A DRAMATIC INCREASE IN AUTOMOBILE TRAFFIC AND EMISSIONS IN OUR ALLEY.
3. THERE WILL BE AN INCREASE IN TRASH AND CLUTTER IN OUR ALLEYS AND GARAGE ENTRANCES.
4. SIGN PLACEMENT.

WE PROPOSE THE FOLLOWING:

1. ERECTION OF AN 8-FOOT BLOCK WALL BETWEEN MCDONALD'S PROPERTY AND THE ALLEY.
2. MAINTAIN ALL MCDONALD TRAFFIC WITHIN THIS WALL.
3. RELOCATE SPEAKERS TO THE EAST SIDE.
4. RELOCATE THE SIGN TO THE EAST SIDE.
5. BUILD A LEFT TURN LANE ON CARSON EAST BOUND TO ACCESS MCDONALDS AND MALL.

	<u>NAME</u>	<u>ADDRESS</u>	<u>SIGNATURE</u>
1.	Jennifer Crane	4102 Ostrom Ave	Jennifer Crane
2.	Myrna Syverson	4112 Ostrom Ave	Myrna Syverson
3.	Bill Syverson	4112 Ostrom Ave	Bill Syverson
4.	Janet Syverson	4112 Ostrom Ave	Janet Syverson
5.	Sarah Syverson	4112 Ostrom Ave	Sarah Syverson
6.	Fred Hershner	4124 Ostrom Ave	Fred Hershner
7.	Darlene Hershner	4124 Ostrom Ave	Darlene Hershner
8.	Lustine Carballido	4128 Ostrom Ave	L. Carballido
9.	Felby N. Carballido	4128 Ostrom Ave	F. Carballido



NAME ADDRESS SIGNATURE

owners

owners

- 10. Kimberly C Watten 4109 Ostrom Kimberly C. Watten
- 11. JEFF WATTEN 4109 OSTROM Jeff Watten
- 12. Miriam Rasmussen 4271 OSTROM Miriam Rasmussen
- 13. Bonnie Koontz 4108 Ostrom Bonnie Koontz
- 14. Kent McLaughlin 4115 Ostrom Kent McLaughlin
- 15. Louis Podella 4131 Ostrom Louis Podella
- 16. Margaret Ingram 4141 Ostrom Margaret Ingram
- 17. Norman Ingram 4141 Ostrom Norman Ingram
- 18. B.W. Farnsworth 4207 Ostrom B.W. Farnsworth
- 19. Robert Kerntz 4108 Ostrom Robert Kerntz
- 20. Diane A. Larson 4118 Ostrom Diane A. Larson
- 21. Nancy Larson 4118 Ostrom Nancy Larson
- 22. Ed Mergelmeier 4105 Ostrom Ed Mergelmeier
- 23. Alan Mergelmeier 4105 Ostrom Alan Mergelmeier
- 24. Joe Mergelmeier 4105 Ostrom Joe Mergelmeier
- 25. Helen Mergelmeier 4105 Ostrom Helen Mergelmeier
- 26. Jan D. Clark 4102 Ostrom Jan D. Clark
- 27. David MERGELMEIER 4105 OSTROM David Mergelmeier
- 28. Cathy Clark 3320 Palo Verde Cathy Clark
- 29. Kathy McLaughlin 4115 Ostrom Kathy McLaughlin
- 30. ~~Kent " " 562-596-7365 (2006)~~
- 31. ~~Susie + Clay New 1994 - corner House~~
- 32. ~~Ed + Adreina - (Horses) Vanessa - Jessica 420-8402~~
- 33. ~~Kelly (Kelene) Bob GARRETT - Susie - Brian? 420-6865~~
- 34. ~~Haruko Shimano (6/95) 425-4208~~
- 35.
- 36.
- 37.
- 38.

NAME

ADDRESS

SIGNATURE

10. JACK CREAGLE 4125 OSTRUM AVE Lakewood Jack Creagle

11. WILLIAM F CREAGLE 4125 OSTRUM Lakewood William F Creagle

12. Ruth A. Arnold 4150 Quigley Ave. Third, Cor. Ruth A. Arnold

13. Paul L. Fincher 4134 Ostrom Lakewood 90713 Paul L. Fincher

14. Renee FINCHER, 4134 OSTRUM, Renee Fincher

15. THOMAS J MOORE 4154 QUIGLEY AVE Thomas J Moore

16. MARTIAL A ARNOLD 4150 QUIGLEY AVE Martial A Arnold

17. ROBERT G. LEE 4121 OSTRUM AVE Robert G Lee

18. ~~ROBERT~~ MARY SLEE 4121 OSTRUM AVE Mary Lee

19. STAN BLANDFORD 4170 QUIGLEY Stan Blandford

20. Marguerite Blandford 4170 Quigley M Blandford

21. Eugene B. Testa 4158 Quigley Eugene B. Testa

22. ~~Billie Annette Tochum = Lindsey⁽⁵⁾ Kelly⁽⁷⁾ 421-0543~~

4-2000

23. ~~11752 S.E Hunter DR~~

24. ~~Portland, OR 97236~~

25. ~~New # 503 698-4191 (Happy Valley~~

26. ~~Clackamas 97236~~

27. ~~Email ECWA-200@pavemet.net~~

28. ~~Cell 562-221-3863~~

29. ~~Moved 4-10-06~~

30. _____

31. _____

32. _____

33. _____

34. _____

35. _____

36. _____

37. _____

38. _____

LAKEWOOD
CITY CLERK

5687 17 AUG 24 P12:18

RECEIVED

RESOLUTION NO. 2017-52

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKEWOOD APPROVING THE APPEAL OF CONDITIONAL USE PERMIT NO. 948 FOR THE ESTABLISHMENT OF A CARWASH FACILITY WITH COVERED OUTDOOR VACUUM STATIONS AND A CAR SERVICE BUILDING ON A PROPERTY LOCATED AT 6741 CARSON STREET, LAKEWOOD, CALIFORNIA.

THE CITY COUNCIL OF THE CITY OF LAKEWOOD DOES HEREBY FIND, RESOLVE AND DETERMINE AS FOLLOWS:

SECTION 1. The City Council finds that the Planning and Environment Commission, by Resolution No. 14-2017, approved an application for a Conditional Use Permit No. 948, for the establishment of a carwash facility with covered outdoor vacuum stations and a car service building located at 6741 Carson Street, pursuant to the provisions of Sections 9341.B, 9347.A, 9347.B.3, 9347.D.11, and 9490.1 of the Lakewood Municipal Code, Lakewood, California, on July 6, 2017.

SECTION 2. The City Council further finds that Mr. Arthur Pinette, 4323 Quigley Avenue, Lakewood, California 90713, timely filed a written appeal of the Planning Commission decision with the City Council on July 26, 2017. A copy of the written appeal is attached hereto and made a part hereof.

SECTION 3. The City Council of the City of Lakewood does hereby report that a public hearing was held before it in respect to said appeal on the 12th day of September, 2017, and the City Council does hereby find and determine that said appeal should be approved for the following reasons:

A. The nature, conditions and development of adjacent uses, buildings and structures have been considered, and it is hereby found that the proposed use will jeopardize or adversely affect or will be detrimental to the public health, safety and welfare, or to the surrounding property and residences for the following reasons:

1. The proposed use is in conflict with the General Plan as follows:_____.

2. The nature, condition and development of adjacent uses, buildings, and structures have been considered and it has been found that the proposed use will jeopardize, or adversely affect, or be detrimental to the public health, safety and welfare, or to the surrounding property and residences for the following reasons:_____.

3. The Applicant has failed to show that the proposed conditional use meets the principles and standards specified in Section 9401.A of the Lakewood Municipal Code, and

Section _____.

4. (Here, set forth any additional applicable grounds for denying the application.).

B. The record does not have substantial evidence supporting the decision of the Planning and Environment Commission.

ADOPTED AND APPROVED this 12th day of September, 2017, by the City Council of the City of Lakewood voting as follows:

	AYES	NAYS	ABSENT
Council Member Croft	_____	_____	_____
Council Member Piazza	_____	_____	_____
Council Member Rogers	_____	_____	_____
Council Member Wood	_____	_____	_____
Mayor DuBois	_____	_____	_____

Mayor

ATTEST:

City Clerk

RESOLUTION NO. 2017-52

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LAKEWOOD DENYING THE APPEAL OF CONDITIONAL USE PERMIT NO. 948 FOR THE ESTABLISHMENT OF A CARWASH FACILITY WITH COVERED OUTDOOR VACUUM STATIONS AND A CAR SERVICE BUILDING ON A PROPERTY LOCATED AT 6741 CARSON STREET, LAKEWOOD, CALIFORNIA.

THE CITY COUNCIL OF THE CITY OF LAKEWOOD DOES HEREBY FIND, RESOLVE AND DETERMINE AS FOLLOWS:

SECTION 1. The City Council finds that the Planning and Environment Commission, by Resolution No. 14-2017, approved an application for a Conditional Use Permit No. 948, for the establishment of a carwash facility with covered outdoor vacuum stations and a car service building located at 6741 Carson Street, pursuant to the provisions of Sections 9341.B, 9347.A, 9347.B.3, 9347.D.11, and 9490.1 of the Lakewood Municipal Code, Lakewood, California, on July 6, 2017.

SECTION 2. The City Council further finds that Mr. Arthur Pinette, 4323 Quigley Avenue, Lakewood, California 90713, timely filed a written appeal of the Planning Commission decision with the City Council on July 26, 2017. A copy of the written appeal is attached hereto and made a part hereof.

SECTION 3. The City Council of the City of Lakewood does hereby report that a public hearing was held before it in respect to said appeal on the 12th day of September, 2017, and the City Council does hereby find and determine that said appeal should be denied for the following reasons:

A. The nature, conditions and development of adjacent uses, buildings and structures have been considered, and it is hereby found that the proposed use will not jeopardize or adversely affect or will not be detrimental to the public health, safety and welfare, or to the surrounding property and residences for the following reasons:

1. The request is for approval of Conditional Use Permit No. 948 is based on Exhibits "A," "B," "C," "D," "E," "F," "G," "H," and "I."

2. The subject use will not to be in conflict with the goals of the General Plan, nor is the proposed use in conflict with the Commercial land use designation of the General Plan.

3. The nature, condition, and development of adjacent uses, buildings, and structures have been considered, and it has been found the use will not adversely affect or is materially

detrimental to adjacent uses, buildings, or structures provided that the conditions contained have been met and maintained.

4. Carson Street and the adjacent public alley are adequate to serve the traffic generated by the site. Thus, no adverse effect is anticipated on existing roads and circulation as a consequence of this application.

5. The project will have 27 parking spaces including two ADA accessible parking spaces. There will also be one 10' x 25' loading zone space near the northwest corner of the building. The 16 spaces on the east side of the carwash building will be used as covered outdoor vacuum stations.

6. Notification of a public hearing has been made, pursuant to Section 9422, et seq., of the Lakewood Municipal Code and State law.

B. The record does have substantial evidence supporting the decision of the Planning and Environment Commission.

ADOPTED AND APPROVED this 12th day of September, 2017, by the City Council of the City of Lakewood voting as follows:

	AYES	NAYS	ABSENT
Council Member Croft	_____	_____	_____
Council Member Piazza	_____	_____	_____
Council Member Rogers	_____	_____	_____
Council Member Wood	_____	_____	_____
Mayor DuBois	_____	_____	_____

Mayor

ATTEST:

City Clerk

**D
I
V
I
D
E
R
S
H
E
E
T**

COUNCIL AGENDA

September 12, 2017

TO: The Honorable Mayor and City Council

SUBJECT: Storage Tanks and Delivery of Water Disinfectant

INTRODUCTION

The City currently utilizes around 48,000 gallons of 12.5 % sodium hypochlorite per year to disinfect the City’s water system. The FY 17-18 budget provides for this expenditure under Special Supplies for Water Treatment. The Purchasing Officer was requested to solicit proposals for the supply, installation, and maintenance of storage tanks and the bulk delivery of 12.5% sodium hypochlorite for a three-year period. The City will own the storage tanks at the end of three years.

STATEMENT OF FACT

Required legal notices were posted and bid packages were distributed to five potential vendors. On July 17, 2017, the Water Administration Manager opened three sealed bids in the presence of a Management Aide at the City Clerk’s Office.

The Water Administration Manager and the Purchasing Officer reviewed the proposals to determine that specifications had been successfully met.

Here is a summary of prices, which are before sales tax and inclusive of delivery.

	WATERLINE TECHNOLOGIES INC.	BRENNTAG PACIFIC INC.	COMMERCIAL AQUATIC SERVICES, INC.	UNIVAR
	price per gallon			
YEAR 1	\$ 2.16	\$ 1.5705	\$ 1.90	did not submit bid
YEAR 2	1.12	1.647	2.09	
YEAR 3	1.18	1.73	2.30	
3-YR TOTAL @ 48,000 gallons each year	\$ 200,700	\$ 222,638	\$ 283,005	NA

On August 2, 2017, the Assistant Director of Water Resources and the Water Distribution Supervisor toured Waterline’s facility and met with their management team. The Assistant Director of Water Resources also called three current Waterline customers and he received positive feedback about Waterline.

STAFF RECOMMENDATION

It is recommended that the City Council authorize the purchase of 12.5% sodium hypochlorite from Waterline Technologies, Inc. of Santa Ana, CA and approve a three-year professional services agreement with the aforementioned vendor.

for Diane Perkin 
Director of Administrative Services


Thaddeus McCormack
City Manager

**D
I
V
I
D
E
R
S
H
E
E
T**

COUNCIL AGENDA

September 12, 2017

TO: The Honorable Mayor and City Council

SUBJECT: Ordinance Granting a Franchise – Cardinal Pipeline

INTRODUCTION

Cardinal Pipeline, L.P., a California limited partnership, has applied for a franchise to operate and maintain certain pipelines incident to the oil industry pursuant to Sections 6001.5 through 6302 of the Public Utilities Code.

STATEMENT OF FACT

The City Council adopted a Resolution at its August 8, 2017 meeting, which was a notice of intention to grant a franchise to Cardinal Pipeline, L.P. and introduced Ordinance Number 2017-7 and set a Public Hearing for September 12, 2017.

Proposed City Ordinance 2017-7 sets forth the terms and conditions to grant a franchise to Cardinal Pipeline, L.P. for a term of 20 years to operate and maintain certain pipelines incident to the oil industry.

RECOMMENDATION

That the City Council conduct a Public Hearing and adopt Ordinance 2017-7 which grants Cardinal Pipeline, L.P. a franchise for a term of 20 years to operate and maintain certain pipelines incident to the oil industry within the City of Lakewood.

Lisa Ann Rapp
Director of Public Works



Thaddeus McCormack
City Manager



ORDINANCE NO. 2017-7

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF
LAKEWOOD GRANTING A FRANCHISE TO CONSTRUCT
AND USE AN OIL PIPELINE TO CARDINAL PIPELINE, L.P.

THE CITY COUNCIL OF THE CITY OF LAKEWOOD DOES HEREBY ORDAIN AS
FOLLOWS:

SECTION 1. NATURE OF FRANCHISE. The City of Lakewood (hereinafter referred to as “City”) hereby grants a non-exclusive Franchise to Cardinal Pipeline, L.P., a California limited partnership (hereinafter referred to as “Grantee”), for a period of twenty (20) years from February 23, 2017 (the “Effective Date”), to lay and use pipelines, not to exceed twenty-four (24) inches in internal diameter, for the transportation of oil, gas, gasoline, wet gas, hydrocarbon substances and products thereof, water, waste water, or other substances transportable by pipelines, in, under, along, and across the public streets, highways, and alleys (collectively “streets”), in the City, as described in Exhibit “A” attached hereto and made a part hereof (hereinafter referred to as the “Franchise”). Grantee may request, by written notice, up to three (3) extensions of five (5) years each to the term of the Franchise prior to its expiration. Such extensions shall be subject to approval by City in its sole discretion. City shall provide written notice to Grantee of its approval or disapproval of any extension request.

The Franchise is hereby granted to Grantee, under and in accordance with the provisions of the Franchise Act of 1937 and City’s Municipal Code. The Franchise shall include the right, for the period and subject to the conditions hereof, to so maintain, operate, repair, renew, and change the size of the pipeline system, if any, of Grantee, as already laid and constructed in said streets.

The terms and conditions of the Franchise shall also apply to any pipe or other facilities of Grantee which are located within the right-of-way of any road or highway at the time such road or highway becomes a City street.

The granting of the Franchise is expressly conditioned upon payment of all franchise fees due and owing from the date of adoption of this Ordinance.

SECTION 2. APPURTENANCES. Grantee shall have the right, which shall not be withheld unreasonably, to construct and maintain such traps, manholes, conduits, pipe casings, protective covering, cathodic protection facilities, valves, appliances, attachments, and appurtenances (hereinafter for convenience collectively referred to as “appurtenances”), as may be necessary or convenient for the proper maintenance and operation of the pipelines under the Franchise. Said appurtenances shall be kept flush with the surface of the streets and be so located as to conform to any order of the Director of Public Works (provided such order is consistent with applicable rules, regulations and code) with regard thereto and not to interfere

with the use of the street for travel. Grantee shall have the right, subject to such ordinances, rules, or regulations as are now or may hereafter be in force (including any reasonable conditions imposed by the Director of Public Works, including, without limitation, the issuance to Grantee of certain encroachment permits.), to make all necessary excavations in said streets for the construction and repair of said pipelines and appurtenances.

SECTION 3. LOCATION OF PIPELINES. So far as it is reasonably practicable, any pipelines hereinafter laid shall be located along the edge or shoulder of the streets or in the parking areas adjacent thereto so as not to unreasonably disturb the flow of traffic and, where possible, shall be laid in the unpaved portion of the street.

If the pipelines shall be laid across or along the paved portion of a street, the repair of the street, after the pipelines have been laid, shall be made by Grantee within ten (10) days of the completion of the laying of such pipeline, at the expense of Grantee, and in accordance with all applicable provisions of City's Municipal Code and any other generally applicable policy or procedure established by City pertaining to street excavations, and all other applicable laws.

SECTION 4. CONSTRUCTION OF PIPELINES.

A. **Terms of Construction.** The pipelines and appurtenances laid, constructed, or maintained under the provisions of the Franchise shall be installed, maintained, and inspected by Grantee in a satisfactory, safe, and workmanlike manner, of good material, and in conformity with all ordinances, rules, and regulations now or hereafter adopted or prescribed by City, County, State, or Federal authorities.

B. **Restoration of Streets.** The work of laying, constructing, maintaining, operating, renewing, repairing, changing, and moving any of the pipeline system contemplated by the Franchise and all other work in exercise of the Franchise shall be performed in compliance with all applicable provisions of City's Municipal Code pertaining to street excavations and restoration, including but not limited to, City's encroachments ordinance, any current or future generally applicable policies, and other applicable laws, and shall be conducted with the least possible hindrance or interference to the use of City roads by the public or by City, and Grantee shall provide all necessary warning, safety, and traffic control devices as are or may be required by City, County, State, or Federal regulations. All excavations shall be back filled and adequately compacted. The surface of City roads shall be placed in a condition that is as good and as serviceable as existed at the beginning of this work and must be to the reasonable satisfaction of the Director of Public Works. If City has an applicable road restoration ordinance, policy, or other standard, then the Director of Public Works' discretion shall be consistent with that ordinance, policy, or other standard.

SECTION 5. MAPS AND DATE TO BE FURNISHED. Within ninety (90) days following the date on which any pipelines or additional pipelines have been laid or constructed under this Franchise, Grantee shall file a map in such form as may be required by the Director of Public Works showing the accurate location and size of all its facilities then in place and shall, upon installation of any additional facilities or upon removal, change, or abandonment of all or

any portion thereof, file a revised map or maps showing the location and size of all such additional and/or abandoned facilities as of that date. If cathodic protection is to be used for facilities installed or maintained pursuant to this Franchise, a description of all the protective devices shall be furnished to the Director of Public Works which shall show the location and types of anodes, including a description of methods to be used as protection against corrosion and electrolytic leakage.

SECTION 6. COMPENSATION TO CITY.

A. Amount of Franchise Fee. As consideration for the Franchise hereby granted, Grantee shall pay a Franchise Fee (hereinafter the “Fee”) to City in accordance with the Public Utilities Commission of the State of California Code Section 623.15. The Fee shall be paid annually to City in lawful money of the United States within sixty (60) days after the end of each calendar year. The payments due to City shall be computed as follows:

The length of the pipe expressed in feet located within the franchised area, rounded to the nearest foot shall be multiplied by the applicable base rate, as adjusted pursuant to subdivision (B), in accordance with the following schedule:

Pipe Size (internal diameter in inches)	Base rate per lineal foot
0 – 4	\$0.088
6	\$0.132
8	\$0.176
10	\$0.220
12	\$0.264
14	\$0.308
16	\$0.352
18	\$0.396
20	\$0.440
22	\$0.484
24	\$0.528
26	\$0.572
28	\$0.616
30	\$0.660

For pipelines with an internal diameter not listed above, the Fee shall be in the same proportion to the Fee of a 12-inch-diameter pipe as the diameter of the unlisted pipe is to 12 inches.

B. Computation of Payments. Such payments shall be computed from the Effective Date of this Franchise, to and including the date of either actual removal of the facilities or the effective date of a properly approved abandonment “in place” authorized by City, and until Grantee shall have fully complied with all the provisions of this Franchise and of all other applicable provisions of law or ordinance relative to such abandonment. All such payments shall

be made payable to City, and shall be supported by Grantee's verified statement concerning the computation thereof. In the event of installation or abandonment of facilities with the approval of City as elsewhere in this Franchise provided, or in the event of removal of such facilities by Grantee, the payments otherwise due to City or occupancy of the streets by such facilities shall be prorated for the calendar year in which such installation, removal, or abandonment occurs as of the end of the calendar month in which installed, removed, or abandoned. Provided, however, that the amount of each annual payment shall be computed and revised each calendar year as follows:

(1) The applicable base rate shall be multiplied by the Consumer Price Index (CPI-U), All Items for the Los Angeles-Riverside-Orange County areas, as published by the United States Department of Labor, Bureau of Labor Statistics, for the month immediately preceding the month in which payment is due and payable, and divided by the Consumer Price Index for June 30, 1989, which is declared to be 100.0. Under no circumstances shall the multiplying factor be less than one (1).

(2) If the United States Department of Labor, Bureau of Labor Statistics, discontinues the preparation or publication of a Consumer Price Index for the area, and if no translation table prepared by the Department of Labor is available so as to make those statistics which are then available applicable to the index of June 30, 1989, City shall prescribe a rate of payment which shall, in City's judgment, vary from the rates specified in this Section in approximate proportion as commodity consumer prices then current vary from commodity consumer prices current in December 1988. On this point, the determination by City shall be final and conclusive.

(3) If said Bureau revises the said Index, the parties hereto shall accept the method of revision or conversion recommended by the said Bureau.

C. Right of Inspection. City shall have the right to inspect Grantee's pipeline records relating to its annual report and to audit and recompute any and all amounts payable under the Franchise. Costs of audit shall be borne by Grantee when audits result in an increase of more than five percent (5%) of Grantee's annual payments due to City. Acceptance of any payment shall not be construed as a release, waiver, acquiescence, or accord and satisfaction of any claim that City may have for further or additional sums payable under this Ordinance or for the performance of any other obligation hereunder.

D. Base Granting Fee. In the case of an initial grant of Franchise, or franchise which extends, renews, or continues previously granted franchises, a base granting fee of \$7,500 for pipelines with a total length of one-quarter (1/4) mile or more or \$1,600 for pipelines with a total length of less than one-quarter (1/4) mile shall be paid within thirty (30) days after the Council adopts the ordinance granting the franchise and prior to signing the written acceptance of the franchise.

SECTION 7. EMERGENCY PREPAREDNESS.

A. Equipment and Crews. At all times during the terms of this Franchise, Grantee shall maintain emergency response equipment and capabilities as required by applicable federal and state rules, laws and regulations.

B. Plans. Grantee shall establish and maintain an Emergency Response Plan as required by federal and state regulations. Upon request, Grantee will provide a copy of the Emergency Response Plan to the City.

SECTION 8. REPAIRS. Grantee shall pay to City on demand the cost of all repairs to City property made necessary by any of the operations of Grantee under the Franchise, provided, however, that Grantee may make repairs to streets, sidewalks, curbs, and gutters itself at its own cost in accordance with City specifications, if the same can be done without undue inconvenience to the public use of the streets.

SECTION 9. REARRANGEMENT OF FACILITIES.

A. Expense of Grantee.

(1) If any of Grantee's facilities, in the discretion of City, shall endanger the public in the use of the public streets or interfere with or obstruct the use of any street by the public or for public purpose, City shall have the right to require Grantee, and Grantee shall move, alter, or relocate the same (hereinafter called "rearrangement") to avoid such danger, interference, or obstruction, in conformity with the written notice of the Director of Public Works, at Grantee's sole expense.

(2) Whenever, during the existence of this Franchise, City, any water, electric, gas, or other utility system now or hereafter owned or operated by City, or any community facilities or assessment district, or similar agency established by City, shall change the grade, width, alignment, or location of any street, way, alley, or place, or improve any said street in any manner, including but not limited to, the laying of any sewer, storm drain, conduit, gas, water, or other pipes, pedestrian tunnels, subway, viaduct, or other work of City (the right to do all of which is specifically reserved to City without any admission on its part that it would not otherwise have such rights), Grantee shall, at its own cost and expense, do any and all things to effect such change in position or location in conformity with the written approval of the Director of Public Works, including without limitation, the acceptance of encroachment permits and the removal or relocation of any facilities installed, if and when made necessary by the determination of the Director of Public Works.

B. Expense of Others.

(1) City shall also have the right to require Grantee to rearrange any part of Grantee's facilities for the accommodation of any private person, firm, or corporation. When such rearrangement is done for the accommodation of any private person, firm, or corporation,

the cost of such rearrangement shall be borne by the accommodated party. Such accommodated party, in advance of such rearrangement, shall deposit with Grantee funds in an amount as, in the reasonable discretion of Grantee, shall be required to pay the cost of such rearrangement.

(2) The rearrangement referred to in subsection (1) of Subsection B of this Section shall be accomplished in conformity with the written notice of the Director of Public Works.

C. Rearrangement of the Facilities of Others. Nothing in this Franchise shall be construed to require City to move, alter, or relocate any of its facilities upon said streets, at its own expense, for the convenience, accommodation, or necessity of any other public utility, person, firm, or corporation now or hereafter owning a public utility system of any type or nature, or to move, alter, or relocate any part of its system upon said streets for the convenience, accommodation, or necessity of Grantee.

D. Notice. Grantee shall be given not less than ninety (90) days written notice of any rearrangement of facilities that Grantee is required to make herein. Such notice shall specify in reasonable detail the work to be done by Grantee and shall specify the time within which such work is to be accomplished. (provided such timing shall be reasonable and not less than one hundred twenty (120) days). In the event that City shall change the provisions of any such notice given to Grantee, Grantee shall be given an additional period of not less than ninety (90) days to accomplish such work.

SECTION 10. REMOVAL OR ABANDONMENT OF FACILITIES. At the time of expiration, revocation, or termination of this Franchise or the permanent discontinuance of the use of its facilities, or any portion thereof, Grantee shall, within thirty (30) days thereafter, make a written application to the Director of Public Works to either: (1) abandon all, or a portion, of such facilities in place, or (2) remove all, or a portion, of such facilities as the Director of Public Works, in the Director of Public Works's discretion, shall consider to be appropriate. Such application shall describe the facilities desired to be abandoned by reference to the map or maps required by Section 5 of this Ordinance and shall also describe with reasonable accuracy the relative physical condition of such facilities. Thereupon, the Director of Public Works shall determine whether any abandonment or removal which is thereby proposed may be effected without detriment to the public interest or under what conditions such proposed abandonment or removal may be safely effected and shall then notify Grantee, according to such requirements as shall be specified in the Director of Public Works' order, and within ninety (90) days thereafter, to either:

- A. Remove all or a portion of such facilities; or
- B. Abandon in place all or a portion of such facilities.

If any facilities to be abandoned in place subject to prescribed conditions shall not be abandoned in accordance with all such conditions, then the Director of Public Works may make additional appropriate orders, including if deemed desirable, an order that Grantee shall remove all such facilities in accordance with applicable requirements.

A request of Grantee to abandon in place any facilities shall be deemed an offer of transfer of such facilities to City and by resolution authorizing Grantee to abandon any facility in place, City shall succeed to all right, title, and interest of Grantee in said facilities.

SECTION 11. COMPLETION OF WORK. If Grantee fails to commence any work or act and diligently proceed or complete any such act or work required of Grantee by the terms of this Franchise within the time limits required hereby, City may cause such act or work to be completed by City or, at the election of City, by a private contractor. City agrees that to the extent reasonably possible, any work by City or its private contractors shall be performed in a manner that does not cause damage to Grantee's facilities or disruption to the transportation of oil and other petroleum products through Grantee's pipeline system. In the event City causes such act or work to be completed by City or a private contractor, City shall send an itemized bill to Grantee. Within ten (10) days of receipt of said bill, Grantee shall either pay the bill plus fifteen percent (15%) for overhead, or detail in writing to City why such bill is inappropriate. If Grantee timely provides this statement of dispute to City, City shall consider Grantee's statement and shall notify Grantee in writing of its determination. If Grantee finds that the City's determination is unacceptable, Grantee may bring an action in court challenging that decision. Regardless of Grantee's position on the accuracy of City's decision, Grantee shall pay all amounts determined by City within ten (10) days of receipt of City's determination. For any removal, relocation, or modification of Grantee's facilities by the City as provided for herein, the City shall, to the extent required by law, only conduct such work with the prior approval of, and in coordination with, the California State Fire Marshal and comply with Chapter 5.5 of Title 5, Division 1, Part 1, of the California Government Code (Elder California Pipeline Safety Act of 1981) and all other local, State, and Federal laws.

SECTION 12. RECOVERY OF COSTS OF REPAIRS AND UNPAID FEES. If Grantee has not paid City for such fees and expenses incurred by or payable to City as hereinabove set forth, City may take any and all reasonable enforcement actions, including but not limited to, ordering that the charge(s) be assessed against the property of Grantee in City, that liens be imposed on said property, instituting collection proceedings, and instituting franchise default proceedings.

SECTION 13. BOND. Grantee shall, within thirty (30) days of the Effective Date of this Franchise, file with the City Clerk, and yearly thereafter maintain in full force and effect, a bond of the required amount for the benefit of City, with a surety to be approved by City's Finance Director. The bond shall be surety that Grantee shall truly observe, fulfill, and perform each and every term and condition of this Franchise and, in the case of a material breach of any condition of this Franchise as determined by the City Council in accordance with the default procedures set forth below in Section 19 of this Franchise, the damages caused thereby shall be recoverable from the principal and sureties upon the bond. If said bond is not so filed, Grantee agrees and acknowledges that the award of this Franchise will be set aside and any money paid therefore will be forfeited.

The amount of the bond shall be Fifty Thousand Dollars (\$50,000.00).

Whenever a bond is taken and deemed to be liquidated damages for any breach of a term or condition of this Franchise, Grantee must immediately file another bond of like amount and character and, if Grantee fails to do so within the time set by City, City may, by resolution, declare said Franchise automatically forfeited.

Nothing herein shall insulate Grantee from liability in excess of the amount of said bond or shall be construed as a waiver by City of any remedy at law against Grantee for any breach of the terms and conditions of this Franchise, or for any damage, loss, or injuries suffered by City or in case of any damage, loss, or injury suffered by any person, firm, or corporation by reason of any work done or any activity conducted by Grantee in the exercise of this Franchise.

SECTION 14. INSURANCE.

A. Prior to the beginning of and throughout the duration of this Franchise, Grantee will maintain insurance in conformance with the requirements set forth below. Grantee shall furnish proof that it shall provide the following types and amounts of insurance:

(1) Commercial General Liability Insurance using Insurance Services Office “Commercial General Liability” policy form CG 0001, with an edition prior to 2004 or the exact equivalent. Defense costs must be paid in addition to limits. The insurance policy shall include, but not be limited to, coverage for premises operations, explosion and collapse hazard, underground hazards, contractual insurance, property damage, independent contractors, and personal injury. Limits shall be no less than \$10,000,000 per occurrence for all covered losses and no less than \$20,000,000 general aggregate.

(2) Workers’ Compensation coverage consistent with California statutory requirements on a state approved policy form with employers’ liability limits no less than \$10,000,000 per accident for all covered losses.

(3) Business Auto Coverage on ISO Business Auto Coverage form CA 00 01, including owned, non-owned, and hired autos, or the exact equivalents. Limits shall be no less than \$10,000,000 per accident combined single limit.

(4) Excess or Umbrella Liability Insurance (Over Primary), if used to meet limit requirements, shall provide coverage at least as broad as specified for the underlying coverages. Such policy or policies shall include as insureds those covered by the underlying policies, including additional insureds. The insurance shall be maintained in an amount not less than \$20,000,000 throughout the term of the Franchise.

B. City and its officers, agents, and employees shall be named as additional insureds on said policy at no cost to City. City shall receive thirty (30) days advance written notice of any proposed reduction in coverage of the insurance policies on which it is carried as an additional insured, as well as on coverage required to be maintained by this Section. Such advance notice

shall also be required as to any proposed or actual cancellation of any such policies of insurance. Insurance endorsements of such coverage shall be filed with City. City shall approve the form and provisions of the insurance.

SECTION 15. INDEMNIFICATION BY GRANTEE. For all claims relating to activity taken during the times subject to this Ordinance, including any retroactivity dates, Grantee shall indemnify, defend with counsel selected by City (subject to approval of Grantee, whose approval shall not be unreasonably withheld), protect, and hold harmless City, its officers, employees, agents, assigns, and any successor or successors to City's interest from and against all claims, actual damages (including, but not limited to, special and consequential damages), penalties, attorneys' fees, and consultants' and experts' fees and costs ("Liabilities") arising as a result of Grantee's exercise of the Franchise or operation of the pipeline system, regardless of whether any act or omission complained of is authorized, allowed, or prohibited by the Franchise. This indemnity includes, but is not limited to, any repair, cleanup, or detoxification, or preparation and implementation of any removal, remediation, response, closure, or other plan (regardless of whether undertaken due to governmental action) concerning any facilities or equipment or the effects of such facilities or equipment authorized by this Franchise, and any hazardous substance or hazardous wastes, including petroleum and its fractions as defined in the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"; 42 U.S.C. § 9601, *et seq.*); the Resources Conservation and Recovery Act ("RCRA"; 42 U.S.C. § 6901, *et seq.*); and California Health & Safety Code § 25280, *et seq.*, at any place where Grantee maintains a pipeline for the transportation of substances and liquids pursuant to this Franchise. The foregoing indemnity is intended to (1) supplement and not replace any other indemnity from any source, and (2) operate as an agreement pursuant to Section 107(e) of CERCLA and California Health & Safety Code Section 25364, to assure, protect, hold harmless, and indemnify City from liability. Grantee shall not be liable to City for any Liabilities resulting from or arising out of acts, errors, or omissions, or caused by the negligence or willful misconduct of City, its officers, employees, agents, assigns, or successors.

SECTION 16. ASSIGNMENT.

A. Grantee shall not transfer, sell, hypothecate, sublet, or assign the Franchise, nor shall any of the rights or privileges therein be transferred, sold, hypothecated, leased, or assigned, either in whole or in part, nor shall title thereto, either legal or equitable, or any right, interest, or property therein pass to or vest in any person, except Grantee or an affiliate of Grantee, either by act of Grantee or by operation of law, nor shall there be any "Change in Control" (as hereinafter defined) of Grantee, without the prior consent of City expressed by resolution. The aforesaid provisions of this Section shall not prohibit Grantee from using its pipelines for the purpose of transporting for other persons oil, petroleum, gas, gasoline, or other hydrocarbon substances or water, but in such event Grantee shall be responsible to City for the full performance and observance of the terms and conditions of the Franchise.

B. Any sale, lease, assignment, or transfer of the Franchise or the rights or privileges granted hereby, or any of them, except to an affiliate of Grantee, or any Change in Control of Grantee without the prior written consent of City first having been obtained, whether by

operation of law or otherwise, shall be null and void. In the event of assignment or transfer to an affiliate of Grantee, Grantee shall provide written notice of such assignment or transfer within thirty (30) days.

C. City shall not unreasonably withhold its consent to a Franchise transfer or a Change in Control of Grantee. For the purpose of determining whether it shall consent to such transfer, City may inquire into the qualifications of the prospective transferee or controlling party, and Grantee shall assist City in any such inquiry. In seeking City's consent to any change of ownership or Change in Control, Grantee shall have the responsibility of ensuring that transferee completes an application in form and substance reasonably satisfactory to City. An application shall be submitted to City not less than ninety (90) days prior to the date of transfer. Grantee shall be required to establish that it is in material compliance with its Franchise. The transferee shall be required to establish that it possesses the qualifications and financial and technical capability to operate and maintain the pipeline and comply with all Franchise requirements for the remainder of the term of the Franchise. If City finds that legal, financial, character, technical, and other public interest qualities of the applicant are satisfactory and that the proposed transferee has the capability to operate and maintain the system and comply with all Franchise requirements for the then remaining term thereof, City shall consent to the transfer and assignment of the rights and obligations of such Franchise. City may condition the transfer to insure the transferee is in material compliance, and remains in material compliance, with the Franchise.

D. For purposes of Section 16.A. above, a "Change in Control" of Grantee shall be deemed to be a transfer requiring City's consent. "Change in Control" means (i) any merger, consolidation, or other reorganization of Grantee in which Grantee, or an affiliate of Grantee, is not the surviving entity; (ii) any transfer or change in ownership of fifty percent (50%) or more of the capital stock, capital accounts, equity interests, or memberships, as the case may be, of Grantee; or (iii) the sale of fifty percent (50%) or more of the market value of the assets of Grantee.

E. Notwithstanding the above, Grantee shall be entitled to pledge, encumber, or grant any security interest in the Franchise, provided that Grantee shall first notify and obtain City's consent in writing of such proposed transaction. City shall consent to such transaction, subject to the following conditions:

(1) Any consent so granted shall not be deemed a consent to such pledgee, encumbrancer, or secured party exercising any rights or prerogatives of Grantee under the Franchise, nor to its exercise of any rights or prerogatives of a holder of an ownership interest in Franchise.

(2) Any consent so granted shall not be deemed a consent to any subsequent transfer or assignment as referred to in this Section. Any such subsequent transfer or assignment shall be deemed an assignment of this Franchise within the meaning of this Section, and shall be subject to the provisions of this Section.

(3) The pledgee, encumbrancer, or secured party shall have executed and delivered to City an instrument in writing agreeing to be bound by the provisions of the Franchise.

F. The provisions of this Section shall not apply to Grantee's assignment of rights, duties, and obligations under the Franchise to any affiliate of Grantee. As used in this Franchise, the term "affiliate" shall mean an entity controlling, controlled by, or under common control with the entity to which the term applies, whether by ownership, contract, or voting control. Franchisee and the entity to whom the rights are to be assigned shall sign an assignment and assumption agreement whereby the transferee agrees to be bound by and comply with the terms of this Franchise.

G. Notwithstanding anything to the contrary in this Section 17, in the event Grantee or its successor or assign hereunder is or becomes subject to the jurisdiction of the California Public Utilities Commission, then the terms of clauses A through F, inclusive, of this Section 17 shall not apply and Grantee shall file with the City within thirty (30) days after any sale, transfer, assignment or lease of the Franchise or any part thereof, or any of the rights or privileges granted thereby, written evidence of the transaction certified by Grantee or its duly authorized officers.

SECTION 17. RECEIVERSHIP AND FORECLOSURE.

A. Subject to applicable provisions of the Bankruptcy Code, the Franchise shall, at the option of City, cease and terminate one hundred twenty (120) days after the appointment of a receiver or trustee to take over and conduct the business of Grantee, whether in a receivership, reorganization, bankruptcy, or other action or proceeding, unless such receivership or trusteeship shall have been vacated prior to the expiration of said one hundred twenty (120) days, or unless:

(1) Such receiver or trustee shall have, within one hundred twenty (120) days after his election or appointment, fully complied with all terms of the Franchise and remedied all breaches of the Franchise or provided a plan for the remedy of such breaches which is satisfactory to City; and

(2) Such receiver or trustee shall, within said one hundred twenty (120) days, execute an agreement duly approved by the court having jurisdiction, whereby such receiver or trustee assumes and agrees to be bound by each and every term, provision, and limitation of the Franchise.

B. Upon the foreclosure or other judicial sale of all or a substantial part of a pipeline system, Grantee shall notify City of such fact, and such notification shall be treated as a notification that a change in ownership of Grantee has taken place.

SECTION 18. WAIVER OF BREACH. No waiver of the breach of any of the covenants, agreements, restrictions, or conditions of this Franchise by City shall be construed to be a waiver or any such succeeding breach of the same or other covenants, agreements, restrictions, or conditions of the Franchise. No delay or omission of City in exercising the right,

power, or remedy herein provided in the event of default shall be construed as a waiver thereof, or acquiescence therein, nor shall the acceptance of any payments made in a manner or at a time other than what is herein provided be construed as a waiver of or variation in any of the terms of the Franchise.

SECTION 19. DEFAULT.

A. Default. In the event that Grantee shall default in the performance of any of the terms, covenants, and conditions hereof, City may give written notice to Grantee of such default. In the event that Grantee does not commence the work necessary to cure such default within ten (10) business days after such notice is sent or prosecute such work diligently to completion, Grantee agrees and acknowledges that City may declare this Franchise forfeited by giving written notice thereof to Grantee, whereupon this Franchise shall be void and the rights of the Grantee hereunder shall terminate and Grantee shall execute an instrument of surrender and deliver the same to City.

If City declares the Franchise forfeited, it may thereupon and thereafter exclude Grantee from further occupancy or use of all City streets authorized under this Franchise. A forfeiture of said Franchise shall not of itself operate to release the bond filed for said Franchise. After forfeiture, the bond shall remain in full force and effect for a period of one (1) year unless exonerated by City. No bond shall be exonerated unless a release is obtained from City. The release shall state whether all excavations have been back filled, all obstructions removed, and whether the substratum or surface of City streets occupied or used have been placed in good and serviceable condition. Release shall not constitute a waiver of any right or remedy which City may have against Grantee or any person, firm, or corporation for any damage, loss, or injury suffered by City as a result of any work or activity performed by Grantee in the exercise of the Franchise.

To implement forfeiture under this Section, City shall proceed as follows:

- (1) Notice of demand for compliance shall be in writing signed by the City Manager, the Director of Public Works or a designee and delivered by personal delivery or certified mail to the Grantee. The notice shall demand correction within a reasonable timeframe as determined by the City Manager.
- (2) The City shall give Grantee written notice of any City Council meeting at which forfeiture of this Franchise will be considered. Grantee shall have the opportunity to present evidence that cured any default or that it commenced work to cure such default within the time required by this Franchise and is prosecuting such work diligently.
- (3) The Grantee shall have the right to seek review of the City Council's decision in the Superior Court of the State of California.

B. Cumulative Remedies. No provision herein made for the purpose of securing the enforcement of the terms and conditions of the Franchise shall be deemed an exclusive remedy or to afford the exclusive procedure, for the enforcement of said terms and conditions, but the

remedy and procedure herein provided, in addition to those provided by law, shall be deemed to be cumulative.

SECTION 20. SCOPE OF RESERVATION. Nothing herein contained shall ever be construed so as to exempt Grantee from compliance with all ordinances of City now in effect or which may hereafter be adopted which are not inconsistent with the terms of the Franchise. The enumeration herein of specific rights reserved shall not be construed as exclusive, or as limiting the general reservation herein made, or as limiting such rights as City may now or hereafter have in law.

SECTION 21. NOTICE. Any notice required to be given under the terms of this Franchise, the manner of service of which is not specifically provided for, may be served personally or by United States first class mail as follows:

A. Upon City, by addressing a written notice to the City Clerk of the City of Lakewood, Lakewood City Hall, 5050 Clark Avenue, Lakewood, CA 90712.

B. Upon Grantee, by addressing a written notice to Cardinal Pipeline, L.P, 3760 Kilroy Airport Way, Suite 300, Long Beach, CA 90806, with a copy 1801 California Street, Suite 3600, Denver, CO 80202 Attn: Legal Counsel.

C. For such other address as may from time to time be furnished in writing by one party to the other and depositing said notice in the United States Mail, postage prepaid.

When service of any such notice is made by mail, the time of such notice shall begin with and run from three (3) business days after the date of the deposit of same in the United States Mail.

SECTION 22. SUCCESSORS. The terms herein shall inure to the benefit of and shall bind, as the case may be, the successors and assigns of the parties hereto, subject, however, to the provisions of Section 16 hereof.

SECTION 23. INTERPRETATION. The Franchise is granted upon each and every condition herein contained, and shall be strictly construed against Grantee. Nothing shall pass by the Franchise granted hereby to Grantee unless it be granted in plain and unambiguous terms. Each of said conditions is a material and essential condition to the granting of the Franchise.

SECTION 24. FORCE MAJEURE. The time within which Grantee is obligated hereunder to construct, erect, maintain, operate, repair, renew, change the size of, and remove pipelines or other improvements shall be extended for a period of time equal in duration to and performance in the meantime shall be excused on account of and for and during the period of any delay caused by, strikes, threats of strikes, lockouts, war, threats of war, insurrection, invasion, acts of God, calamities, violent action of the elements, fire, impossibility of obtaining materials, or other things beyond the reasonable control of Grantee.

SECTION 25. ATTORNEYS' FEES. If either party brings an action to enforce the terms of any covenant, agreement, or condition contained in the Franchise, the prevailing party in such action, trial, or appeal, shall be entitled to reasonable attorneys' fees to be paid by the losing party as fixed by the court.

SECTION 26. PUBLICATION EXPENSES. Grantee shall, pursuant to California Public Utilities Code Section 6293, pay to City a sum of money sufficient to reimburse it for all publication expenses incurred by it in connection with the granting of this Franchise; said payment to be made within thirty (30) days after City shall have furnished Grantee with a written statement of such expenses.

SECTION 27. ACCEPTANCE. The Franchise granted hereby shall not become effective until written acceptance thereof shall have been filed by Grantee with the City Clerk within thirty days of the effective date of this Ordinance.

SECTION 28. SEVERABILITY. City hereby declares that the provisions of this Ordinance are severable and if for any reason a court of competent jurisdiction shall hold any sentence, paragraph, or section of this Ordinance to be invalid, such decision shall not affect the validity of the remaining parts of this Ordinance.

SECTION 29. BUSINESS DAYS. As used in this Ordinance, the term "business days" shall mean days other than Saturdays, Sundays, and legal holidays and closures observed by City, and "days" shall mean calendar days. If the time for performance of an obligation under this Ordinance falls on other than a business day, the time for performance shall be extended to the next business day.

SECTION 30. EFFECTIVE DATE OF FRANCHISE RETROACTIVITY. This Ordinance shall be in full force and effect thirty (30) days after its adoption. All conditions precedent having first been met to make this Franchise effective and binding upon City and Grantee, the rights, privileges, limitations, restrictions, conditions, obligations, and duties granted and imposed hereby shall be retroactive to February 23, 2017, provided, however, that Grantee is deemed to be in full compliance with the requirements and conditions of this Ordinance as of the date of the adoption of this Ordinance.

SECTION 31. CERTIFICATION. The City Clerk shall certify to the adoption of this ordinance. The City Council hereby finds and determines there are no newspapers of general circulation both published and circulated within the City and, in compliance with section 36933 of the Government Code, directs the City Clerk to cause said ordinance within fifteen (15) days after its passage to be posted in at least three (3) public places within the city as established by ordinance. This ordinance shall take effect thirty (30) days after its adoption.

ADOPTED AND APPROVED THIS _____ DAY OF _____, 2017, BY THE
FOLLOWING ROLL CALL VOTE:

	AYES	NAYS	ABSENT
Council Member Croft	_____	_____	_____
Council Member Piazza	_____	_____	_____
Council Member Rogers	_____	_____	_____
Council Member Wood	_____	_____	_____
Mayor DuBois	_____	_____	_____

Mayor

ATTEST:

City Clerk

EXHIBIT A

Description of Pipeline

An Eight inch diameter (8") pipeline, Two thousand, nine hundred thirty (2,930) linear feet located east of centerline in Norwalk Boulevard between the northern City Boundary at the centerline of Del Amo Boulevard and the southern City Boundary at the north side of the public right-of-way of 211th Street, all within the City of Lakewood.

**D
I
V
I
D
E
R
S
H
E
E
T**

COUNCIL AGENDA
September 12, 2017

TO: Honorable Mayor and City Council

SUBJECT: Justice Assistance Grant Program Funding for Criminal Abatement Team

INTRODUCTION

For the last several years, a portion of the city's Crime, Public Nuisance and Property Abatement Team was funded by the Edward Byrne Memorial Justice Assistance Grant (JAG) program. Each year the Federal government establishes the amount of dollars provided for this program.

STATEMENT OF FACTS

The City has been notified that we may claim an entitlement grant of \$16,588 from the Justice Assistance Program and that funding for the deputy on the Abatement Team is an eligible expenditure. The Abatement Team's mission is to identify and "clean up" nuisance single and multiple family housing units and businesses creating a haven for criminal activities. They also address properties that are unsightly, with residents who disturb the peace and safety of Lakewood neighborhoods. The special assignment deputy is a key member of this team and a portion of the contract cost of this deputy can be offset by this grant.

The JAG program requires the City Council to hold a public hearing on the expenditure of these funds and allow citizens to comment.

RECOMMENDATION

Staff recommends the City Council approve the submittal of the JAG Program funding for the Crime, Public Nuisance and Property Abatement Team deputy; hold a public hearing and receive public comment on this grant; authorize the City Manager to apply for the grant and sign the appropriate paperwork; and direct the Director of Administrative Services to appropriate \$16,588 in the 2017 JAG grant fund when the grant is awarded.

Carol Flynn Jacoby
Assistant City Manager



Thaddeus McCormack
City Manager



**D
I
V
I
D
E
R
S
H
E
E
T**

TO: The Honorable Mayor and City Council

SUBJECT: Award of Bid – Public Works Contract 17-05.
Resilient Surfacing Replacement at Mayfair Tot Play Area

INTRODUCTION

On September 5, 2017 the City Clerk received and opened two bids for the Resilient Surfacing Replacement at Mayfair Tot Play Area.

STATEMENT OF FACT

Six contractors qualified to bid this project by attending a mandatory pre-bid conference; seven contractors purchased plans and specifications, and two contractors submitted bid proposals. The following is the bid summary:

RANK	BIDDER	BID AMOUNT
1	Spectra Turf	\$ 38,633.12
2	Play Core	\$ 55,755.00

SpectraTurf was the lowest bidder on this project at \$38,633.12, and meets the contract requirements. References contacted by staff provided favorable comments on the quality of their work and they have completed similar installations for various public facilities. The Contractor’s bonding company has an AM Best Rating of A+ XV.

The work generally consists of replacing existing resilient play surfacing at the existing Tot Play Area as listed in the project plans and specifications. There are adequate funds in the project budget to complete the full scope of contract work, and to cover contingencies during installation.

SUMMARY

Bids have been received on Public Works Contract 17-05. Staff recommends the contract be awarded to the lowest responsible bidder, SpectraTurf, and that \$3,800 in project funds be authorized for contingency purposes.

RECOMMENDATION

That the City Council:

- (1) Adopt the plans, specifications, and working details for the subject project.
- (2) Award a contract for “Resilient Surfacing Replacement at Mayfair Tot Play Area”, Public Works Contract 17-05, in the amount of \$38,633.12, to SpectraTurf, and authorize the Mayor to sign the contract in a form approved by the City Attorney.
- (3) Authorize staff to approve a cumulative total of change orders for the resilient surfacing replacement as necessary not to exceed \$3,800.

Lisa Ann Rapp
Director of Public Works



Thaddeus McCormack
City Manager



**D
I
V
I
D
E
R
S
H
E
E
T**

COUNCIL AGENDA
September 12, 2017

TO: The Honorable Mayor and City Council

SUBJECT: Purchase of Two DASH Buses

INTRODUCTION

The Director of Public Works and the Director of Recreation and Community Services have determined and approved to order two 16 passenger buses for the DASH Transit by utilizing available Prop A funds to purchase the vehicles. These buses will replace two old DASH buses, which were acquired in 2004.

STATEMENT OF FACT

The Fleet Manager has identified the El Dorado-Aerotech Class C (Ford E450) equipped with necessary hardware as the appropriate vehicle.

The Fleet Manager obtained a proposal on these vehicles from Creative Bus Sales. Creative Bus Sales was founded in 1980 and it is the nation's largest bus dealership. It is also our vendor of the current DASH buses and has provided excellent service for many years.

Creative Bus Sales can supply the El Dorado buses through the CalACT/MBTA Purchasing Cooperative Contract. CalAct is the largest state transit association in the United States. It has more than 300 members including large and small transit and paratransit operators, social service organizations, government agencies & commercial vendors. As a member of CalAct, the City has access to purchase a variety of transit vehicles from the aforementioned purchasing contract.

The total amount from Creative Bus Sales for the two El Dorado-Aerotech buses with all options, taxes, and fees is \$169,822.49.

Our Purchasing Policy authorizes the purchase through any governmental entity that substantially adheres to our procedures for the purchase of supplies and equipment.

The Fiscal Year 2017-2018 Adopted Budget includes the use of Prop A funds for the purchase of the buses.

STAFF RECOMMENDATION

That the City Council hold a public hearing and authorize the purchase of two El Dorado-Aerotech buses at a contract price of \$169,822.49 from Creative Bus Sales of Chino, CA by utilizing Prop A Funds.


for Diane Perkin
Director of Administrative Services


Thaddeus McCormack
City Manager

**D
I
V
I
D
E
R
S
H
E
E
T**

COUNCIL AGENDA

September 12, 2017

TO: The Honorable Mayor and City Council

SUBJECT: First Amendment to Subrecipient Agreement between the City of Lakewood and the Los Angeles Gateway Region Integrated Regional Water Management Joint Powers Authority

INTRODUCTION

On December 9, 2014, the City Council approved a Subrecipient Agreement between participating members of the Gateway JPA and the Bureau of Reclamation (BOR) for the installation of advanced meters throughout the region. There has been a revision to the Agreement that staff is bringing before the City Council for approval.

STATEMENT OF FACT

Gateway Region Integrated Water Management Authority (GWMA) entered into a Grant Agreement dated September 24, 2014 with the United States of America, acting through the Department of Interior, Bureau of Reclamation (BOR), by which GWMA received One Million Dollars (\$1,000,000.00) for the Gateway Regional Advanced Metering Infrastructure Project to assist the Cities of Lakewood, Vernon, Downey, South Gate, Signal Hill, Whittier, Pico Rivera, Norwalk and Bellflower to improve regional water management practices by converting a total of 6,263 antiquated meters within their jurisdictions to smart meters with advanced reading technology capabilities.

On December 9, 2014, the City Council approved a Subrecipient Agreement with GWMA for Eighty Thousand Eight Hundred Forty Eight Dollars (\$80,848) to convert 251 meters into smart meters. The installation of the 251 smart meters is complete and the City has received reimbursements totaling \$32,462. However, since approval of the Agreement, the City of Vernon withdrew from the grant project and GWMA requested if any other signatories to the Subrecipient Agreement would be interested in installing all or a portion of Vernon's smart meters. The cities of Norwalk – 219 meters, South Gate – 218 meters, and Lakewood – 75 meters agreed to divvy up Vernon's 512 smart meters. By submitting documentation for 75 smart meters already installed during this grant cycle, Lakewood will receive reimbursement for \$26,200.

FISCAL IMPACT

By submitting documentation for 75 smart meters already installed during this grant cycle, the City will receive a reimbursement for \$26,200.

RECOMMENDATION

Staff recommends that the City Council approve the First Amendment to Subrecipient Agreement between the City of Lakewood and the Los Angeles Gateway Region Integrated Regional Water Management Joint Powers Authority and authorize the Mayor to sign on behalf of the City in a form approved by the City Attorney.

Jason J. Wen, Ph.D., P.E.
Water Resources Director



Thaddeus McCormack
City Manager



**D
I
V
I
D
E
R
S
H
E
E
T**

COUNCIL AGENDA

September 12, 2017

TO: The Honorable Mayor and City Council

SUBJECT: Approval of Submittal of Outdoor Environmental Education Facilities (OEEF) Grant Program

INTRODUCTION

For the City Council to consider a Resolution for submittal of an Outdoor Environmental Education Facilities (OEEF) Grant application to build a California Native Outdoor Education Center in front of the Department of Water Resources office at 5812 Arbor Road.

STATEMENT OF FACT

The City of Lakewood is requesting a \$310,000 grant from the California Clean Water, Clean Air, Safe Neighborhood Parks, and Coastal Protection Act of 2002 to display innovative concepts in water reuse, energy sustainability, and low water use landscaping, which will educate homeowners, businesses, as well as water agencies how to best utilize existing water reuse techniques to irrigate landscaping. Should the State award grant funds to the City for the California Native Outdoor Education Center, staff proposes to appropriate \$35,000 in matching funds.

FISCAL IMPACT

Should the City receive \$310,000 in OEEF program funding, \$35,000 will need to be appropriated to the Department of Water Resources Capital Improvement budget as matching funds.

RECOMMENDATION

Staff recommends that the City Council:

1. Adopt Resolution titled “RESOLUTION OF THE CITY OF LAKEWOOD APPROVING THE APPLICATION FOR OUTDOOR ENVIRONMENTAL EDUCATION FACILITIES GRANT FUNDS” and
2. Upon the grant funding, authorize staff to appropriate \$345,000 to the Capital Improvement Budget of which \$310,000 would be reimbursed.

Jason J. Wen, Ph.D., P.E.
Water Resources Director



Thaddeus McCormack
City Manager



RESOLUTION NO. 2017-51

RESOLUTION OF THE CITY OF LAKEWOOD APPROVING
THE APPLICATION FOR OUTDOOR ENVIRONMENTAL
EDUCATION FACILITIES GRANT FUNDS

WHEREAS, the State Department of Parks and Recreation has been delegated the responsibility by the Legislature of the State of California for the administration of the Outdoor Environmental Education Facilities Grant Program, setting up necessary procedures governing the application; and

WHEREAS, said procedures established by the State Department of Parks and Recreation require the Applicant to certify by resolution the approval of the application before submission of said application to the State; and

WHEREAS, successful Applicants will enter into a contract with the State of California to complete the Grant Scope project;

NOW, THEREFORE, BE IT RESOLVED that the City of Lakewood hereby approves the filing of an application for the Water Quality Improvements Irrigated with Air Conditioning Condensation; and

1. Certifies that said Applicant has or will have available, prior to commencement of any work on the project included in this application, the sufficient funds to complete the project; and
2. Certifies that if the project is awarded, the Applicant has or will have sufficient funds to operate and maintain the project, and
3. Certifies that the Applicant has reviewed, understands, and agrees to the General Provisions contained in the contract shown in the Grant Administration Guide; and
4. Delegates the authority to the Director of Water Resources to conduct all negotiations, sign and submit all documents, including, but not limited to applications, agreements, amendments, and payment requests, which may be necessary for the completion of the Grant Scope; and
5. Agrees to comply with all applicable federal, state and local laws, ordinances, rules, regulations and guidelines.

Adopted and approved this 12th day of September, 2017.

Mayor

ATTEST:

City Clerk

**D
I
V
I
D
E
R
S
H
E
E
T**

COUNCIL AGENDA
September 12, 2017

TO: Honorable Mayor and Members of the City Council

SUBJECT: CDBG Program Public Hearing on the Consolidated Annual Performance and Evaluation Report (CAPER) Fiscal Year 2016-2017

INTRODUCTION

Community Development Block Grant (CDBG) regulations require grantees, such as the City, to prepare an annual performance report. This report is called the Consolidated Annual Performance and Evaluation Report (CAPER) and is required to be submitted to the U.S. Department of Housing and Urban Development (HUD) no later than 90 days after the close of the grantee's program year. This annual report summarizes a grantee's accomplishments during the previous program year and it is used by HUD to: 1) Provide the necessary information required by HUD to assess each grantee's ability to carry out its programs in compliance with applicable regulations and requirements; 2) Provide information necessary for HUD to report to Congress; and 3) Provide the grantee with an opportunity to describe its program achievements with its citizens.

STATEMENT OF FACTS

The CAPER includes a summary of Lakewood's overall progress in meeting local priorities and goals during the program year. The City's CAPER discusses annual and cumulative performance in the context of the five-year strategic goals of the Consolidated Plan and the annual goals of the Action Plan, including the following areas: decent housing, continuum of care, leveraged resources, citizen participation, and other actions. This year-end report lists the City's efforts in furthering fair housing and information on program requirements such as monitoring, displacement and/or relocation, anti-poverty strategies, and supplemental information such as a financial summary. It also includes a self-evaluation, which describes the City's accomplishments and identifies any changes necessary to meet the listed goals and strategies.

The CDBG accomplishments for FY 2016-2017 are summarized as follows:

1. Public Services –unduplicated participants served:
 - Meals on Wheels - 109 individuals
 - Community Family Guidance - 63 individuals
 - Pathways Volunteer Hospice - 32 individuals
 - Human Services Association - 117 individuals
 - Fair Housing - 348 individuals

2. Single Family Rehabilitation Loan Program – During FY 2016-2017, a total of ten loans were approved and funded with Lakewood Housing Successor Agency funds.

3. Fix-Up Paint-Up Grant Program - During FY 2016-2017, a total of six grants were approved and funded via Lakewood Successor Agency funds.
4. Community Conservation – During FY 2016-2017 Code Enforcement responded to 1,278 service requests. Of the 1,278 requests, 324 were located within CDBG eligible areas.

The Citizen Participation Plan requires that the City conduct a public hearing for the purpose of reviewing program performance and progress through the submission of the CAPER for public review. A 15-day comment period began on August 24, 2017 to allow citizens to review the CAPER and submit written comments to the Community Development Director no later than September 12, 2017. The Comment period concludes on September 12, 2017 with a public hearing held before City Council. Any comments received will be submitted in conjunction with the CAPER, which is due to the local HUD office no later than September 28, 2017.

SUMMARY

The CAPER provides a summary of the accomplishments of the CDBG Program, both programmatic and financial, for the 2016 Fiscal Year (July 1, 2016 through June 30, 2017). The CAPER also summarizes how the City of Lakewood met its priority needs and goals as outlined in the Annual Action Plan. As required by Code of Federal Regulations (24 CFR Part 91.105), a Public Hearing must be held to give Lakewood's citizens an opportunity to comment on this report.

STAFF RECOMMENDATION

It is recommended that the City Council hold a public hearing to solicit citizen comments on the City's Consolidated Annual Performance and Evaluation Report for fiscal year July 1, 2016 through June 30, 2017, and following the hearing, direct staff to take into consideration all comments received on the CAPER and submit those comments, if any, to the local HUD office.

Sonia Dias Southwell, AICP 
Director of Community Development

Thaddeus McCormack 
City Manager



**CITY OF LAKEWOOD
CONSOLIDATED ANNUAL
PERFORMANCE AND
EVALUATION REPORT**

FOR THE

**COMMUNITY DEVELOPMENT
BLOCK GRANT PROGRAM**

JULY 1, 2016 - JUNE 30, 2017

**Prepared by the City of Lakewood
Community Development Department**

City Lakewood

FY 2016-2017 CAPER

TABLE OF CONTENTS

CR-05 Goals and Outcomes1
CR-10 Racial and Ethnic Composition of Families Assisted4
CR-15 Resources and Investments5
CR-20 Affordable Housing7
CR-25 Homeless and Other Special Needs9
CR-30 Public Housing12
CR-35 Other Actions.....13
CR-40 Monitoring.....17
CR-45 CDBG19
Narrative Concerning Use of CDBG Funds.....20
Map of CDBG Eligible Areas21

Appendix A

List of Homeless Shelters in Nearby Gateway Cities

Appendix B

Code Enforcement Summary Report
Summary of Consolidated Plan Projects
CDBG Activity Summary Report
CDBG Financial Summary Report
Published Notice

CR-05 - Goals and Outcomes

Progress the jurisdiction has made in carrying out its strategic plan and its action plan. 91.520(a)

This could be an overview that includes major initiatives and highlights that were proposed and executed throughout the program year.

The Fiscal Year (FY) 2016-2017 Consolidated Annual Performance Evaluation Report (CAPER) captures the expenditures, accomplishments, and progress made on the strategies and goals outlined in the approved FY 2015-2019 Consolidated Plan (Con Plan).

The CAPER outlines achievements in Housing Preservation and Improvement, Housing Development, Equal Housing Opportunity, Community Facilities and Infrastructure, and Community Services.

The FY 2016-2017 CAPER covers the time period starting July 1, 2016 to June 30, 2017 and is the second annual report for the FY 2015-2019 Con Plan.

The Con Plan included the following high priority goals that are the basis for the activities previously approved in the FY 2016-2017 Action Plan.

PRIORITY 1: Provide Housing Preservation and Improvement

PRIORITY 2: Provide for Housing Development

PRIORITY 3: Provide Housing Assistance

PRIORITY 4: Encourage Equal Housing Opportunity

PRIORITY 5: Improve and Provide Public and Community Facilities and Make Necessary Infrastructure Improvements to Serve Low and Moderate Income Persons

PRIORITY 6: Provide Needed Community Services for Low and Moderate Income Persons and Special Needs Groups

PRIORITY 7: Provide Assistance to the Continuum of Care

PRIORITY 8: Provide for the Economic Development Needs of the Community

CAPER

1

Comparison of the proposed versus actual outcomes for each outcome measure submitted with the consolidated plan and explain, if applicable, why progress was not made toward meeting goals and objectives. 91.520(g)

Categories, priority levels, funding sources and amounts, outcomes/objectives, goal outcome indicators, units of measure, targets, actual outcomes/outputs, and percentage completed for each of the grantee's program year goals.

Goal	Category	Source / Amount	Indicator	Unit of Measure	Expected - Strategic Plan	Actual - Strategic Plan	Percent Complete	Expected - Program Year	Actual - Program Year	Percent Complete
Equal Housing Opportunity	Non-Homeless Special Needs	CDBG \$35,240	Public service activities for Low/Moderate Income Housing Benefit	Households Assisted	1250	498	39.84%	250	234	93.60%
Housing Development		Private	Homeowner Housing Added	Household Housing Unit	0	0		0	0	
Housing Preservation and Improvement	Affordable Housing	Housing Successor Agency Loan Paybacks	Homeowner Housing Rehabilitated	Household Housing Unit	80	29	36.25%	16	15	93.75%
Housing Preservation and Improvement	Affordable Housing	CDBG \$48,586.27 General Fund	Housing Code Enforcement/Foreclosed Property Care	Household Housing Unit	2500	1052	42.08%	500	324	64.80%
Provide Community Services	Non-Housing Community Development	CDBG	Public service activities other than Low/Moderate Income Housing Benefit	Persons Assisted	0	62		0	27	

Provide Community Services	Non-Housing Community Development	CDBG \$34,000	Public service activities for Low/Moderate Income Housing Benefit	Households Assisted	2500	818	32.72%	189	321	155.56%
----------------------------	-----------------------------------	---------------	---	---------------------	------	-----	--------	-----	-----	---------

Table 1 - Accomplishments – Program Year & Strategic Plan to Date

Assess how the jurisdiction’s use of funds, particularly CDBG, addresses the priorities and specific objectives identified in the plan, giving special attention to the highest priority activities identified.

The City of Lakewood’s Con Plan goals are used as the basis for the budgetary principals that were outlined in the Con Plan. During FY 2016-2017, the City was awarded \$529,085 in CDBG funds, received \$67,804 in program income, \$595,000 entitlement/capital carryover and \$65,544 in unexpended CDBG funds at the end of the program year for a total of \$1,257,433. During FY 2016-2017, the City spent a total of \$414,177.84 in CDBG expenditures including \$95,395.92 on Community Facilities and Infrastructure, \$96,659.25 on Rehabilitation Delivery Costs, \$104,296.39 on Program Administration, \$69,240.00 in Public Service, and \$48,586.27 for Code Enforcement.

CR-10 - Racial and Ethnic composition of families assisted

Describe the families assisted (including the racial and ethnic status of families assisted).

91.520(a)

	CDBG
White	280
Black or African American	98
Asian	33
American Indian or American Native	6
Native Hawaiian or Other Pacific Islander	2
Other/ Multi-Racial	136
Total	555
Hispanic	169
Not Hispanic	386

Table 2 – Table of assistance to racial and ethnic populations by source of funds

Narrative

The City of Lakewood and its subrecipients served 555 individuals and 504 households during FY 2016-2017. The subrecipients include Meals on Wheels, Community Family Guidance, Human Services Association, Pathways Volunteer Hospice, and Fair Housing.

There are 10 different categories used to define race and 4 different categories to define ethnicity. Race includes White (280), Black or African American (93), Asian (28), Multi-Racial (136), American Indian or American Native (3), Asian & White (5), American Indian & White (2), American Indian & Black (1), Black & White (5), and Native Hawaiian or other Pacific Islander (2). Ethnicity includes Hispanic (99), Puerto Rican (2), Mexican/Chicano (67), and Cuban (1). When calculating hispanic, staff included all categories of ethnicity for a total of 169 hispanic residents assisted.

Through the City of Lakewood's Single-Family Residential Loan and Grant Programs, 15 low-moderate income families received assistance in rehabilitating their homes. The City does not require the applicant to identify race or ethnicity.

CR-15 - Resources and Investments 91.520(a)

Identify the resources made available

Source of Funds	Source	Resources Made Available	Amount Expended During Program Year
CDBG	CDBG	1,257,433	414,177
HOME	HOME		
HOPWA	HOPWA		
ESG	ESG		
Other	Other		

Table 3 - Resources Made Available

Narrative

The CDBG resources available in FY 2016-2017 include program income received and carryover funds. During FY 2016-2017, the City of Lakewood expended \$414,177.84 on CDBG eligible programs and administrative activities. The remainder of resources will be carried over to FY 2017-2018.

Identify the geographic distribution and location of investments

Target Area	Planned Percentage of Allocation	Actual Percentage of Allocation	Narrative Description
5550.01	16	16	
5550.02	16	16	
5551.02	16	16	
5551.03	16	16	
5707.01	16	16	
5707.02	16	16	

Table 4 – Identify the geographic distribution and location of investments

Narrative

The City's housing programs were advertised and made available throughout the City during FY 2016-2017 to assist in the reduction of concentration of low income persons. The program was not directed to one geographical area but to extremely low to moderate income (0 to 120% of the County MFI) persons and families. The City continues to promote a balanced and integrated community and is committed to providing assistance throughout the City.

The only exception to this policy is that some activities (Code Enforcement, Public Facilities and Street Improvements) are limited to low to moderate income census tracts, which are known as area benefit activities. An area benefit activity is an activity that meets the identified needs of low income persons residing in an area where at least 51 percent of the residents (or less if the exception criteria are applicable) are low income persons. During FY 2016-2017, an area where at least 44.51 percent of the residents are low to moderate income persons is considered an area where the exception criteria is applied. The benefits of the activity are available to everyone in that area despite their income. A map of these low to moderate income census tracts is included in the CAPER. The City has traditionally used

80 percent or more of its CDBG resources to benefit special areas and to operate programs available exclusively to low and moderate income people (whereas HUD regulations only require a minimum 70 percent low and moderate benefit for CDBG activities). To achieve this high ratio of low and moderate benefit for its CDBG resources and the compelling need to assist these areas, the City utilized CDBG resources within low to moderate income census tracts areas. The allocation of funds is evenly distributed to the targeted census tracts.

Leveraging

Explain how federal funds leveraged additional resources (private, state and local funds), including a description of how matching requirements were satisfied, as well as how any publicly owned land or property located within the jurisdiction that were used to address the needs identified in the plan

While the City does not leverage additional funds, the City offers an annual Neighborhood Clean-Up Program that is operated through the City's Code Enforcement program. The program provides assistance to tenants and property owners in disposing of unsightly and unwanted debris in neighborhoods identified as needing assistance. Each year a total of six clean-up events are scheduled and each event has three or more roll-off bins available to residents in the vicinity of the bin. Neighborhood residents are notified of the event date and community volunteer assistance is provided. A private waste disposal company donated the bins for this FY 16-17 event saving the City \$8,761.50 in rental fees.

CR-20 - Affordable Housing 91.520(b)

Evaluation of the jurisdiction's progress in providing affordable housing, including the number and types of families served, the number of extremely low-income, low-income, moderate-income, and middle-income persons served.

	One-Year Goal	Actual
Number of Homeless households to be provided affordable housing units	15	3
Number of Non-Homeless households to be provided affordable housing units	370	370
Number of Special-Needs households to be provided affordable housing units	157	157
Total	542	530

Table 5 – Number of Households

	One-Year Goal	Actual
Number of households supported through Rental Assistance	216	234
Number of households supported through The Production of New Units	0	0
Number of households supported through Rehab of Existing Units	16	15
Number of households supported through Acquisition of Existing Units	0	0
Total	232	249

Table 6 – Number of Households Supported

Discuss the difference between goals and outcomes and problems encountered in meeting these goals.

The one year goal of 15 for the Number of Homeless households to be provided affordable housing units was derived from the FY 2016-2017 Action Plan where the goal asked “One Year Goals for the Number of Households to be Supported”. Staff responded to the goal with 15 homeless to be supported as the Burns Center staff provide support services to the homeless.

Discuss how these outcomes will impact future annual action plans.

In future Action Plans, staff will answer accordingly to projected number of homeless households being provided housing units.

Include the number of extremely low-income, low-income, and moderate-income persons served by each activity where information on income by family size is required to determine the eligibility of the activity.

Number of Households Served	CDBG Actual	HOME Actual
Extremely Low-income	1	0
Low-income	12	0
Moderate-income	2	0
Total	15	0

Table 7 – Number of Households Served

Narrative Information

Lakewood’s Rehabilitation Loan and Grant Programs require that recipients be low-moderate income residents.

CR-25 - Homeless and Other Special Needs 91.220(d, e); 91.320(d, e); 91.520(c)

Evaluate the jurisdiction's progress in meeting its specific objectives for reducing and ending homelessness through:

Reaching out to homeless persons (especially unsheltered persons) and assessing their individual needs

Services are provided to people experiencing homelessness in Lakewood by PATH and its subcontract with the City of Long Beach's Department of Health and Human Services. Services begin with outreach and continue up to one year after a person is permanently housed. An outreach worker (Lakewood Sheriff) and case manager provide services to Lakewood. Activities in the outreach phase are focused on assessing basic needs (clothing, hygiene products, showers and transportation). Outreach can include assistance obtaining documents necessary for housing i.e., social security card, identification, DD214, proof of income and disability verification. Outreach also includes emergency and temporary housing, liaison and referral to subsidy providers, access to medical and mental health and substance abuse treatment services and primary care home establishment i.e. Department of Mental Health, Veterans Administration, and federally qualified health centers located in the SPA, Benefit establishment assistance for General Relief, Social Security programs, Temporary Assistance to Needy Families, and Veteran's Administration, referral to employment and education services i.e. Goodwill Industries and local centers of the Workforce Investment Board, housing location and re-location assistance.

Once a person is permanently housed retention services can continue up to one year and include household set up assistance, case management including prevention assistance to maintain housing, home visits and linkage to mainstream support services. See attached table, PATH Homeless Service Counts for the City of Lakewood FY 2016-2017, for number of homeless persons assisted in the City of Lakewood during FY 2016-2017.

Addressing the emergency shelter and transitional housing needs of homeless persons

The City coordinated efforts to provide information and resources for transitional housing through the PATH. PATH was responsible for placing four homeless persons in emergency shelters and providing one hotel voucher during FY 2016-2017.

A 2011 study by LAHSA shows that there are 8,359 transitional housing beds available in Los Angeles County. The City worked with community non-profit groups and community based organizations interested in providing transitional housing services to the homeless. In addition to assisting in providing emergency shelter and transitional housing, the City provided support services such as job training and counseling. The County of Los Angeles also offers an array of work training programs, housing placement assistance, and other support resources.

Another form of transitional housing in the City is Adult Residential Facilities, Residential Care Facilities for the Elderly, Group Homes and Small Family Homes and is described as follows:

- The City has 16 Adult Residential Facilities that each house up to six adults aged 18-59. The facilities provide 24-hour non-medical care to individuals who may be physically, mentally or

developmentally disabled.

- The City has 10 Residential Care Facilities for the Elderly, which each house up to six persons aged 60 or older. These facilities were accepted as transitional housing by the State Department of Housing and Community Development during the FY 2013-2021 Housing Element update.

The City has one Small Family Home that provides 24-hour care for families with less than six children who are in need of assistance because of a physical, mental or developmental disability.

Helping low-income individuals and families avoid becoming homeless, especially extremely low-income individuals and families and those who are: likely to become homeless after being discharged from publicly funded institutions and systems of care (such as health care facilities, mental health facilities, foster care and other youth facilities, and corrections programs and institutions); and, receiving assistance from public or private agencies that address housing, health, social services, employment, education, or youth needs

Su Casa Family Crisis and Support Center is a private non-profit organization that provides both short term emergency housing and transitional housing in two separate locations in the city.

The short-term emergency housing location allows a maximum stay of 30 days providing supportive services to battered women and their children. At this facility, Su Casa has 20 beds and a shelter capacity of 22 to 24 persons. Their support services include food, shower facilities, laundry facilities, mail drop (the site is used as a mailing address), clothing, childcare, transportation, and intensive individual and group counseling for children.

At the second location, Su Casa provides transitional housing for up to one year in an apartment complex, which facilitates residents' ability to adapt to independent living and break the cycle of abuse. The maximum capacity at this facility is 16 persons and the residents are provided counseling, assistance in seeking jobs, schooling, and assistance with the location of permanent housing. Those persons who are employed while residing in the shelter are charged a small percentage of their income, which is saved in an escrow account and used for the costs associated with securing permanent housing.

Admittance to the program is strictly on a referral basis. The City provided funding for the purchase of the Transitional Housing Facility and has secured the transitional shelter with affordable housing covenants, which will expire in December 2025.

Helping homeless persons (especially chronically homeless individuals and families, families with children, veterans and their families, and unaccompanied youth) make the transition to permanent housing and independent living, including shortening the period of time that individuals and families experience homelessness, facilitating access for homeless individuals and families to affordable housing units, and preventing individuals and families who were recently homeless from becoming homeless again

The Burns center staff assisted 47 homeless individuals during FY 2016-2017. Support services included emergency food, referrals to qualified social service providers, and transportation to their facilities, and

use of the telephone when persons are calling for assistance.

During FY 2016-2017, the Housing Specialist and Neighborhood Preservation Manager attended SPA 7 meetings to discuss strategies for assisting the homeless. Additionally, the Housing Specialist and Neighborhood Preservation Manager met quarterly with PATH during FY 2016-2017 to discuss strategies for assisting the homeless.

During FY 2016-2017, LAHSA partnered with the Los Angeles public library to provide services to the homeless. Homeless services include shelter, motel vouchers, bus tokens, and direct connections to various providers that address mental and physical health needs and issues with substance abuse. The program also connects the homeless with the Veterans Administration and other agencies.

Although Lakewood does not directly provide affordable housing, the City is in possession of nine vacant parcels remaining from the Successor Agency that are reserved to be developed with affordable housing using private funding. The City maintains nine parcels with the intention to partner with a private developer to develop affordable housing.

PATH Homeless Service Counts for the City of Lakewood FY 2016-2017

MONTH / YEAR	July 2016	Aug 2016	Sept 2016	Oct 2016	Nov 2016	Dec 2016	Jan 2017	Feb 2017	Mar 2017	April 2017	May 2017	June 2017	TOTAL YTD
No. of Contacts	11	17	13	13	24	27	19	37	39	19	30	45	294
No. Served (Unduplicated)	2	3	1	1	24	5	2	1	3	1	2	23	68
No. Served (Duplicated)	6	4	8	1	2	3	3	5	6	4	11	45	98
No. Received Case Management	2	4	2	1	2	5	3	6	3	4	7	12	51
No. Assessed at Hot Spots	10	19	4	11	22	24	16	31	27	10	10	15	199
No. Connected to Substance Abuse Services	0	0	0	0	0	1	0	0	0	1	1	1	4
No. Connected to Employment Services	0	0	0	0	0	1	0	0	0	0	0	0	1
No. Connected to Mental Health Services	2	1	0	0	0	0	1	0	1	0	2	1	8

No. Connected to Medical Services	1	2	0	0	0	0	3	0	2	0	2	2	2	0	12
No. Connected to HIV/AIDS Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. Connected to Life Skills / Personal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. Connected to Mainstream Benefits	1	2	0	0	0	3	1	1	2	2	2	2	2	1	13
No. Connected to Education Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. Connected to Veterans Benefits	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No. Connected to Criminal Justice/Legal	0	0	0	0	0	0	0	0	0	1	1	1	0	0	2
No. Placed in Emergency Shelter	0	0	0	0	0	0	2	0	0	0	0	0	2	0	4

CR-30 - Public Housing 91.220(h); 91.320(j)

Actions taken to address the needs of public housing

There are no public housing developments in the City; therefore, funding for FY 2016-2017 does not apply to this section.

Actions taken to encourage public housing residents to become more involved in management and participate in homeownership

There are no public housing developments in the City; therefore, funding for FY 2016-2017 does not apply to this section.

Actions taken to provide assistance to troubled PHAs

There are no public housing developments in the City; therefore, funding for FY 2016-2017 does not apply to this section.

CR-35 - Other Actions 91.220(j)-(k); 91.320(i)-(j)

Actions taken to remove or ameliorate the negative effects of public policies that serve as barriers to affordable housing such as land use controls, tax policies affecting land, zoning ordinances, building codes, fees and charges, growth limitations, and policies affecting the return on residential investment. 91.220 (j); 91.320 (i)

The City is committed to addressing the negative effects of public policies over which it has control. In order to promote integration and prevent low income concentrations, the City has designed its affordable housing programs to be available Citywide. This priority also serves to make sure that the City does not have any policies, rules, or regulations that would lead to minority or racial concentrations.

Since 1989, Lakewood has demonstrated a willingness to encourage housing development of all types. It has approved several zone changes to allow the construction of housing including General Commercial (C-4) to Multiple Family Residential (M-F-R) to allow for the building of a 201-unit senior citizen apartment complex in 1989, Light Manufacturing (M-1) to Planned Development Single Family (PDSF), to allow for the building of 184 single family residences in 1994, Open Space (O-S) to MFR, to allow for the building of a 85-unit senior citizen apartment complex in 1996, C-4 to MFR, to allow for the conversion of the Cloud Motel into apartments in 1999, Intermediate Commercial (C-3) to PDSF to allow for a 20 unit single-family residential project in 2003, C-4 to M-F-R in 2014 to allow an existing apartment complex to expand by adding 22 additional apartments, O-S to M-F-R to allow a three-unit condominium project in 2015, and Code amendments to allow for development of a variety of housing types, including those that benefit low and moderate income people. The City makes an effort to fast track projects and process permits in a timely manner. The City intends to maintain its current posture of openness and willingness to consider new ideas and eliminate any regulatory barriers under its control in the provision of a variety of housing to meet the needs of all income groups.

The City has worked cooperatively within existing legislatively mandated constraints to develop and encourage public policies that foster affordable housing development and assistance.

Actions taken to address obstacles to meeting underserved needs. 91.220(k); 91.320(j)

A major obstacle to meeting the needs of the community is funding. Over the years, community partnerships with county, state, and federal agencies have been integral to meeting the needs of the underserved community. During the FY 2016-2017 program year, the City continued these relationships to ensure that the needs of the community are adequately fulfilled.

The City promoted its housing and community service programs in all areas of the City to ensure all low and moderate income households received notifications of services provided by the City and to address the continuing needs of the underserved population. The City used the Chamber of Commerce, local newspaper, City newsletter, and community events to promote these services. The City, in conjunction with, the Los Angeles County Housing Authority and the Los Angeles County Community Development Department, provided the following services for low and moderate income Renter Households and Owner-occupied Households:

- Referrals for mortgage assistance programs

- Coordination with neighborhood networks to elaborate on the needs of the community
- Code enforcement
- Home Improvement Programs
- Infrastructure improvements
- Provision of Fair Housing Services

Actions taken to reduce lead-based paint hazards. 91.220(k); 91.320(j)

No specific actions concerning lead-based paint was taken for FY 2016-2017. To reduce lead-base paint hazards in Lakewood, the City disseminates information and monitors the lead-poisoning data provided by Los Angeles County. In addition, the City’s Residential Rehabilitation Program provides funding to low and moderate income households in making necessary improvements and correct code violations.

Actions taken to reduce the number of poverty-level families. 91.220(k); 91.320(j)

According to the 2009-2013 American Community Survey (ACS) 5-Year Estimates, it is estimated that approximately 8.1% of the City’s population were living below the poverty level. This includes 5.2% in families and 12.1% in female head of household. Lakewood’s rate of poverty is significantly lower, when compared to the 17.8% in Los Angeles County and 15.4% in the nation overall.

The County’s Department of Public and Social Services administers various programs that provide cash aid and other benefits and services to individuals and families in need. These programs are designed to alleviate hardship and promote family health, personal responsibility, and economic independence. According to the County, the majority of persons who seek these programs are primarily in need of medical assistance and in-home support services.

A fundamental way to reduce poverty is through job creation and enhancement. There are a number of local, state, and federal programs that focus on job creation and retention. The most notable is the State of California’s welfare reform plan, known as CalWORKS. CalWORKS is designed to move welfare recipients from dependency to self-sufficiency through employment, and to divert potential recipients from dependency. Job related education and training are provided through the County of Los Angeles, Department of Public and Social Services, as well as the State of California.

During FY 2016-2017, the City’s Recreation and Community Services Department referred persons to the County anti-poverty programs described above. In addition, the City coordinated efforts with public and private organizations providing economic development and job training opportunities. Some of these are summarized as follows:

- Southeast Los Angeles County Workforce Investment Board
- California Trade and Commerce Agency-Team California
- California Employment Development Department
- Los Angeles County ROP

The City fostered employment growth through the expansion and rehabilitation of commercial centers located throughout the City. The new and improved commercial centers enhance the economic vitality of the City and work to attract and retain employment opportunities for Lakewood’s residents.

Actions taken to develop institutional structure. 91.220(k); 91.320(j)

The institutions involved in carrying out the aforesaid Priority actions include the Lakewood Community Development Department, the Housing Authority of the County of Los Angeles, Successor Agency, and private sector owners of rental property. The City, for its part, will promote and encourage fair housing, housing assistance and single-family home rehabilitation through:

- Continued utilization of the services of a Fair Housing Contractor or organization to promote, educate and enforce fair housing in the community.
- Continued use of the Los Angeles County Housing Authority to refer residents who are interested in receiving affordable housing assistance.

Continued use of Successor Agency funds to assist low income homeowners in rehabilitating their homes and in eliminating substandard conditions. The City will continue to encourage the Single Family Residential Rehabilitation Loan and Grant Programs by advertising the programs in a variety of ways.

Actions taken to enhance coordination between public and private housing and social service agencies. 91.220(k); 91.320(j)

In FY 2016-2017, the City's housing programs are limited by resources to Housing Rehabilitation and Fair Housing.

The Single Family Residential Rehabilitation Loan and Fix-Up Paint-Up Grant Program are funded with Housing Successor Agency Loan Payback funds. The Section 8 Housing Program is federally funded and is administered entirely by HACOLA. Lakewood's Fair Housing Consultant to referred 99 residents who are interested in affordable housing to contact HACOLA.

Identify actions taken to overcome the effects of any impediments identified in the jurisdictions analysis of impediments to fair housing choice. 91.520(a)

For the fiscal year FY 2016-2017, the City, along with the Fair Housing Consultant, affirmatively furthered fair housing and addressed impediments to fair housing by:

1. Held quarterly workshops for tenants and landlords to educate them on their rights and responsibilities.
2. Provided Public Education publications in both English and Spanish outlining the objectives and services of the Fair Housing Program. Information was made available at City Hall and was distributed to community organizations.
3. Provided five speaking engagements to Lakewood audiences who want to learn about the Fair Housing Program goals and services.
4. Provided referral assistance to 80 low and moderate income housing consumers, especially those who are disabled, members of minority groups, the senior, and those who have been unable to find decent, safe, and sanitary housing.

5. Attended the City of Lakewood's Safety Expo to disseminate information regarding Fair Housing services.
6. Attended monthly SPA 7 meetings to discuss homeless services and resources.
7. Attended quarterly PATH meetings held by the City of Long Beach Homeless Services coordinator.

CR-40 - Monitoring 91.220 and 91.230

Describe the standards and procedures used to monitor activities carried out in furtherance of the plan and used to ensure long-term compliance with requirements of the programs involved, including minority business outreach and the comprehensive planning requirements

The Consolidated Plan provides the City with a number of benchmarks for measuring its progress toward the five-year goals. The FY 2016-2017 Action Plan is developed with this progress in mind, with quantifiable objectives and measurable outcomes for each of the proposed activities to adequately assess the City's Housing and Community Development accomplishments.

The City follows the monitoring requirements for the use of federal funds as established by HUD. The Community Development Department tracks the City's progress in implementing all of the strategies outlined in the Consolidated Plan. The lead person responsible for the Consolidated Plan preparation and yearly reporting is the Housing Specialist, under the supervision of the Neighborhood Preservation Manager and Director of Community Development.

Careful evaluation of the housing and public service delivery system can be the most effective tool in detecting gaps and making appropriate modifications. The City notifies all subrecipients that annual monitoring of their agency's day-to-day operations will take place to ensure compliance with all CDBG rules and regulations. The City also coordinates with the Fair Housing Organization in the administration of the Fair Housing Program.

The Department's loan portfolio, including loan administration and servicing functions, is managed and tracked by the Community Development Department. Loans are monitored for compliance and regulatory requirements such as affordability restrictions, occupancy and rent requirements, maintenance requirements, and loan repayments.

In addition to this monitoring, the Community Development Department tracks housing unit production through a housing database, which identifies housing projects from concept to completion. This database provides opportunity for staff to respond to City Council and public inquiries regarding the City's progress toward its Regional Housing Needs Goals.

In September 2003, HUD issued a notice to all entitlement grantees encouraging the development and use of a local performance measurement system. This performance measurement system has two critical components - productivity and program impact. Productivity reflects the level of efficiency (quantity, quality, and pace) and program impact reflects the desired outcomes in the community or in the lives of persons assisted.

The City's performance measurement system, as requested by HUD, is modeled from the City of Los Angeles' Matrix of Goals versus Accomplishments by Priority. The matrix collects an array of data, including priority, activity, funding source and amount spent, strategy, goals, and annual and long-term accomplishments. In addition, a performance indicator for each activity is defined. These performance indicators help the City identify if goals are being met and/or if outcomes are being produced. Generally, the performance indicators relate to people, housing units, public facilities, and jobs.

The required tracking matrix is attached to the City's Consolidated Annual Performance Evaluation Report (CAPER). The matrix yields the following outcomes over a five-year period:

- Improved quality of life for CDBG program participants and low and moderate income persons
- Maintained current property values
- Increased percentage of housing units that are standard
- Increased business sales volume

Citizen Participation Plan 91.105(d); 91.115(d)

Describe the efforts to provide citizens with reasonable notice and an opportunity to comment on performance reports.

On August 24, 2017, a notice was published in the [Press Telegram](#) announcing the public hearing before the Lakewood City Council on September 12, 2017 and announced a 15-day public comment period that will conclude on September 12, 2017. Public hearing notices were also posted in three locations within the City.

The Draft CAPER was available for public review at the following locations:

- Lakewood City Hall, Community Development Department, 5050 Clark Avenue, Lakewood, CA 90712
 - Lakewood City Hall, City Clerk's Office, 5050 Clark Avenue, Lakewood, CA 90712
 - Angelo M. Iacoboni Library, 4990 N. Clark Avenue, Lakewood, CA 90712
- The City welcomed any written recommendations, suggestions, or other input. Any opinions or comments related to the Action Plan were to be addressed to the following person:

Sonia Dias Southwell, AICP
Director of Community Development
City of Lakewood
5050 North Clark Avenue
Lakewood, CA 90712
(562) 866-9771 extension 2301

All comments received during the 15-day comment period will be submitted to City Council for consideration and recommendation prior to being submitted to HUD.

CR-45 - CDBG 91.520(c)

Specify the nature of, and reasons for, any changes in the jurisdiction's program objectives and indications of how the jurisdiction would change its programs as a result of its experiences.

The City of Lakewood will not be changing any of the program objectives as a result of its experiences during FY 2016-2017.

Does this Jurisdiction have any open Brownfields Economic Development Initiative (BEDI) grants?

No

[BEDI grantees] Describe accomplishments and program outcomes during the last year.

REPORTING PERIOD JULY 1, 2016 - JUNE 30, 2017

CDBG	Entitlement \$529,085	Budgeted \$1,257,433	Amount Spent (Expenditure) \$414,177
-------------	----------------------------------	---------------------------------	---

*The actual budgeted amount includes \$765,327 in unexpended funds at the end of the previous program year and \$75,509 in program income.

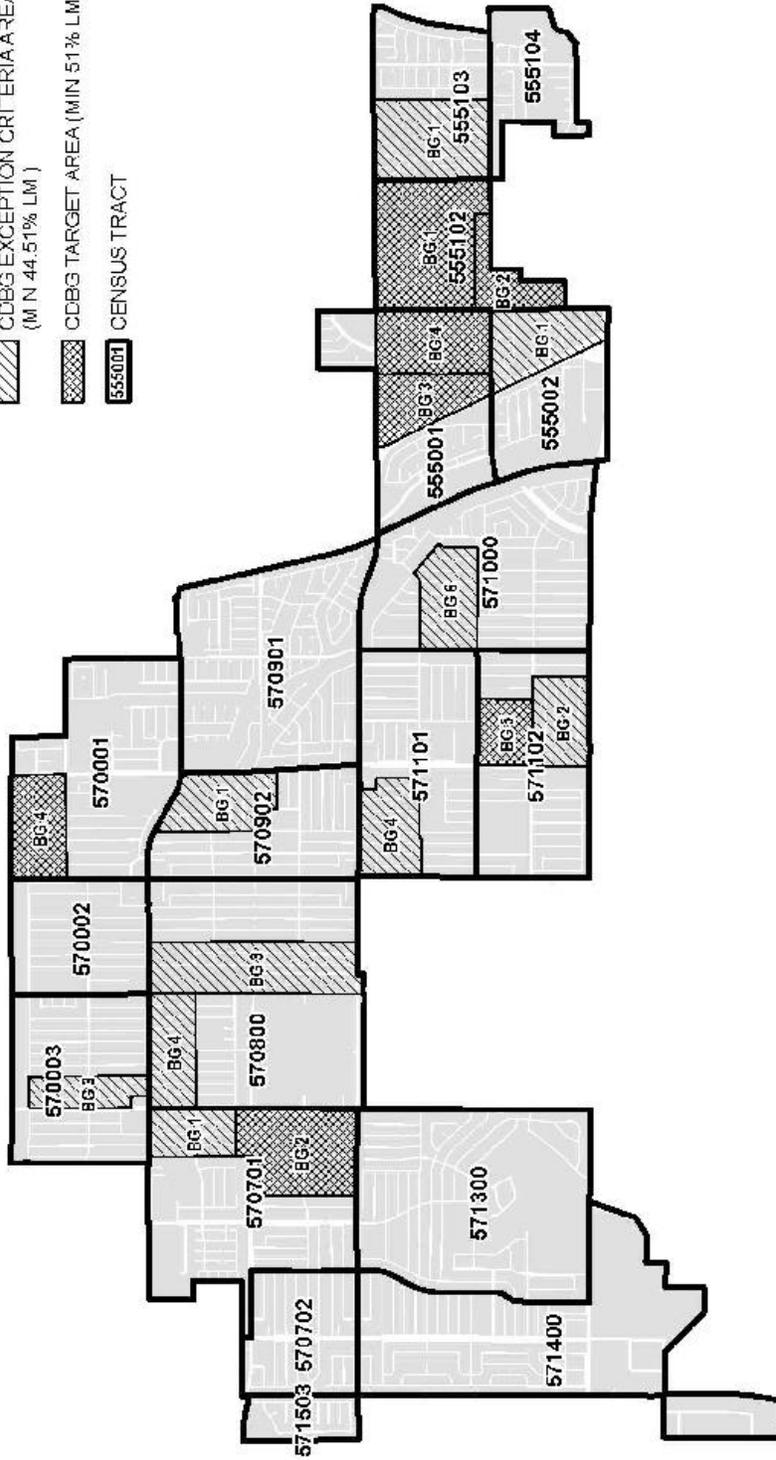
NARRATIVE CONCERNING USE OF CDBG FUNDS:

- a. All CDBG funds except for Planning/Administration were used for activities that benefited low and moderate income persons.
- b. The City carried out its planned actions described in its Action Plan and followed its HUD approved Consolidated Plan. The City pursued all resources it said it would pursue. The City refers interested residents to California Housing Finance Agency program for first time home buyers assistance.
- c. All of the City's entitlement grant funds were used exclusively for one or more of the three national objectives.
- d. The source of program income is repayment of single-family rehabilitation loans. For FY 2016-2017 actual program income received was \$75,509 (\$74,107 program income plus \$1,402 earned interest).

The City will carry over \$955,7742 of FY 2016-2017 funds into FY 2017-2018. These funds have been budgeted for the Burns Center Improvements. The project is expected to be completed during FY 2018-2019.

CDBG ELIGIBLE AREAS

-  CDBG EXCEPTION CRITERIA AREA (MIN 44.51% LMI)
-  CDBG TARGET AREA (MIN 51% LMI)
-  CENSUS TRACT



CAPER FY 2016 - 2017

DATA FROM 2008 2010 AMER CAN COMMUNITY SURVEY
LOW AND MODERATE INCOME (LMI) SUMMARY DATA

APPENDIX A

Homeless Shelters, Transitional Housing and Permanent Housing within nearby Gateway Cities

Homeless Shelters, Transitional Housing and Permanent Housing Within Nearby Gateway Cities

City	Name of Facility & Address	Target Population	# Emerg. Beds	# Trans. Beds	# Perm. Beds
Bell	The Salvation Army Transitional Housing at Bell Shelter 5600 Rickenbacker Rd., Bldg. 1-E	Adults	0	30	0
Bellflower	Southern California Alcohol & Drug Programs, Inc. Angel Step Too Transitional Housing 16314 Cornuta Ave.	Women and Children of Substance Abuse and Domestic Violence	0	36	0
Carson	Peace & Joy Care Center - Emergency Shelter 1693 E. Del Amo Blvd.	Domestic Violence	40	12	0
Compton	Compton Welfare-Rights Organization Shelter for homeless women and children 4513 E. Compton Blvd.	Families	14	0	0
	Peace & Joy Care Center - Naomi's House Confidential site	Domestic Violence	0	15	0
	Peace & Joy Care Center - Raising Hearts, Hopes and Homes Confidential site	Domestic Violence	0	20	0
	The Shields for Families Project, Inc. Shields Transitional Housing 1415 E. Alondra	Families	0	126	0
	Truevine Community Outreach, Inc. Per Diem Shelter 14513 S. Butler St.	Adult Men	0	6	0
Downey	Southern California Alcohol & Drug Programs, Inc. Positive Steps: Day Treatment 11455 Paramount Blvd. #F	HIV/AIDS w/substance abuse addiction.	0	30	0

City	Name of Facility & Address	Target Population	# Emerg. Beds	# Trans. Beds	# Perm. Beds
	Southern California Alcohol & Drug Programs, Inc. Shelter Plus Care 11500 Paramount Blvd.	Substance Abusers	0	0	200
	Southern California Alcohol & Drug Programs, Inc. La Casita Confidential Site	Families - Substance Abuse	0	30	0
Lakewood	Su Casa Family Crisis & Support Center Su Casa Family Crisis & Support Center - 30 Day Shelter Confidential Site	Domestic Violence	22	0	0
	Su Casa Family Crisis & Support Center Su Casa Family Crisis & Support Center - Trans- itional Housing Confidential Site	Domestic Violence	0	24	0
Long Beach	1736 Family Crisis Center Domestic Violence Shelter Confidential Site	Domestic Violence	0	64	0
	1736 Family Crisis Center Transitional Shelter for Adolescents 2240 Willard St.	Youth	0	12	0
	Boys and Girls Town Runaway & Homeless Youth Program 350 W. Wardlow Rd.	Youth	0	0	0
	Catholic Charities of Los Angeles, Inc. Elizabeth Ann Seton Residence 2241 Williams St.	Families	44	0	0
	Disabled Resources Center, Inc. (DRC) Motel Vouchers Program 2750 East Spring St., Ste 100	Disabled	0	0	0
	Homestead Hospice & Shelter Padua House 940 Atlantic Ave.	HIV/AIDS	0	11	0

City	Name of Facility & Address	Target Population	# Emerg. Beds	# Trans. Beds	# Perm. Beds
	Mental Health Association. Homeless Assistance Program 456 Elm Ave.	Mentally Ill	0	0	0
	United States Veterans Initiative, Inc. Villages at Cabrillo 2001 River Ave.	Veterans	102	47	66
	Veterans Affairs Medical Center Health Care for Homeless Veterans 5901 E. 7th Street	Veterans	0	0	0
Lynwood	Missionaries of Charity Queen of Peace Home 10950 California Ave.	Pregnant Women & Teens	12	0	0
Norwalk	Homes for Life Foundation Harvest House 14029 Harvest Ave. Rio Hondo Temporary Home 12300 4th St., Bldg. 213	Mentally Ill	0	8	8
	Southern California Alcohol & Drug Programs, Inc. CIDER House Detox Program 11400 Norwalk Blvd. #211	Families	85	0	0
	Southern California Alcohol & Drug Programs, Inc. CIDER House Primary Care 11400 Norwalk Blvd., Bldg. 209-211, 313	Substance Abusers	25	0	0
	Los Angeles Centers for Alcohol and Drug Abuse Aftercare Project 10425 S. Painter	Substance Abusers	0	75	0
Santa Fe Springs	Southern California Alcohol & Drug Programs, Inc. Positive Steps Mens Transitional Housing 10113 Harvest Ave.	Substance Abusers	0	30	0
	The Salvation Army Santa Fe Springs, Transitional Living Center 12000 E. Washington	HIV/AIDS w/substance abuse addiction. Families	0	6	0
			0	68	0

City	Name of Facility & Address	Target Population	# Emerg. Beds	# Trans. Beds	# Perm. Beds
Whittier	Hospitality House Emergency Shelter 7950 S. Pickering Rd.	Adults	17	0	0
	Southern California Alcohol & Drug Programs, Inc. Awakenings Residential Program 12322 Clearglen Ave.	Disabled - Hearing Impaired	0	14	0
	Whittier Area First Day Coalition Social Services Referral Center 12426 Whittier Blvd.	At-Risk	45	0	0
	Women's and Children's Crisis Shelter Emergency Domestic Violence Shelter Confidential Site (PO Box 404)	Domestic Violence	30	0	0
Total Beds:			406	664	274

**APPENDIX B
ATTACHMENTS**

**CODE ENFORCEMENT SUMMARY
REPORT**

FY 2016-2017 Code Enforcement Cases Within CDBG Eligible Areas

ID	ADDRESS	ID	ADDRESS	ID	ADDRESS
1	12427 Centralia Street	45	20322 Clarkdale Avenue	89	5220 Clark Avenue
2	21211 Haston Place	46	11637 207th Street	90	6133 Eastbrook Avenue
3	20813 Arline Avenue	47	11861 206th Street	91	6648 Turnergrove Avenue
4	6130 Briercrest Avenue	48	11854 206th Street	92	20809 Seine Avenue
5	5608 Pepperwood Avenue	49	4742 Briercrest Avenue	93	5703 McAuley Street
6	20328 Jersey Avenue	50	11644 206th Street	94	20822 Belshire Avenue
7	4838 Bellflower Boulevard	51	20920 Roseton Avenue	95	20822 Belshire Avenue
8	6232 Freckles Road	52	11844 Centralia Street	96	5703 McAuley Street
9	12427 Centralia Street	53	20914 Pioneer Boulevard	97	20304 Jersey Avenue
10	21114 Pioneer Boulevard	54	5227 Lakewood Boulevard	98	5608 Faculty Avenue
11	4902 Coke Avenue	55	5608 Pepperwood Avenue	99	11704 215th Street
12	4832 Dunrobin Avenue	56	4152 Woodruff Avenue	100	12028 Lemming Street
13	21525 Pioneer Boulevard	57	4563 Petaluma Avenue	101	20916 Pioneer Boulevard
14	5622 Castana Avenue	58	20408 Norwalk Boulevard	102	20806 Norwalk Boulevard
15	5622 Castana Avenue	59	20319 Seine Avenue	103	21403 Seeley Place
16	20316 Arline Avenue	60	6103 Carson Street	104	4733 Radnor Avenue
17	11626 206th Street	61	11959 207th Street	105	4733 Radnor Avenue
18	20726 Ely Avenue	62	20408 Clarkdale Avenue	106	20909 Pioneer Boulevard
19	20912 Verne Avenue	63	4863 Dunrobin Avenue	107	20725 Alburtis Avenue
20	4577 Petaluma Avenue	64	6103 Carson Street	108	20725 Alburtis Avenue
21	21404 Seeley Place	65	4863 Dunrobin Avenue	109	5703 McAuley Street
22	20736 Ibex Avenue	66	5738 Castana Avenue	110	20914 Pioneer Boulevard
23	5366 Ocana Avenue	67	20809 Seine Avenue	111	20909 Pioneer Boulevard
24	5728 McAuley Street	68	4906 Coke Avenue	112	20915 Pioneer Boulevard
25	20408 Arline Avenue	69	4912 Coke Avenue	113	11959 207th Street
26	5009 Hayter Avenue	70	4913 Coke Avenue	114	20833 Horst Avenue
27	4912 Barlin Avenue	71	4919 Coke Avenue	115	20315 Arline Avenue
28	3918 Camerino Street	72	20927 Ely Avenue	116	20312 Arline Avenue
29	20736 Claretta Avenue	73	5533 Pearce Avenue	117	5925 Carson Street
30	5366 Ocana Avenue	74	4902 Coke Avenue	118	20725 Alburtis Avenue
31	4647 Ladoga Avenue	75	4903 Coke Avenue	119	20725 Alburtis Avenue
32	20806 Norwalk Boulevard	76	5119 Minturn Avenue	120	5703 McAuley Street
33	6134 Bonfair Avenue	77	5119 Minturn Avenue	121	20914 Pioneer Boulevard
34	20914 Pioneer Boulevard	78	11501 Massinger Street	122	20915 Pioneer Boulevard
35	6107 Carson Street	79	5730 South Street	123	11959 207th Street
36	4949 Lakewood Boulevard	80	4637 Ladoga Avenue	124	20833 Horst Avenue
37	4923 Hayter Avenue	81	20736 Claretta Avenue	125	20312 Arline Avenue
38	5532 Pimenta Avenue	82	11804 Centralia Street	126	5925 Carson Street
39	5406 Ocana Avenue	83	6200 Ibbetson Avenue	127	4112 Camerino Street
40	4532 Palo Verde Avenue	84	4854 Bellflower Boulevard	128	5309 Premiere Avenue
41	5406 Ocana Avenue	85	20701 Roseton Avenue	129	4184 Woodruff Avenue
42	6139 Bonfair Avenue	86	6048 Bonfair Avenue	130	20303 Seine Avenue
43	6139 Bonfair Avenue	87	20524 Alburtis Avenue	131	4333 South Street
44	20736 Ibex Avenue	88	20505 Pioneer Boulevard	132	4186 Woodruff Avenue

ID	ADDRESS	ID	ADDRESS	ID	ADDRESS
133	5436 Oliva Avenue	179	5302 Premiere Avenue	225	20304 Jersey Avenue
134	5703 Mc Auley Street	180	11651 208th Street	226	20318 Jersey Avenue
135	5406 Ocana Avenue	181	20918 Pioneer Boulevard	227	11521 Massinger Street
136	20918 Pioneer Boulevard	182	4312 Andy Street	228	4812 Bellflower Boulevard
137	11755 Carson Street	183	5727 Cardale Street	229	11867 206th Street
138	5532 Ocana Avenue	184	5733 Cardale Street	230	11867 206th Street
139	5532 Ocana Avenue	185	5227 Lakewood Boulevard	231	5703 Castana Avenue
140	20826 Roseton Avenue	186	12205 Centralia Street	232	11644 208th Street
141	11935 209th Street	187	11953 Centralia Street	233	4558 Palo Verde Avenue
142	21121 Dalaman Avenue	188	20903 Claretta Avenue	234	4642 Palo Verde Avenue
143	20812 Roseton Avenue	189	21627 Pioneer Boulevard	235	4542 Palo Verde Avenue
144	11716 215th Street	190	20915 Pioneer Boulevard	236	4912 Coke Avenue
145	11743 216th Street	191	21619 Pioneer Boulevard	237	20918 Pioneer Boulevard
146	20307 Jersey Avenue	192	12217 Centralia Street	238	6142 Harvey Way
147	4838 Briercrest Avenue	193	20917 Pioneer Boulevard	239	6237 woodruff Avenue
148	4838 Briercrest Avenue	194	4091 Hardwick Street	240	5925 Carson Street
149	6117 Ibbetson Avenue	195	4091 Hardwick Street	241	6133 Ibbetson Avenue
150	12309 Centralia Street	196	4091 Hardwick Street	242	4538 Palo Verde Avenue
151	20832 Thornlake Avenue	197	4091 Hardwick Street	243	6223 Woodruff Avenue
152	20702 Thornlake Avenue	198	4140 South Street	244	4502 Palo Verde
153	11643 207th Street	199	4909 Lakewood Boulevard	245	12427 Centralia Street
154	11637 207th Street	200	5220 Clark Avenue	246	5629 Whitewood Avenue
155	11637 207th Street	201	5150 Candlewood Street	247	6138 Harvey Way
156	5800 South Street	202	5150 Candlewood Street	248	5713 Clark Avenue
157	5970 Pepperwood Avenue	203	5150 Candlewood Street	249	20507 Roseton Avenue
158	5409 Pearce Avenue	204	5150 Candlewood Street	250	11861 206th Street
159	20811 Roseton Avenue	205	5150 Candlewood Street	251	4116 South Street
160	21008 Pioneer Boulevard	206	5150 Candlewood Street	252	20512 Pioneer Boulevard
160	11425 Chadwell Street	207	5150 Candlewood Street	253	11761 Carson Street
162	11425 Chadwell Street	208	5150 Candlewood Street	254	11444 Renville Street
163	5738 Whitewood Avenue	209	5150 Candlewood Street	255	11513 Elvins Street
164	5734 Sunfield Avenue	210	5150 Candlewood Street	256	11513 Elvins Street
165	5532 Ocana Avenue	211	5745 Graywood Avenue	257	4758 Eastbrook Avenue
166	11606 206th Street	212	5150 Candlewood Street	258	4758 Eastbrook Avenue
167	5869 Dashwood Street	213	5150 Candlewood Street	259	4949 Lakewood Boulevard
168	5869 Dashwood Street	214	5150 Candlewood Street	260	5230 Clark Avenue
169	4905 Castana Avenue	215	5150 Candlewood Street	261	4553 Hackett Avenue
170	20407 Roseton Avenue	216	5150 Candlewood Street	262	4532 Hackett Avenue
171	5255 Lakewood Boulevard	217	5150 Candlewood Street	263	5103 Pearce Avenue
172	4020 Candlewood Street	218	5150 Candlewood Street	264	5129 Pearce Avenue
173	11648 205th Street	219	20328 Jersey Avenue	265	5107 Candlewood Street
174	20407 Roseton Avenue	220	20404 Jersey Avenue	266	4617 Hackett Avenue
175	5925 Carson Street	221	4832 Dunrobin Avenue	267	4632 Ladoga Avenue
176	11601 206th Street	222	4832 Dunrobin Avenue	268	4632 Ladoga Avenue
177	20808 Roseton Avenue	223	6144 Bonfair Avenue	269	11747 Carson Street
178	5942 Centralia Street	224	5208 Fidler Avenue	270	11747 Carson Street

ID	ADDRESS	ID	ADDRESS
271	12052 208th Street	317	20909 Verne Avenue
272	21415 Haston Place	318	11750 214th Street
273	11640 205th Street	319	20835 Florcraft Avenue
274	11854 206th Street	320	5707 Candlewood Street
275	11650 Walcroft Street	321	20307 Jersey Avenue
276	11647 Walcroft Street	322	5738 Whitewood Avenue
277	20529 Pioneer Boulevard	323	4456 Gondar Avenue
278	11521 Massinger Street	324	11867 206th Street
279	11644 206th Street		
280	11623 206th Street		
281	4718 Adenmoor Avenue		
282	5139 Coke Street		
283	11953 Centralia Street		
284	11749 Carson Street		
285	5734 Sunfield Street		
286	20318 Jersey Avenue		
287	20409 Jersey Avenue		
288	11634 206th Street		
289	5301 Fidler Avenue		
290	4735 Briercrest Avenue		
291	20743 Elaine Avenue		
292	5623 Pennswood Avenue		
293	5623 Oliva Avenue		
294	11519 Chadwell Street		
295	5712 Cardale Street		
296	20806 Norwalk Boulevard		
297	11727 Carson Street		
298	5312 Premiere Avenue		
299	21627 Pioneer Boulevard		
300	6100 Bellflower Boulevard		
301	6100 Bellflower Boulevard		
302	20918 Pioneer Boulevard		
303	20807 Elaine Avenue		
304	20808 Alburtis Avenue		
305	20808 Alburtis Avenue		
306	6220 Ibbetson Avenue		
307	6008 Greentop Street		
308	11854 206th Street		
309	5139 Coke Street		
310	11875 Centralia Street		
311	21114 Haston Place		
312	12350 Del Amo Boulevard		
313	20702 Seine Avenue		
314	21222 Pioneer Boulevard		
315	20723 Elaine Avenue		
316	11734 209th Street		

**SUMMARY OF CONSOLIDATED
PLAN PROJECTS**

U.S. DEPARTMENT OF HOUSING AND
URBAN DEVELOPMENT
OFFICE OF COMMUNITY PLANNING AND
DEVELOPMENT

DATE: 8/24/2017
TIME: 11:34:05 AM
PAGE: 1/8

PR06 - Summary of Consolidated Plan
Projects for Report Year

IDIS

Plan IDIS Year Project	Project Title and Description	Program	Project Estimate	Committed Amount	
2016 1	Code Enforcement	Under this program, the City will continue to enforce existing building codes with Community Conservation Officers working in conjunction with the Crime, Public Nuisance, and Property Abatement Team serving CDBG-eligible areas.	CDBG	\$46,733.00	\$0.00
2	Rehabilitation Delivery Costs	This program provides funds for the payment of costs and carrying charges for rehabilitation counseling, work specifications, loan and grant processing, site inspections, processing loan paybacks and all administrative work related to loan and grant processing.	CDBG	\$91,985.00	\$0.00
3	Fair Housing Program	Provide funds for a fair housing counseling program and landlord tenant services for residents and property owners. The Fair Housing Consultant will function as a central source for fair housing information and education; investigate and conciliate housing discrimination complaints; make referrals to appropriate sources for the formal resolution of complaints when information conciliation efforts fail; distribute information on landlord tenant rights and assist low and moderate income families in maintaining suitable housing.	CDBG	\$35,240.00	\$0.00
4	Burns Center Improvements	This project provides for necessary costs associated with all repairs and the replacement and relocation of existing elevator, overall building flooring, and building's exterior. Removal of slope from exterior of the building's first floor to create airspace, waterproof the first floor's walls, and the replacement of all interior and exterior water damage around building's exterior and adjacent to slopes, replacement of damaged landscape and irrigation system as necessary, installation of a security system, and necessary improvements to meet ADA accessibility requirements are included in the project.	CDBG	\$355,758.00	\$0.00
5	Community Family Guidance	Provide funds toward the operation of a public service program which provides counseling services for emotionally disturbed children.	CDBG	\$9,000.00	\$0.00
6	Meals on Wheels	Provide funds toward the operation of a public service program, which provides in home meal delivery to low-income, senior and disabled residents.	CDBG	\$10,500.00	\$0.00
7	Pathways Volunteer Hospice	Provide funds for the operation of a public service program, which provides in-home non-medical services to individuals and/or families living with illness or loss.	CDBG	\$9,000.00	\$0.00
9	Planning and Administration	This program ensures the effective use of limited CDBG funds, for the community's priorities and federal regulations. Activities include the preparation of the Consolidated Plan, Action Plan, and Annual Performance Report, and continuous outreach to address the changing needs of the community. Staff is trained on CDBG requirements and future program development.	CDBG	\$98,717.00	\$0.00
10	Code Enforcement	Under this program, the City will continue to enforce existing building codes with Community Conservation Officers working in conjunction with the Crime, Public Nuisance, and Property Abatement Team serving CDBG-eligible areas.	CDBG	\$46,733.00	\$48,586.27

U.S. DEPARTMENT OF HOUSING AND
URBAN DEVELOPMENT
OFFICE OF COMMUNITY PLANNING AND
DEVELOPMENT

DATE: 8/24/2017
TIME: 11:34:05 AM
PAGE: 2/8

PR06 - Summary of Consolidated Plan
Projects for Report Year

IDIS

Plan IDIS Year Project	Project Title and Description	Program	Amount Drawn Thru Report Year	
2016 1	Code Enforcement	Under this program, the City will continue to enforce existing building codes with Community Conservation Officers working in conjunction with the Crime, Public Nuisance, and Property Abatement Team serving CDBG-eligible areas.	CDBG	\$0.00
2	Rehabilitation Delivery Costs	This program provides funds for the payment of costs and carrying charges for rehabilitation counseling, work specifications, loan and grant processing, site inspections, processing loan paybacks and all administrative work related to loan and grant processing.	CDBG	\$0.00
3	Fair Housing Program	Provide funds for a fair housing counseling program and landlord tenant services for residents and property owners. The Fair Housing Consultant will function as a central source for fair housing information and education; investigate and conciliate housing discrimination complaints; make referrals to appropriate sources for the formal resolution of complaints when information conciliation efforts fail; distribute information on landlord tenant rights and assist low and moderate income families in maintaining suitable housing.	CDBG	\$0.00
4	Burns Center Improvements	This project provides for necessary costs associated with all repairs and the replacement and relocation of existing elevator, overall building flooring, and building's exterior. Removal of slope from exterior of the building's first floor to create airspace, waterproof the first floor's walls, and the replacement of all interior and exterior water damage around building's exterior and adjacent to slopes, replacement of damaged landscape and irrigation system as necessary, installation of a security system, and necessary improvements to meet ADA accessibility requirements are included in the project.	CDBG	\$0.00
5	Community Family Guidance	Provide funds toward the operation of a public service program which provides counseling services for emotionally disturbed children.	CDBG	\$0.00
6	Meals on Wheels	Provide funds toward the operation of a public service program, which provides in home meal delivery to low-income, senior and disabled residents.	CDBG	\$0.00
7	Pathways Volunteer Hospice	Provide funds for the operation of a public service program, which provides in-home non-medical services to individuals and/or families living with illness or loss.	CDBG	\$0.00
9	Planning and Administration	This program ensures the effective use of limited CDBG funds, for the community's priorities and federal regulations. Activities include the preparation of the Consolidated Plan, Action Plan, and Annual Performance Report, and continuous outreach to address the changing needs of the community. Staff is trained on CDBG requirements and future program development.	CDBG	\$0.00
10	Code Enforcement	Under this program, the City will continue to enforce existing building codes with Community Conservation Officers working in conjunction with the Crime, Public Nuisance, and Property Abatement Team serving CDBG-eligible areas.	CDBG	\$48,586.27

U.S. DEPARTMENT OF HOUSING AND
URBAN DEVELOPMENT
OFFICE OF COMMUNITY PLANNING AND
DEVELOPMENT

DATE: 8/24/2017
TIME: 11:34:05 AM
PAGE: 3/8

PR06 - Summary of Consolidated Plan
Projects for Report Year

IDIS

Plan IDIS Year Project	Project Title and Description	Program	Amount Available to Draw
2016 1	Code Enforcement	Under this program, the City will continue to enforce existing building codes with Community Conservation Officers working in conjunction with the Crime, Public Nuisance, and Property Abatement Team serving CDBG-eligible areas.	CDBG \$0.00
2	Rehabilitation Delivery Costs	This program provides funds for the payment of costs and carrying charges for rehabilitation counseling, work specifications, loan and grant processing, site inspections, processing loan paybacks and all administrative work related to loan and grant processing.	CDBG \$0.00
3	Fair Housing Program	Provide funds for a fair housing counseling program and landlord tenant services for residents and property owners. The Fair Housing Consultant will function as a central source for fair housing information and education; investigate and conciliate housing discrimination complaints; make referrals to appropriate sources for the formal resolution of complaints when information conciliation efforts fail; distribute information on landlord tenant rights and assist low and moderate income families in maintaining suitable housing.	CDBG \$0.00
4	Burns Center Improvements	This project provides for necessary costs associated with all repairs and the replacement and relocation of existing elevator, overall building flooring, and building's exterior. Removal of slope from exterior of the building's first floor to create airspace, waterproof the first floor's walls, and the replacement of all interior and exterior water damage around building's exterior and adjacent to slopes, replacement of damaged landscape and irrigation system as necessary, installation of a security system, and necessary improvements to meet ADA accessibility requirements are included in the project.	CDBG \$0.00
5	Community Family Guidance	Provide funds toward the operation of a public service program which provides counseling services for emotionally disturbed children.	CDBG \$0.00
6	Meals on Wheels	Provide funds toward the operation of a public service program, which provides in home meal delivery to low-income, senior and disabled residents.	CDBG \$0.00
7	Pathways Volunteer Hospice	Provide funds for the operation of a public service program, which provides in-home non-medical services to individuals and/or families living with illness or loss.	CDBG \$0.00
9	Planning and Administration	This program ensures the effective use of limited CDBG funds, for the community's priorities and federal regulations. Activities include the preparation of the Consolidated Plan, Action Plan, and Annual Performance Report, and continuous outreach to address the changing needs of the community. Staff is trained on CDBG requirements and future program development.	CDBG \$0.00
10	Code Enforcement	Under this program, the City will continue to enforce existing building codes with Community Conservation Officers working in conjunction with the Crime, Public Nuisance, and Property Abatement Team serving CDBG-eligible areas.	CDBG \$0.00

U.S. DEPARTMENT OF HOUSING AND
URBAN DEVELOPMENT
OFFICE OF COMMUNITY PLANNING AND
DEVELOPMENT

DATE: 8/24/2017
TIME: 11:34:05 AM
PAGE: 4/8

PR06 - Summary of Consolidated Plan
Projects for Report Year

IDIS

Plan IDIS Year Project	Project Title and Description	Program	Amount Drawn in Report Year	
2016 1	Code Enforcement	Under this program, the City will continue to enforce existing building codes with Community Conservation Officers working in conjunction with the Crime, Public Nuisance, and Property Abatement Team serving CDBG-eligible areas.	CDBG	\$0.00
2	Rehabilitation Delivery Costs	This program provides funds for the payment of costs and carrying charges for rehabilitation counseling, work specifications, loan and grant processing, site inspections, processing loan paybacks and all administrative work related to loan and grant processing.	CDBG	\$0.00
3	Fair Housing Program	Provide funds for a fair housing counseling program and landlord tenant services for residents and property owners. The Fair Housing Consultant will function as a central source for fair housing information and education; investigate and conciliate housing discrimination complaints; make referrals to appropriate sources for the formal resolution of complaints when information conciliation efforts fail; distribute information on landlord tenant rights and assist low and moderate income families in maintaining suitable housing.	CDBG	\$0.00
4	Burns Center Improvements	This project provides for necessary costs associated with all repairs and the replacement and relocation of existing elevator, overall building flooring, and building's exterior. Removal of slope from exterior of the building's first floor to create airspace, waterproof the first floor's walls, and the replacement of all interior and exterior water damage around building's exterior and adjacent to slopes, replacement of damaged landscape and irrigation system as necessary, installation of a security system, and necessary improvements to meet ADA accessibility requirements are included in the project.	CDBG	\$0.00
5	Community Family Guidance	Provide funds toward the operation of a public service program which provides counseling services for emotionally disturbed children.	CDBG	\$0.00
6	Meals on Wheels	Provide funds toward the operation of a public service program, which provides in home meal delivery to low-income, senior and disabled residents.	CDBG	\$0.00
7	Pathways Volunteer Hospice	Provide funds for the operation of a public service program, which provides in-home non-medical services to individuals and/or families living with illness or loss.	CDBG	\$0.00
9	Planning and Administration	This program ensures the effective use of limited CDBG funds, for the community's priorities and federal regulations. Activities include the preparation of the Consolidated Plan, Action Plan, and Annual Performance Report, and continuous outreach to address the changing needs of the community. Staff is trained on CDBG requirements and future program development.	CDBG	\$0.00
10	Code Enforcement	Under this program, the City will continue to enforce existing building codes with Community Conservation Officers working in conjunction with the Crime, Public Nuisance, and Property Abatement Team serving CDBG-eligible areas.	CDBG	\$48,586.27

U.S. DEPARTMENT OF HOUSING AND
URBAN DEVELOPMENT
OFFICE OF COMMUNITY PLANNING AND
DEVELOPMENT

DATE: 8/24/2017
TIME: 11:34:05 AM
PAGE: 5/8

PR06 - Summary of Consolidated Plan
Projects for Report Year

IDIS

Plan IDIS Year Project	Project Title and Description	Program	Project Estimate	Committed Amount
2016 11	Rehabilitation Delivery Costs This program provides funds for the payment of reasonable administrative costs and carrying charges such as rehabilitation counseling, work specifications, loan processing, site inspections, reporting, processing loan paybacks and all administrative work related to loan and grant processing.	CDBG	\$91,985.00	\$96,659.26
12	Fair Housing Program Provide funds for a fair housing counseling program and landlord tenant services for residents and property owners. The Fair Housing Consultant will function as a central source for fair housing information and education; investigate and conciliate housing discrimination complaints; make referrals to appropriate sources for the formal resolution of complaints when information conciliation efforts fail; distribute information on landlord tenant rights and assist low and moderate income families in maintaining suitable housing.	CDBG	\$35,240.00	\$35,240.00
13	Burns Center Improvements This project provides for necessary costs associated with all repairs and the replacement and relocation of existing elevator, overall building flooring, and building's exterior. Removal of slope from exterior of the building's first floor to create airspace, waterproof the first floor's walls, and the replacement of all interior and exterior water damage around building's perimeter are also provided for in this project. In addition, construction of a retaining wall up to 10 feet from building's exterior and adjacent to slopes, replacement of damaged landscape and irrigation system as necessary, installation of a security system, and necessary improvements to meet ADA accessibility requirements are included in the project.	CDBG	\$355,758.00	\$335,758.00
14	Community Family Guidance This program provides counseling services for emotionally disturbed children.	CDBG	\$9,000.00	\$9,000.00
15	Meals on Wheels This program provides in-home meal delivery to low income, senior, and disabled persons.	CDBG	\$10,500.00	\$10,500.00
16	Pathways Volunteer Hospice This program provides in-home non-medical services to terminally ill persons.	CDBG	\$9,000.00	\$9,000.00
17	Human Services Association This activity will support senior citizen congregate meals at the Weingart Senior Center and home delivered meals to Lakewood residents.	CDBG	\$5,500.00	\$5,500.00
18	Program Administration This program ensures the effective use of limited CDBG funds, for the community's priorities and federal regulations. Activities include the preparation of the Consolidated Plan, Action Plan, and Annual Performance Report, and continuous outreach to address the changing needs of the community. Staff is trained on CDBG requirements and future program development.	CDBG	\$98,717.00	\$104,296.39

U.S. DEPARTMENT OF HOUSING AND
URBAN DEVELOPMENT
OFFICE OF COMMUNITY PLANNING AND
DEVELOPMENT

DATE: 8/24/2017
TIME: 11:34:05 AM
PAGE: 6/8

PR06 - Summary of Consolidated Plan
Projects for Report Year

IDIS

Plan IDIS Year Project	Project Title and Description	Program	Amount Drawn Thru Report Year
2016 11	Rehabilitation Delivery Costs This program provides funds for the payment of reasonable administrative costs and carrying charges such as rehabilitation counseling, work specifications, loan processing, site inspections, reporting, processing loan paybacks and all administrative work related to loan and grant processing.	CDBG	\$96,659.26
12	Fair Housing Program Provide funds for a fair housing counseling program and landlord tenant services for residents and property owners. The Fair Housing Consultant will function as a central source for fair housing information and education; investigate and conciliate housing discrimination complaints; make referrals to appropriate sources for the formal resolution of complaints when information conciliation efforts fail; distribute information on landlord tenant rights and assist low and moderate income families in maintaining suitable housing.	CDBG	\$35,240.00
13	Burns Center Improvements This project provides for necessary costs associated with all repairs and the replacement and relocation of existing elevator, overall building flooring, and building's exterior. Removal of slope from exterior of the building's first floor to create airspace, waterproof the first floor's walls, and the replacement of all interior and exterior water damage around building's perimeter are also provided for in this project. In addition, construction of a retaining wall up to 10 feet from building's exterior and adjacent to slopes, replacement of damaged landscape and irrigation system as necessary, installation of a security system, and necessary improvements to meet ADA accessibility requirements are included in the project.	CDBG	\$83,812.97
14	Community Family Guidance This program provides counseling services for emotionally disturbed children.	CDBG	\$9,000.00
15	Meals on Wheels This program provides in-home meal delivery to low income, senior, and disabled persons.	CDBG	\$10,500.00
16	Pathways Volunteer Hospice This program provides in-home non-medical services to terminally ill persons.	CDBG	\$9,000.00
17	Human Services Association This activity will support senior citizen congregate meals at the Weingart Senior Center and home delivered meals to Lakewood residents.	CDBG	\$5,500.00
18	Program Administration This program ensures the effective use of limited CDBG funds, for the community's priorities and federal regulations. Activities include the preparation of the Consolidated Plan, Action Plan, and Annual Performance Report, and continuous outreach to address the changing needs of the community. Staff is trained on CDBG requirements and future program development.	CDBG	\$104,296.39

U.S. DEPARTMENT OF HOUSING AND
URBAN DEVELOPMENT
OFFICE OF COMMUNITY PLANNING AND
DEVELOPMENT

DATE: 8/24/2017
TIME: 11:34:05 AM
PAGE: 7/8

PR06 - Summary of Consolidated Plan
Projects for Report Year

IDIS

Plan IDIS Year Project	Project Title and Description	Program	Amount Available to Draw
2016 11	Rehabilitation Delivery Costs This program provides funds for the payment of reasonable administrative costs and carrying charges such as rehabilitation counseling, work specifications, loan processing, site inspections, reporting, processing loan paybacks and all administrative work related to loan and grant processing.	CDBG	\$0.00
12	Fair Housing Program Provide funds for a fair housing counseling program and landlord tenant services for residents and property owners. The Fair Housing Consultant will function as a central source for fair housing information and education; investigate and conciliate housing discrimination complaints; make referrals to appropriate sources for the formal resolution of complaints when information conciliation efforts fail; distribute information on landlord tenant rights and assist low and moderate income families in maintaining suitable housing.	CDBG	\$0.00
13	Burns Center Improvements This project provides for necessary costs associated with all repairs and the replacement and relocation of existing elevator, overall building flooring, and building's exterior. Removal of slope from exterior of the building's first floor to create airspace, waterproof the first floor's walls, and the replacement of all interior and exterior water damage around building's perimeter are also provided for in this project. In addition, construction of a retaining wall up to 10 feet from building's exterior and adjacent to slopes, replacement of damaged landscape and irrigation system as necessary, installation of a security system, and necessary improvements to meet ADA accessibility requirements are included in the project.	CDBG	\$251,945.03
14	Community Family Guidance This program provides counseling services for emotionally disturbed children.	CDBG	\$0.00
15	Meals on Wheels This program provides in-home meal delivery to low income, senior, and disabled persons.	CDBG	\$0.00
16	Pathways Volunteer Hospice This program provides in-home non-medical services to terminally ill persons.	CDBG	\$0.00
17	Human Services Association This activity will support senior citizen congregate meals at the Weingart Senior Center and home delivered meals to Lakewood residents.	CDBG	\$0.00
18	Program Administration This program ensures the effective use of limited CDBG funds, for the community's priorities and federal regulations. Activities include the preparation of the Consolidated Plan, Action Plan, and Annual Performance Report, and continuous outreach to address the changing needs of the community. Staff is trained on CDBG requirements and future program development.	CDBG	\$0.00

U.S. DEPARTMENT OF HOUSING AND
URBAN DEVELOPMENT
OFFICE OF COMMUNITY PLANNING AND
DEVELOPMENT

DATE: 8/24/2017
TIME: 11:34:05 AM
PAGE: 8/8

PR06 - Summary of Consolidated Plan
Projects for Report Year

IDIS

Plan IDIS Year Project	Project Title and Description	Program	Amount Drawn in Report Year
2016 11	Rehabilitation Delivery Costs This program provides funds for the payment of reasonable administrative costs and carrying charges such as rehabilitation counseling, work specifications, loan processing, site inspections, reporting, processing loan paybacks and all administrative work related to loan and grant processing.	CDBG	\$96,659.26
12	Fair Housing Program Provide funds for a fair housing counseling program and landlord tenant services for residents and property owners. The Fair Housing Consultant will function as a central source for fair housing information and education; investigate and conciliate housing discrimination complaints; make referrals to appropriate sources for the formal resolution of complaints when information conciliation efforts fail; distribute information on landlord tenant rights and assist low and moderate income families in maintaining suitable housing.	CDBG	\$35,240.00
13	Burns Center Improvements This project provides for necessary costs associated with all repairs and the replacement and relocation of existing elevator, overall building flooring, and building's exterior. Removal of slope from exterior of the building's first floor to create airspace, waterproof the first floor's walls, and the replacement of all interior and exterior water damage around building's perimeter are also provided for in this project. In addition, construction of a retaining wall up to 10 feet from building's exterior and adjacent to slopes, replacement of damaged landscape and irrigation system as necessary, installation of a security system, and necessary improvements to meet ADA accessibility requirements are included in the project.	CDBG	\$83,812.97
14	Community Family Guidance This program provides counseling services for emotionally disturbed children.	CDBG	\$9,000.00
15	Meals on Wheels This program provides in-home meal delivery to low income, senior, and disabled persons.	CDBG	\$10,500.00
16	Pathways Volunteer Hospice This program provides in-home non-medical services to terminally ill persons.	CDBG	\$9,000.00
17	Human Services Association This activity will support senior citizen congregate meals at the Weingart Senior Center and home delivered meals to Lakewood residents.	CDBG	\$5,500.00
18	Program Administration This program ensures the effective use of limited CDBG funds, for the community's priorities and federal regulations. Activities include the preparation of the Consolidated Plan, Action Plan, and Annual Performance Report, and continuous outreach to address the changing needs of the community. Staff is trained on CDBG requirements and future program development.	CDBG	\$104,296.39

CDBG ACTIVITY SUMMARY REPORT



PGM Year: 2014
Project: 0004 - Burns Center Improvements
IDIS Activity: 296 - Burns Center Improvements

Status: Open
Location: 5510 Clark Ave Lakewood, CA 90712-1905

Objective: Create suitable living environments
Outcome: Availability/accessibility
Matrix Code: Senior Centers (03A)

National Objective: LMC

Initial Funding Date: 12/23/2014

Description:

This project provides for necessary replacement of brick pavers and concrete hardscape walkways due to the uplifting of tree roots, displacement and damage. In addition, this project will also fund the renovation of landscaping, irrigation system repair replacement and other improvements needed due to current hardscape uplifting.

Financing

	Fund Type	Grant Year	Grant	Funded Amount	Drawn In Program Year		Drawn Thru Program Year
					Total	Hispanic	
CDBG	EN	Pre-2015		\$187,328.00	\$0.00	\$0.00	\$0.00
		2013	B13MC060521		\$0.00		\$31,554.45
		2014	B14MC060521		\$11,582.95		\$88,801.89
Total	Total			\$187,328.00	\$11,582.95	\$120,356.34	

Proposed Accomplishments

Public Facilities : 1

Actual Accomplishments

Number assisted:

	Owner		Renter		Total		Person	
	Total	Hispanic	Total	Hispanic	Total	Hispanic	Total	Hispanic
White:	0	0	0	0	0	0	0	0
Black/African American:	0	0	0	0	0	0	0	0
Asian:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native:	0	0	0	0	0	0	0	0
Native Hawaiian/Other Pacific Islander:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & White:	0	0	0	0	0	0	0	0
Asian White:	0	0	0	0	0	0	0	0
Black/African American & White:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & Black/African American:	0	0	0	0	0	0	0	0
Other multi-racial:	0	0	0	0	0	0	0	0
Asian/Pacific Islander:	0	0	0	0	0	0	0	0
Hispanic:	0	0	0	0	0	0	0	0
Total:	0							



U.S. Department of Housing and Urban Development
 Office of Community Planning and Development
 Integrated Disbursement and Information System
 CDBG Activity Summary Report (GPR) for Program Year 2016
 LAKEWOOD

Date: 16-Aug-2017
 Time: 13:31
 Page: 2

Female-headed Households: 0 0 0

Income Category:

	Owner	Renter	Total	Person
Extremely Low	0	0	0	0
Low Mod	0	0	0	0
Moderate	0	0	0	0
Non Low Moderate	0	0	0	0
Total	0	0	0	0
Percent Low/Mod				

Annual Accomplishments

Years **Accomplishment Narrative**

2014

Benefitting



PGM Year: 2015
Project: 0002 - Rehabilitation Delivery Costs
IDIS Activity: 304 - Rehabilitation Delivery Costs
Status: Completed 7/11/2017 1:29:41 PM
Location: 5050 Clark Ave Lakewood, CA 90712-2603
Objective: Create suitable living environments
Outcome: Availability/accessibility
Matrix Code: Rehabilitation Administration (14H) **National Objective:** LMH

Initial Funding Date: 01/26/2016

Description:

Funds for the payment of reasonable administrative costs and carrying charges such as rehabilitation counseling, work specifications, loan processing, site inspections, reporting and all administrative work related to loan and grant processing.

Financing

Fund Type	Grant Year	Grant	Funded Amount	Drawn In Program Year	Drawn Thru Program Year
CDBG	Pre-2015		\$39,259.26	\$0.00	\$0.00
	2014	B14MC060521		\$0.00	\$39,259.26
	2015	B15MC060521	\$13,824.68	\$0.00	\$13,824.68
Total			\$53,083.94	\$0.00	\$53,083.94

Proposed Accomplishments

Housing Units : 1

Actual Accomplishments

Number assisted:

	Owner		Renter		Total		Person	
	Total	Hispanic	Total	Hispanic	Total	Hispanic	Total	Hispanic
White:	0	0	0	0	0	0	0	0
Black/African American:	1	0	0	0	1	0	0	0
Asian:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native:	0	0	0	0	0	0	0	0
Native Hawaiian/Other Pacific Islander:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & White:	0	0	0	0	0	0	0	0
Asian White:	0	0	0	0	0	0	0	0
Black/African American & White:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & Black/African American:	0	0	0	0	0	0	0	0
Other multi-racial:	0	0	0	0	0	0	0	0
Asian/Pacific Islander:	0	0	0	0	0	0	0	0
Hispanic:	0	0	0	0	0	0	0	0
Total:	1	0	0	0	1	0	0	0



U.S. Department of Housing and Urban Development
 Office of Community Planning and Development
 Integrated Disbursement and Information System
 CDBG Activity Summary Report (GPR) for Program Year 2016
 LAKEWOOD

Date: 16-Aug-2017
 Time: 13:31
 Page: 4

Female-headed Households: 1 0 1

Income Category:	Owner	Renter	Total	Person
Extremely Low	1	0	1	0
Low Mod	0	0	0	0
Moderate	0	0	0	0
Non Low Moderate	0	0	0	0
Total	1	0	1	0
Percent Low/Mod	100.0%		100.0%	

Annual Accomplishments

Years 2015 Accomplishment Narrative

2015

Benefitting



PGM Year: 2015
Project: 0003 - Public Services
IDIS Activity: 306 - Fair Housing
Status: Completed 7/11/2017 1:30:53 PM
Location: 5050 Clark Ave Lakewood, CA 90712-2603
Objective: Create suitable living environments
Outcome: Availability/accessibility
Matrix Code: Fair Housing Activities (if CDBG, then subject to 15% cap) (05J)
National Objective: LMC

Initial Funding Date: 01/25/2016

Description:

The Fair Housing Consultant provides information on tenant-landlord rights and advocacy.

Financing

Fund Type	Grant Year	Grant	Funded Amount	Drawn In Program Year	Drawn Thru Program Year
CDBG	Pre-2015		\$16,853.48	\$0.00	\$0.00
	2014	B14MC060521		\$0.00	\$16,853.48
	2015	B15MC060521	\$16,853.52	\$0.00	\$16,853.52
Total			\$33,707.00	\$0.00	\$33,707.00

Proposed Accomplishments

People (General) : 250

Actual Accomplishments

Number assisted:

	Owner		Renter		Total		Person	
	Total	Hispanic	Total	Hispanic	Total	Hispanic	Total	Hispanic
White:	0	0	0	0	0	0	98	9
Black/African American:	0	0	0	0	0	0	79	0
Asian:	0	0	0	0	0	0	11	0
American Indian/Alaskan Native:	0	0	0	0	0	0	0	0
Native Hawaiian/Other Pacific Islander:	0	0	0	0	0	0	1	0
American Indian/Alaskan Native & White:	0	0	0	0	0	0	0	0
Asian White:	0	0	0	0	0	0	0	0
Black/African American & White:	0	0	0	0	0	0	1	0
American Indian/Alaskan Native & Black/African American:	0	0	0	0	0	0	0	0
Other multi-racial:	0	0	0	0	0	0	60	52
Asian/Pacific Islander:	0	0	0	0	0	0	0	0
Hispanic:	0	0	0	0	0	0	0	0
Total:	0	0	0	0	0	0	250	61



U.S. Department of Housing and Urban Development
 Office of Community Planning and Development
 Integrated Disbursement and Information System
 CDBG Activity Summary Report (GPR) for Program Year 2016
 LAKEWOOD

Date: 16-Aug-2017
 Time: 13:31
 Page: 6

Female-headed Households:	0	0	0
<i>Income Category:</i>			
Extremely Low	0	0	129
Low Mod	0	0	63
Moderate	0	0	58
Non Low Moderate	0	0	0
Total	0	0	250
Percent Low/Mod			100.0%

Annual Accomplishments

Years	Accomplishment Narrative	# Benefiting
-------	--------------------------	--------------

2015



PGM Year: 2015
Project: 0003 - Public Services
IDIS Activity: 307 - Community Family Guidance
Status: Completed 7/11/2017 2:32:21 PM
Location: 5050 Clark Ave Lakewood, CA 90712-2603

Objective: Create suitable living environments
Outcome: Availability/accessibility
Matrix Code: Abused and Neglected Children (05N) **National Objective:** LMC

Initial Funding Date: 02/01/2016

Description:

This program provides counselling services for emotionally disturbed children.

Financing

Fund Type	Grant Year	Grant	Funded Amount	Drawn In Program Year	Drawn Thru Program Year
CDBG	Pre-2015		\$4,500.00	\$0.00	\$0.00
	2014	B14MC060521		\$0.00	\$4,500.00
	2015	B15MC060521	\$4,500.00	\$0.00	\$4,500.00
Total			\$9,000.00	\$0.00	\$9,000.00

Proposed Accomplishments

People (General) : 24

Actual Accomplishments

Number assisted:

	Owner		Renter		Total		Person	
	Total	Hispanic	Total	Hispanic	Total	Hispanic	Total	Hispanic
White:	0	0	0	0	0	0	18	3
Black/African American:	0	0	0	0	0	0	14	0
Asian:	0	0	0	0	0	0	3	0
American Indian/Alaskan Native:	0	0	0	0	0	0	0	0
Native Hawaiian/Other Pacific Islander:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & White:	0	0	0	0	0	0	0	0
Asian White:	0	0	0	0	0	0	0	0
Black/African American & White:	0	0	0	0	0	0	2	0
American Indian/Alaskan Native & Black/African American:	0	0	0	0	0	0	0	0
Other multi-racial:	0	0	0	0	0	0	26	8
Asian/Pacific Islander:	0	0	0	0	0	0	0	0
Hispanic:	0	0	0	0	0	0	0	0
Total:	0	0	0	0	0	0	63	11



Female-headed Households:

0 0 0 0

Income Category:

	Owner	Renter	Total	Person
Extremely Low	0	0	0	36
Low Mod	0	0	0	9
Moderate	0	0	0	8
Non Low Moderate	0	0	0	10
Total	0	0	0	63
Percent Low/Mod				84.1%

Annual Accomplishments

Years	Accomplishment Narrative	# Benefitting
-------	--------------------------	---------------

2015



PGM Year: 2015
Project: 0003 - Public Services
IDIS Activity: 308 - Meals on Wheels
Status: Completed 7/11/2017 1:31:22 PM
Location: 5050 Clark Ave Lakewood, CA 90712-2603
Objective: Create suitable living environments
Outcome: Availability/accessibility
Matrix Code: Senior Services (05A) **National Objective:** LMC

Initial Funding Date: 01/25/2016

Description:

This program provides in-home meal delivery to low income, senior, and disabled persons.

Financing

CDBG	Fund Type	Grant Year	Grant	Funded Amount	Drawn In Program Year		Drawn Thru Program Year	
					Total	Hispanic	Total	Hispanic
	EN	Pre-2015		\$5,250.00	\$0.00	\$0.00	\$0.00	
		2014	B14MC060521		\$0.00	\$5,250.00	\$5,250.00	
		2015	B15MC060521	\$5,250.00	\$0.00	\$5,250.00	\$5,250.00	
Total	Total			\$10,500.00	\$0.00	\$10,500.00	\$10,500.00	

Proposed Accomplishments

People (General) : 100

Actual Accomplishments

Number assisted:

	Owner		Renter		Total		Person	
	Total	Hispanic	Total	Hispanic	Total	Hispanic	Total	Hispanic
White:	0	0	0	0	0	0	73	6
Black/African American:	0	0	0	0	0	0	5	0
Asian:	0	0	0	0	0	0	5	0
American Indian/Alaskan Native:	0	0	0	0	0	0	1	0
Native Hawaiian/Other Pacific Islander:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & White:	0	0	0	0	0	0	3	0
Asian White:	0	0	0	0	0	0	3	0
Black/African American & White:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & Black/African American:	0	0	0	0	0	0	0	0
Other multi-racial:	0	0	0	0	0	0	10	0
Asian/Pacific Islander:	0	0	0	0	0	0	0	0
Hispanic:	0	0	0	0	0	0	0	0
Total:	0	0	0	0	0	0	100	6



Female-headed Households: 0 0 0

Income Category:

	Owner	Renter	Total	Person
Extremely Low	0	0	0	32
Low Mod	0	0	0	47
Moderate	0	0	0	6
Non Low Moderate	0	0	0	15
Total	0	0	0	100
Percent Low/Mod				85.0%

Annual Accomplishments

Years	Accomplishment Narrative	# Benefiting
-------	--------------------------	--------------

2015



PGM Year: 2015
Project: 0003 - Public Services
IDIS Activity: 309 - Pathways Volunteer Hospice
Status: Completed 7/11/2017 1:31:41 PM
Location: 5050 Clark Ave Lakewood, CA 90712-2603
Objective: Create suitable living environments
Outcome: Availability/accessibility
Matrix Code: Health Services (05M)
National Objective: LMC

Initial Funding Date: 01/25/2016

Description:
 This program provides in-home non-medical services to terminally ill persons.
Financing

Fund Type	Grant Year	Grant	Funded Amount	Drawn In Program Year	Drawn Thru Program Year
CDBG	Pre-2015		\$4,500.00	\$0.00	\$0.00
	2014	B14MC060521		\$0.00	\$4,500.00
	2015	B15MC060521	\$4,500.00	\$0.00	\$4,500.00
Total			\$9,000.00	\$0.00	\$9,000.00

Proposed Accomplishments

People (General) : 20

Actual Accomplishments

Number assisted:

	Owner		Renter		Total	
	Total	Hispanic	Total	Hispanic	Total	Hispanic
White:	0	0	0	0	0	0
Black/African American:	0	0	0	0	0	0
Asian:	0	0	0	0	0	0
American Indian/Alaskan Native:	0	0	0	0	0	0
Native Hawaiian/Other Pacific Islander:	0	0	0	0	0	0
American Indian/Alaskan Native & White:	0	0	0	0	0	0
Asian White:	0	0	0	0	0	0
Black/African American & White:	0	0	0	0	0	0
American Indian/Alaskan Native & Black/African American:	0	0	0	0	0	0
Other multi-racial:	0	0	0	0	0	0
Asian/Pacific Islander:	0	0	0	0	0	0
Hispanic:	0	0	0	0	0	0
Total:	0	0	0	0	0	20



U.S. Department of Housing and Urban Development
 Office of Community Planning and Development
 Integrated Disbursement and Information System
 CDBG Activity Summary Report (GPR) for Program Year 2016
 LAKEWOOD

Date: 16-Aug-2017
 Time: 13:31
 Page: 12

Female-headed Households: 0 0 0

Income Category:

	Owner	Renter	Total	Person
Extremely Low	0	0	0	7
Low Mod	0	0	0	10
Moderate	0	0	0	3
Non Low Moderate	0	0	0	0
Total	0	0	0	20
Percent Low/Mod				100.0%

Annual Accomplishments

Years	Accomplishment Narrative	# Benefitting
-------	--------------------------	---------------

2015



PGM Year: 2015
Project: 0003 - Public Services
IDIS Activity: 311 - Human Services Association
Status: Completed 7/11/2017 1:32:11 PM
Location: 5050 Clark Ave Lakewood, CA 90712-2603
Objective: Create suitable living environments
Outcome: Availability/accessibility
Matrix Code: Senior Services (05A) **National Objective:** LMC

Initial Funding Date: 01/25/2016

Description:

This activity will support senior citizen congregate meals at the Weingart Senior Center and home delivered meals to Lakewood residents.
Financing

Fund Type	Grant Year	Grant	Funded Amount	Drawn In Program Year	Drawn Thru Program Year
CDBG	Pre-2015		\$2,250.00	\$0.00	\$0.00
	2014	B14MC060521		\$0.00	\$2,250.00
	2015	B15MC060521	\$2,250.00	\$0.00	\$2,250.00
Total			\$4,500.00	\$0.00	\$4,500.00

Proposed Accomplishments

People (General) : 45

Actual Accomplishments

Number assisted:

	Owner		Renter		Total		Person	
	Total	Hispanic	Total	Hispanic	Total	Hispanic	Total	Hispanic
White:	0	0	0	0	0	0	13	0
Black/African American:	0	0	0	0	0	0	8	0
Asian:	0	0	0	0	0	0	5	0
American Indian/Alaskan Native:	0	0	0	0	0	0	1	0
Native Hawaiian/Other Pacific Islander:	0	0	0	0	0	0	4	0
American Indian/Alaskan Native & White:	0	0	0	0	0	0	1	0
Asian White:	0	0	0	0	0	0	2	0
Black/African American & White:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & Black/African American:	0	0	0	0	0	0	0	0
Other multi-racial:	0	0	0	0	0	0	11	0
Asian/Pacific Islander:	0	0	0	0	0	0	0	0
Hispanic:	0	0	0	0	0	0	0	0
Total:	0	0	0	0	0	0	45	0



U.S. Department of Housing and Urban Development
 Office of Community Planning and Development
 Integrated Disbursement and Information System
 CDBG Activity Summary Report (GPR) for Program Year 2016
 LAKEWOOD

Date: 16-Aug-2017
 Time: 13:31
 Page: 14

Female-headed Households: 0 0 0

Income Category:

	Owner	Renter	Total	Person
Extremely Low	0	0	0	17
Low Mod	0	0	0	15
Moderate	0	0	0	13
Non Low Moderate	0	0	0	0
Total	0	0	0	45
Percent Low/Mod				100.0%

Annual Accomplishments

Years	Accomplishment Narrative	# Benefitting
-------	--------------------------	---------------

2015



PGM Year: 2015
Project: 0004 - Program Administration
IDIS Activity: 312 - Program Administration
Status: Completed 7/11/2017 1:32:40 PM
Location: Objective:
 Outcome:
 Matrix Code: General Program Administration (21A) National Objective:

Initial Funding Date: 01/25/2016

Description:

This program ensures the effective use of limited CDBG funds per the community's priorities and federal regulations. Activities include the preparation of the Consolidated Plan, Action Plan, Consolidated Annual Performance Evaluation Report, and continuous outreach to address the changing needs of the community.

Financing

	Fund Type	Grant Year	Grant	Funded Amount	Drawn In Program Year		Drawn Thru Program Year	
					Total	Hispanic	Total	Hispanic
CDBG	EN	Pre-2015		\$39,715.63	\$0.00	\$0.00	\$0.00	\$0.00
		2014	B14MC060521		\$0.00	\$0.00	\$39,715.63	
		2015	B15MC060521	\$16,935.03	\$0.00	\$0.00	\$16,935.03	
	PI			\$24,457.23	\$0.00	\$0.00	\$24,457.23	
Total	Total			\$81,107.89	\$0.00	\$0.00	\$81,107.89	

Proposed Accomplishments

Actual Accomplishments

Number assisted:

	Owner		Renter		Total		Person	
	Total	Hispanic	Total	Hispanic	Total	Hispanic	Total	Hispanic
White:	0	0	0	0	0	0	0	0
Black/African American:	0	0	0	0	0	0	0	0
Asian:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native:	0	0	0	0	0	0	0	0
Native Hawaiian/Other Pacific Islander:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & White:	0	0	0	0	0	0	0	0
Asian White:	0	0	0	0	0	0	0	0
Black/African American & White:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & Black/African American:	0	0	0	0	0	0	0	0
Other multi-racial:	0	0	0	0	0	0	0	0
Asian/Pacific Islander:	0	0	0	0	0	0	0	0
Hispanic:	0	0	0	0	0	0	0	0



Total: 0 0 0 0 0 0 0 0

Female-headed Households:

Income Category:	Owner	Renter	Total	Person
Extremely Low			0	
Low Mod			0	
Moderate			0	
Non Low Moderate			0	
Total	0	0	0	0
Percent Low/Mod				

Annual Accomplishments

No data returned for this view. This might be because the applied filter excludes all data.



U.S. Department of Housing and Urban Development
 Office of Community Planning and Development
 Integrated Disbursement and Information System
 CDBG Activity Summary Report (GPR) for Program Year 2016
 LAKEWOOD

Date: 16-Aug-2017
 Time: 13:31
 Page: 17

PGM Year: 2015
Project: 0001 - Code Enforcement
IDIS Activity: 313 - Code Enforcement

Status: Completed 7/11/2017 1:32:58 PM
Location: 5050 Clark Ave Lakewood, CA 90712-2603

Objective: Create suitable living environments
Outcome: Availability/accessibility
Matrix Code: Code Enforcement (15)

National Objective: LMA

Initial Funding Date: 01/25/2016

Description:
 XXXXX
Financing

	Fund Type	Grant Year	Grant	Funded Amount	Drawn In Program Year	Drawn Thru Program Year
CDBG	EN	Pre-2015		\$19,113.13	\$0.00	\$0.00
		2014	B14MC060521		\$0.00	\$19,113.13
		2015	B15MC060521	\$25,967.03	\$0.00	\$25,967.03
Total	Total			\$45,080.16	\$0.00	\$45,080.16

Proposed Accomplishments

Housing Units : 500
 Total Population in Service Area: 19,525
 Census Tract Percent Low / Mod: 51.29

Annual Accomplishments

Years	Accomplishment Narrative	# Benefitting
2015		



U.S. Department of Housing and Urban Development
 Office of Community Planning and Development
 Integrated Disbursement and Information System
 CDBG Activity Summary Report (GPR) for Program Year 2016
 LAKEWOOD

Date: 16-Aug-2017
 Time: 13:31
 Page: 18

PGM Year: 2016
Project: 0010 - Code Enforcement
IDIS Activity: 314 - Code Enforcement

Status: Completed 8/15/2017 12:00:00 AM
Location: 5050 Clark Ave Lakewood, CA 90712-2603

Objective: Create suitable living environments
Outcome: Availability/accessibility
Matrix Code: Code Enforcement (15)

National Objective: LMA

Initial Funding Date: 12/06/2016

Description:

Financing

	Fund Type	Grant Year	Grant	Funded Amount	Drawn In Program Year	Drawn Thru Program Year
CDBG	EN	Pre-2015		\$8,641.69	\$0.00	\$0.00
		2014	B14MC060521		\$8,641.69	\$8,641.69
		2015	B15MC060521	\$11,677.45	\$11,677.45	\$11,677.45
		2016	B16MC060521	\$28,267.13	\$28,267.13	\$28,267.13
Total	Total			\$48,586.27	\$48,586.27	\$48,586.27

Proposed Accomplishments

Housing Units : 500
 Total Population in Service Area: 25,495
 Census Tract Percent Low / Mod: 54.32

Annual Accomplishments

Years **Accomplishment Narrative** **# Benefiting**

2016



PGM Year: 2016
Project: 0011 - Rehabilitation Delivery Costs
IDIS Activity: 315 - Rehabilitation Delivery Costs
Status: Completed 8/15/2017 12:00:00 AM
Location: 2803 Candlewood St Lakewood, CA 90712-2127
Objective: Create suitable living environments
Outcome: Availability/accessibility
Matrix Code: Rehabilitation Administration (14H) **National Objective:** LMH

Initial Funding Date: 12/06/2016

Description:

Provide funds for the payment of administrative costs for rehabilitation counseling, work specifications, loan and grant processing, inspections, and processing loan paybacks.

Financing

Fund Type	Grant Year	Grant	Funded Amount	Drawn In Program Year		Drawn Thru Program Year	
				Total	Hispanic	Total	Hispanic
EN	Pre-2015		\$12,016.13	\$0.00	\$0.00	\$12,016.13	\$0.00
	2014	B14MC060521			\$12,016.13		\$12,016.13
	2015	B15MC060521	\$1,915.00	\$1,915.00	\$1,915.00	\$1,915.00	\$1,915.00
	2016	B16MC060521	\$52,728.13	\$52,728.13	\$52,728.13	\$52,728.13	\$52,728.13
PI			\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00	\$30,000.00
Total			\$96,659.26	\$96,659.26	\$96,659.26	\$96,659.26	\$96,659.26

Proposed Accomplishments

Housing Units : 16

Actual Accomplishments

Number assisted:

	Owner		Renter		Total		Person	
	Total	Hispanic	Total	Hispanic	Total	Hispanic	Total	Hispanic
White:	8	2	0	0	8	2	0	0
Black/African American:	2	0	0	0	2	0	0	0
Asian:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native:	0	0	0	0	0	0	0	0
Native Hawaiian/Other Pacific Islander:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & White:	0	0	0	0	0	0	0	0
Asian White:	0	0	0	0	0	0	0	0
Black/African American & White:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & Black/African American:	0	0	0	0	0	0	0	0
Other multi-racial:	5	5	0	0	5	5	0	0
Asian/Pacific Islander:	0	0	0	0	0	0	0	0



U.S. Department of Housing and Urban Development
 Office of Community Planning and Development
 Integrated Disbursement and Information System
 CDBG Activity Summary Report (GPR) for Program Year 2016
 LAKEWOOD

Date: 16-Aug-2017
 Time: 13:31
 Page: 20

Hispanic:	0	0	0	0	0	0	0	0
Total:	15	7	0	0	15	7	0	0

Female-headed Households:

	7	0	0	7
--	---	---	---	---

Income Category:

	Owner	Renter	Total	Person
Extremely Low	1	0	1	0
Low Mod	11	0	11	0
Moderate	3	0	3	0
Non Low Moderate	0	0	0	0
Total	15	0	15	0
Percent Low/Mod	100.0%		100.0%	

Annual Accomplishments

Years	Accomplishment Narrative	# Benefitting
-------	--------------------------	---------------

2016



PGM Year: 2016
Project: 0012 - Fair Housing Program
IDIS Activity: 316 - Fair Housing
Status: Completed 8/15/2017 12:00:00 AM
Location: 5050 Clark Ave Lakewood, CA 90712-2603
Objective: Create suitable living environments
Outcome: Availability/accessibility
Matrix Code: Fair Housing Activities (if CDBG, then subject to 15% cap) (05J)
National Objective: LMC

Initial Funding Date: 12/06/2016

Description:

Provide funds for a fair housing counseling program and landlord tenant services for residents and property owners.

Financing

	Fund Type	Grant Year	Grant	Funded Amount	Drawn In Program Year	Drawn Thru Program Year
CDBG	EN	Pre-2015		\$14,683.35	\$0.00	\$0.00
		2014	B14MC060521		\$14,683.35	\$14,683.35
		2016	B16MC060521	\$20,556.65	\$20,556.65	\$20,556.65
Total	Total			\$35,240.00	\$35,240.00	\$35,240.00

Proposed Accomplishments

People (General) : 250

Actual Accomplishments

Number assisted:

	Owner		Renter		Total		Person	
	Total	Hispanic	Total	Hispanic	Total	Hispanic	Total	Hispanic
White:	0	0	0	0	0	0	76	6
Black/African American:	0	0	0	0	0	0	67	0
Asian:	0	0	0	0	0	0	6	0
American Indian/Alaskan Native:	0	0	0	0	0	0	0	0
Native Hawaiian/Other Pacific Islander:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & White:	0	0	0	0	0	0	0	0
Asian White:	0	0	0	0	0	0	0	0
Black/African American & White:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & Black/African American:	0	0	0	0	0	0	0	0
Other multi-racial:	0	0	0	0	0	0	85	85
Asian/Pacific Islander:	0	0	0	0	0	0	0	0
Hispanic:	0	0	0	0	0	0	0	0
Total:	0	0	0	0	0	0	234	91



Female-headed Households: 0 0 0

Income Category:	Owner	Renter	Total	Person
Extremely Low	0	0	0	73
Low Mod	0	0	0	92
Moderate	0	0	0	68
Non Low Moderate	0	0	0	1
Total	0	0	0	234
Percent Low/Mod				99.6%

Annual Accomplishments

Years	Accomplishment Narrative	# Benefiting
-------	--------------------------	--------------

2016	The City of Lakewood's Fair Housing Consultant assisted 348 individual during FY 16-17. Data was recorded according to household size rather than by individual.	
------	--	--



PGM Year: 2016
Project: 0013 - Burns Center Improvements
IDIS Activity: 317 - Burns Center Improvements
Status: Open
Location: 5510 Clark Ave Lakewood, CA 90712-1905
Objective: Create suitable living environments
Outcome: Availability/accessibility
Matrix Code: Senior Centers (03A) **National Objective:** LMC

Initial Funding Date: 12/06/2016

Description:

This project provides for necessary costs associated with all repairs and the replacement of an elevator to bring building to ADA compliance.

Financing

	Fund Type	Grant Year	Grant	Funded Amount	Drawn In Program Year	Drawn Thru Program Year
CDBG	EN	Pre-2015		\$83,812.97	\$0.00	\$0.00
		2014	B14MC060521		\$83,812.97	\$83,812.97
		2016	B16MC060521	\$251,945.03	\$0.00	\$0.00
Total	Total			\$335,758.00	\$83,812.97	\$83,812.97

Proposed Accomplishments

Public Facilities : 1

Actual Accomplishments

Number assisted:

	Owner		Renter		Total		Person	
	Total	Hispanic	Total	Hispanic	Total	Hispanic	Total	Hispanic
White:	0	0	0	0	0	0	0	0
Black/African American:	0	0	0	0	0	0	0	0
Asian:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native:	0	0	0	0	0	0	0	0
Native Hawaiian/Other Pacific Islander:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & White:	0	0	0	0	0	0	0	0
Asian White:	0	0	0	0	0	0	0	0
Black/African American & White:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & Black/African American:	0	0	0	0	0	0	0	0
Other multi-racial:	0	0	0	0	0	0	0	0
Asian/Pacific Islander:	0	0	0	0	0	0	0	0
Hispanic:	0	0	0	0	0	0	0	0
Total:	0							



U.S. Department of Housing and Urban Development
 Office of Community Planning and Development
 Integrated Disbursement and Information System
 CDBG Activity Summary Report (GPR) for Program Year 2016
 LAKEWOOD

Date: 16-Aug-2017
 Time: 13:31
 Page: 24

Female-headed Households: 0 0 0

Income Category:

	Owner	Renter	Total	Person
Extremely Low	0	0	0	0
Low Mod	0	0	0	0
Moderate	0	0	0	0
Non Low Moderate	0	0	0	0
Total	0	0	0	0
Percent Low/Mod				

Annual Accomplishments

Years	Accomplishment Narrative	# Benefiting
-------	--------------------------	--------------

2016



PGM Year: 2016
Project: 0014 - Community Family Guidance
IDIS Activity: 318 - Community Family Guidance
Status: Completed 8/15/2017 12:00:00 AM
Location: 10929 South St Cerritos, CA 90703-5340
Objective: Create suitable living environments
Outcome: Availability/accessibility
Matrix Code: Abused and Neglected Children (05N) **National Objective:** LMC

Initial Funding Date: 12/06/2016

Description:

Financing

	Fund Type	Grant Year	Grant	Funded Amount	Drawn In Program Year	Drawn Thru Program Year
CDBG	EN	Pre-2015		\$3,000.00	\$0.00	\$0.00
		2014	B14MC060521		\$3,000.00	\$3,000.00
		2016	B16MC060521	\$6,000.00	\$6,000.00	\$6,000.00
Total	Total			\$9,000.00	\$9,000.00	\$9,000.00

Proposed Accomplishments

People (General) : 24

Actual Accomplishments

Number assisted:

	Owner		Renter		Total		Person	
	Total	Hispanic	Total	Hispanic	Total	Hispanic	Total	Hispanic
White:	0	0	0	0	0	0	27	12
Black/African American:	0	0	0	0	0	0	8	1
Asian:	0	0	0	0	0	0	6	0
American Indian/Alaskan Native:	0	0	0	0	0	0	1	1
Native Hawaiian/Other Pacific Islander:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & White:	0	0	0	0	0	0	0	0
Asian White:	0	0	0	0	0	0	0	0
Black/African American & White:	0	0	0	0	0	0	3	0
American Indian/Alaskan Native & Black/African American:	0	0	0	0	0	0	1	0
Other multi-racial:	0	0	0	0	0	0	17	17
Asian/Pacific Islander:	0	0	0	0	0	0	0	0
Hispanic:	0	0	0	0	0	0	0	0
Total:	0	0	0	0	0	0	63	31



Female-headed Households: 0 0 0

Income Category:

	Owner	Renter	Total	Person
Extremely Low	0	0	0	41
Low Mod	0	0	0	12
Moderate	0	0	0	8
Non Low Moderate	0	0	0	2
Total	0	0	0	63
Percent Low/Mod				96.8%

Annual Accomplishments

Years	Accomplishment Narrative	# Benefitting
-------	--------------------------	---------------

2016



U.S. Department of Housing and Urban Development
 Office of Community Planning and Development
 Integrated Disbursement and Information System
 CDBG Activity Summary Report (GPR) for Program Year 2016
 LAKEWOOD

Date: 16-Aug-2017
 Time: 13:31
 Page: 27

PGM Year: 2016
Project: 0015 - Meals on Wheels
IDIS Activity: 319 - Meals on Wheels
Status: Completed 8/15/2017 12:00:00 AM
Location: 5510 Clark Ave Lakewood, CA 90712-1905
Objective: Create suitable living environments
Outcome: Availability/accessibility
Matrix Code: Senior Services (05A) **National Objective:** LMC

Initial Funding Date: 12/06/2016

Description:

Financing

	Fund Type	Grant Year	Grant	Funded Amount	Drawn In Program Year		Drawn Thru Program Year	
					Total	Hispanic	Total	Hispanic
CDBG	EN	Pre-2015		\$3,500.00	\$0.00	\$0.00	\$0.00	\$0.00
		2014	B14MC060521		\$3,500.00	\$3,500.00	\$3,500.00	\$3,500.00
		2016	B16MC060521		\$7,000.00	\$7,000.00	\$7,000.00	\$7,000.00
Total	Total			\$10,500.00	\$10,500.00	\$10,500.00	\$10,500.00	

Proposed Accomplishments

People (General) : 100

Actual Accomplishments

Number assisted:

	Owner		Renter		Total		Person	
	Total	Hispanic	Total	Hispanic	Total	Hispanic	Total	Hispanic
White:	0	0	0	0	0	0	83	3
Black/African American:	0	0	0	0	0	0	8	0
Asian:	0	0	0	0	0	0	3	0
American Indian/Alaskan Native:	0	0	0	0	0	0	1	1
Native Hawaiian/Other Pacific Islander:	0	0	0	0	0	0	1	0
American Indian/Alaskan Native & White:	0	0	0	0	0	0	1	0
Asian White:	0	0	0	0	0	0	1	1
Black/African American & White:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & Black/African American:	0	0	0	0	0	0	0	0
Other multi-racial:	0	0	0	0	0	0	11	10
Asian/Pacific Islander:	0	0	0	0	0	0	0	0
Hispanic:	0	0	0	0	0	0	0	0
Total:	0	0	0	0	0	0	109	15



PGM Year: 2016
Project: 0016 - Pathways Volunteer Hospice
IDIS Activity: 320 - Pathways Volunteer Hospice
Status: Completed 8/15/2017 12:00:00 AM
Location: 3701 Michelson St Lakewood, CA 90712-1402
Objective: Create suitable living environments
Outcome: Availability/accessibility
Matrix Code: Senior Services (05A) **National Objective:** LMC

Initial Funding Date: 12/06/2016

Description:

Provide funds for the operation of a public service program which provides in-home non-medical services to individuals and/or families living with illness or loss.

Financing

Fund Type	Grant Year	Grant	Funded Amount	Drawn In Program Year	Drawn Thru Program Year
CDBG	Pre-2015		\$3,000.00	\$0.00	\$0.00
	2014	B14MC060521		\$3,000.00	\$3,000.00
	2016	B16MC060521	\$6,000.00	\$6,000.00	\$6,000.00
Total			\$9,000.00	\$9,000.00	\$9,000.00

Proposed Accomplishments

People (General) : 20

Actual Accomplishments

Number assisted:

	Owner		Renter		Total		Person	
	Total	Hispanic	Total	Hispanic	Total	Hispanic	Total	Hispanic
White:	0	0	0	0	0	0	28	0
Black/African American:	0	0	0	0	0	0	1	0
Asian:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native:	0	0	0	0	0	0	0	0
Native Hawaiian/Other Pacific Islander:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & White:	0	0	0	0	0	0	0	0
Asian White:	0	0	0	0	0	0	0	0
Black/African American & White:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & Black/African American:	0	0	0	0	0	0	0	0
Other multi-racial:	0	0	0	0	0	0	3	3
Asian/Pacific Islander:	0	0	0	0	0	0	0	0
Hispanic:	0	0	0	0	0	0	0	0
Total:	0	0	0	0	0	0	32	3



Female-headed Households:

0 0 0 0

Income Category:

	Owner	Renter	Total	Person
Extremely Low	0	0	0	1
Low Mod	0	0	0	12
Moderate	0	0	0	15
Non Low Moderate	0	0	0	4
Total	0	0	0	32
Percent Low/Mod				87.5%

Annual Accomplishments

Years Accomplishment Narrative

Benefitting

2016



PGM Year: 2016
Project: 0017 - Human Services Association
IDIS Activity: 321 - Human Services Association
Status: Completed 8/15/2017 12:00:00 AM
Location: 6800 Florence Ave Bell Gardens, CA 90201-4957
Objective: Create suitable living environments
Outcome: Availability/accessibility
Matrix Code: Senior Services (05A) **National Objective:** LMC

Initial Funding Date: 12/06/2016

Description:

This activity will support senior citizen congregate meals at 2 Lakewood locations and home delivered meals to Lakewood residents.

Financing

Fund Type	Grant Year	Grant	Funded Amount	Drawn In Program Year	Drawn Thru Program Year
CDBG	Pre-2015		\$1,833.32	\$0.00	\$0.00
	2014	B14MC060521		\$1,833.32	\$1,833.32
	2016	B16MC060521	\$3,666.68	\$3,666.68	\$3,666.68
Total			\$5,500.00	\$5,500.00	\$5,500.00

Proposed Accomplishments

People (General) : 45

Actual Accomplishments

Number assisted:

	Owner		Renter		Total		Person	
	Total	Hispanic	Total	Hispanic	Total	Hispanic	Total	Hispanic
White:	0	0	0	0	0	0	66	9
Black/African American:	0	0	0	0	0	0	9	0
Asian:	0	0	0	0	0	0	13	0
American Indian/Alaskan Native:	0	0	0	0	0	0	1	0
Native Hawaiian/Other Pacific Islander:	0	0	0	0	0	0	1	0
American Indian/Alaskan Native & White:	0	0	0	0	0	0	1	0
Asian White:	0	0	0	0	0	0	4	1
Black/African American & White:	0	0	0	0	0	0	2	0
American Indian/Alaskan Native & Black/African American:	0	0	0	0	0	0	0	0
Other multi-racial:	0	0	0	0	0	0	20	17
Asian/Pacific Islander:	0	0	0	0	0	0	0	0
Hispanic:	0	0	0	0	0	0	0	0
Total:	0	0	0	0	0	0	117	27



Female-headed Households:

0 0 0 0

Income Category:

	Owner	Renter	Total	Person
Extremely Low	0	0	0	71
Low Mod	0	0	0	29
Moderate	0	0	0	16
Non Low Moderate	0	0	0	1
Total	0	0	0	117
Percent Low/Mod				99.1%

Annual Accomplishments

Years Accomplishment Narrative

Benefitting

2016



PGM Year: 2016
Project: 0018 - Program Administration
IDIS Activity: 322 - Program Administration
Status: Completed 8/15/2017 12:00:00 AM
Location:
Objective:
Outcome:
Matrix Code: General Program Administration (21A) **National Objective:**

Initial Funding Date: 12/06/2016

Description:
 This program ensures effective use of limited CDBG funds for the community's priorities and federal regulations
Financing

CDBG	Fund Type	Grant Year	Grant	Funded Amount	Drawn In Program Year		Drawn Thru Program Year	
					Total	Hispanic	Total	Hispanic
	EN	Pre-2015		\$5,297.57	\$0.00	\$0.00	\$0.00	\$0.00
		2014	B14MC060521			\$5,297.57	\$5,297.57	\$5,297.57
		2016	B16MC060521	\$61,194.74		\$61,194.74	\$61,194.74	\$61,194.74
	PI			\$37,804.08		\$37,804.08	\$37,804.08	\$37,804.08
Total				\$104,296.39		\$104,296.39	\$104,296.39	\$104,296.39

Proposed Accomplishments

Actual Accomplishments

Number assisted:

	Owner		Renter		Total		Person	
	Total	Hispanic	Total	Hispanic	Total	Hispanic	Total	Hispanic
White:	0	0	0	0	0	0	0	0
Black/African American:	0	0	0	0	0	0	0	0
Asian:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native:	0	0	0	0	0	0	0	0
Native Hawaiian/Other Pacific Islander:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & White:	0	0	0	0	0	0	0	0
Asian White:	0	0	0	0	0	0	0	0
Black/African American & White:	0	0	0	0	0	0	0	0
American Indian/Alaskan Native & Black/African American:	0	0	0	0	0	0	0	0
Other multi-racial:	0	0	0	0	0	0	0	0
Asian/Pacific Islander:	0	0	0	0	0	0	0	0
Hispanic:	0	0	0	0	0	0	0	0
Total:	0							



Female-headed Households:

0

Income Category:

	Owner	Renter	Total	Person
Extremely Low			0	
Low Mod			0	
Moderate			0	
Non Low Moderate			0	
Total	0	0	0	0
Percent Low/Mod				

Annual Accomplishments

No data returned for this view. This might be because the applied filter excludes all data.



U.S. Department of Housing and Urban Development
Office of Community Planning and Development
Integrated Disbursement and Information System
CDBG Activity Summary Report (GPR) for Program Year 2016
LAKEWOOD

Total Funded Amount:	\$1,087,846.91
Total Drawn Thru Program Year:	\$768,930.22
Total Drawn In Program Year:	\$414,177.84

CDBG FINANCIAL SUMMARY



Office of Community Planning and Development
 U.S. Department of Housing and Urban Development
 Integrated Disbursement and Information System
 PR26 - CDBG Financial Summary Report
 Program Year 2016
 LAKEWOOD , CA

DATE: 08-31-17
 TIME: 13:06
 PAGE: 1

PART I: SUMMARY OF CDBG RESOURCES

01 UNEXPENDED CDBG FUNDS AT END OF PREVIOUS PROGRAM YEAR	765,326.91
02 ENTITLEMENT GRANT	529,085.00
03 SURPLUS URBAN RENEWAL	0.00
04 SECTION 108 GUARANTEED LOAN FUNDS	0.00
05 CURRENT YEAR PROGRAM INCOME	75,509.32
05a CURRENT YEAR SECTION 108 PROGRAM INCOME (FOR SI TYPE)	0.00
06 FUNDS RETURNED TO THE LINE-OF-CREDIT	0.00
06a FUNDS RETURNED TO THE LOCAL CDBG ACCOUNT	0.00
07 ADJUSTMENT TO COMPUTE TOTAL AVAILABLE	0.00
08 TOTAL AVAILABLE (SUM, LINES 01-07)	1,369,921.23

PART II: SUMMARY OF CDBG EXPENDITURES

09 DISBURSEMENTS OTHER THAN SECTION 108 REPAYMENTS AND PLANNING/ADMINISTRATION	309,881.45
10 ADJUSTMENT TO COMPUTE TOTAL AMOUNT SUBJECT TO LOW/MOD BENEFIT	0.00
11 AMOUNT SUBJECT TO LOW/MOD BENEFIT (LINE 09 + LINE 10)	309,881.45
12 DISBURSED IN IDIS FOR PLANNING/ADMINISTRATION	104,296.39
13 DISBURSED IN IDIS FOR SECTION 108 REPAYMENTS	0.00
14 ADJUSTMENT TO COMPUTE TOTAL EXPENDITURES	0.00
15 TOTAL EXPENDITURES (SUM, LINES 11-14)	414,177.84
16 UNEXPENDED BALANCE (LINE 08 - LINE 15)	955,743.39

PART III: LOWMOD BENEFIT THIS REPORTING PERIOD

17 EXPENDED FOR LOW/MOD HOUSING IN SPECIAL AREAS	0.00
18 EXPENDED FOR LOW/MOD MULTI-UNIT HOUSING	0.00
19 DISBURSED FOR OTHER LOW/MOD ACTIVITIES	309,881.45
20 ADJUSTMENT TO COMPUTE TOTAL LOW/MOD CREDIT	0.00
21 TOTAL LOW/MOD CREDIT (SUM, LINES 17-20)	309,881.45
22 PERCENT LOW/MOD CREDIT (LINE 21/LINE 11)	100.00%

LOW/MOD BENEFIT FOR MULTI-YEAR CERTIFICATIONS

23 PROGRAM YEARS(PY) COVERED IN CERTIFICATION	PY: PY: PY:
24 CUMULATIVE NET EXPENDITURES SUBJECT TO LOW/MOD BENEFIT CALCULATION	0.00
25 CUMULATIVE EXPENDITURES BENEFITING LOW/MOD PERSONS	0.00
26 PERCENT BENEFIT TO LOW/MOD PERSONS (LINE 25/LINE 24)	0.00%

PART IV: PUBLIC SERVICE (PS) CAP CALCULATIONS

27 DISBURSED IN IDIS FOR PUBLIC SERVICES	69,240.00
28 PS UNLIQUIDATED OBLIGATIONS AT END OF CURRENT PROGRAM YEAR	0.00
29 PS UNLIQUIDATED OBLIGATIONS AT END OF PREVIOUS PROGRAM YEAR	0.00
30 ADJUSTMENT TO COMPUTE TOTAL PS OBLIGATIONS	0.00
31 TOTAL PS OBLIGATIONS (LINE 27 + LINE 28 - LINE 29 + LINE 30)	69,240.00
32 ENTITLEMENT GRANT	529,085.00
33 PRIOR YEAR PROGRAM INCOME	67,804.08
34 ADJUSTMENT TO COMPUTE TOTAL SUBJECT TO PS CAP	0.00
35 TOTAL SUBJECT TO PS CAP (SUM, LINES 32-34)	596,889.08
36 PERCENT FUNDS OBLIGATED FOR PS ACTIVITIES (LINE 31/LINE 35)	11.60%

PART V: PLANNING AND ADMINISTRATION (PA) CAP

37 DISBURSED IN IDIS FOR PLANNING/ADMINISTRATION	104,296.39
38 PA UNLIQUIDATED OBLIGATIONS AT END OF CURRENT PROGRAM YEAR	0.00
39 PA UNLIQUIDATED OBLIGATIONS AT END OF PREVIOUS PROGRAM YEAR	0.00
40 ADJUSTMENT TO COMPUTE TOTAL PA OBLIGATIONS	0.00
41 TOTAL PA OBLIGATIONS (LINE 37 + LINE 38 - LINE 39 +LINE 40)	104,296.39
42 ENTITLEMENT GRANT	529,085.00
43 CURRENT YEAR PROGRAM INCOME	75,509.32
44 ADJUSTMENT TO COMPUTE TOTAL SUBJECT TO PA CAP	0.00
45 TOTAL SUBJECT TO PA CAP (SUM, LINES 42-44)	604,594.32
46 PERCENT FUNDS OBLIGATED FOR PA ACTIVITIES (LINE 41/LINE 45)	17.25%



Office of Community Planning and Development
 U.S. Department of Housing and Urban Development
 Integrated Disbursement and Information System
 PR26 - CDBG Financial Summary Report
 Program Year 2016
 LAKEWOOD , CA

DATE: 08-31-17
 TIME: 13:06
 PAGE: 2

LINE 17 DETAIL: ACTIVITIES TO CONSIDER IN DETERMINING THE AMOUNT TO ENTER ON LINE 17

Report returned no data.

LINE 18 DETAIL: ACTIVITIES TO CONSIDER IN DETERMINING THE AMOUNT TO ENTER ON LINE 18

Report returned no data.

LINE 19 DETAIL: ACTIVITIES INCLUDED IN THE COMPUTATION OF LINE 19

Plan Year	IDIS Project	IDIS Activity	Voucher Number	Activity Name	Matrix Code	National Objective	Drawn Amount
2014	4	296	6027216	Burns Center Improvements	03A	LMC	\$5,601.06
2014	4	296	6058410	Burns Center Improvements	03A	LMC	\$5,981.89
2016	13	317	5991216	Burns Center Improvements	03A	LMC	\$83,812.97
					03A	Matrix Code	\$95,395.92
2016	15	319	5991216	Meals on Wheels	05A	LMC	\$3,500.00
2016	15	319	6027216	Meals on Wheels	05A	LMC	\$3,500.00
2016	15	319	6058410	Meals on Wheels	05A	LMC	\$3,500.00
2016	16	320	5991216	Pathways Volunteer Hospice	05A	LMC	\$3,000.00
2016	16	320	6027216	Pathways Volunteer Hospice	05A	LMC	\$2,250.00
2016	16	320	6058410	Pathways Volunteer Hospice	05A	LMC	\$3,750.00
2016	17	321	5991216	Human Services Association	05A	LMC	\$1,833.32
2016	17	321	6027216	Human Services Association	05A	LMC	\$1,833.32
2016	17	321	6058410	Human Services Association	05A	LMC	\$1,833.36
					05A	Matrix Code	\$25,000.00
2016	12	316	5991216	Fair Housing	05J	LMC	\$14,683.35
2016	12	316	6027216	Fair Housing	05J	LMC	\$8,810.01
2016	12	316	6058410	Fair Housing	05J	LMC	\$11,746.64
					05J	Matrix Code	\$35,240.00
2016	14	318	5991216	Community Family Guidance	05N	LMC	\$3,000.00
2016	14	318	6027216	Community Family Guidance	05N	LMC	\$3,000.00
2016	14	318	6058410	Community Family Guidance	05N	LMC	\$3,000.00
					05N	Matrix Code	\$9,000.00
2016	11	315	5991216	Rehabilitation Delivery Costs	14H	LMH	\$42,016.13
2016	11	315	6027216	Rehabilitation Delivery Costs	14H	LMH	\$31,998.73
2016	11	315	6058410	Rehabilitation Delivery Costs	14H	LMH	\$22,644.40
					14H	Matrix Code	\$96,659.26
2016	10	314	5991216	Code Enforcement	15	LMA	\$20,319.14
2016	10	314	6027216	Code Enforcement	15	LMA	\$16,616.90
2016	10	314	6058410	Code Enforcement	15	LMA	\$11,650.23
					15	Matrix Code	\$48,586.27
Total							\$309,881.45

LINE 27 DETAIL: ACTIVITIES INCLUDED IN THE COMPUTATION OF LINE 27

Plan Year	IDIS Project	IDIS Activity	Voucher Number	Activity Name	Matrix Code	National Objective	Drawn Amount
2016	15	319	5991216	Meals on Wheels	05A	LMC	\$3,500.00
2016	15	319	6027216	Meals on Wheels	05A	LMC	\$3,500.00
2016	15	319	6058410	Meals on Wheels	05A	LMC	\$3,500.00
2016	16	320	5991216	Pathways Volunteer Hospice	05A	LMC	\$3,000.00
2016	16	320	6027216	Pathways Volunteer Hospice	05A	LMC	\$2,250.00
2016	16	320	6058410	Pathways Volunteer Hospice	05A	LMC	\$3,750.00
2016	17	321	5991216	Human Services Association	05A	LMC	\$1,833.32
2016	17	321	6027216	Human Services Association	05A	LMC	\$1,833.32
2016	17	321	6058410	Human Services Association	05A	LMC	\$1,833.36
					05A	Matrix Code	\$25,000.00



Office of Community Planning and Development
 U.S. Department of Housing and Urban Development
 Integrated Disbursement and Information System
 PR26 - CDBG Financial Summary Report
 Program Year 2016
 LAKEWOOD , CA

DATE: 08-31-17
 TIME: 13:06
 PAGE: 3

Plan Year	IDIS Project	IDIS Activity	Voucher Number	Activity Name	Matrix Code	National Objective	Drawn Amount
2016	12	316	5991216	Fair Housing	05J	LMC	\$14,683.35
2016	12	316	6027216	Fair Housing	05J	LMC	\$8,810.01
2016	12	316	6058410	Fair Housing	05J	LMC	\$11,746.64
					05J	Matrix Code	\$35,240.00
2016	14	318	5991216	Community Family Guidance	05N	LMC	\$3,000.00
2016	14	318	6027216	Community Family Guidance	05N	LMC	\$3,000.00
2016	14	318	6058410	Community Family Guidance	05N	LMC	\$3,000.00
					05N	Matrix Code	\$9,000.00
Total							\$69,240.00

LINE 37 DETAIL: ACTIVITIES INCLUDED IN THE COMPUTATION OF LINE 37

Plan Year	IDIS Project	IDIS Activity	Voucher Number	Activity Name	Matrix Code	National Objective	Drawn Amount
2016	18	322	5991216	Program Administration	21A		\$43,101.65
2016	18	322	6027216	Program Administration	21A		\$33,673.80
2016	18	322	6058410	Program Administration	21A		\$27,476.19
2016	18	322	6068290	Program Administration	21A		\$44.75
					21A	Matrix Code	\$104,296.39
Total							\$104,296.39

**NOTICE OF PUBLIC HEARING
AND 15-DAY COMMENT PERIOD**

NOTICE IS HEREBY GIVEN that on September 12, 2017, a Public Hearing will be held before the City of Lakewood's City Council for citizen comments on the City's Consolidated Annual Performance and Evaluation Report (CAPEER) for the Fiscal Year (FY) July 1, 2016 - June 30, 2017. The CAPEER is an assessment of the effectiveness of the City of Lakewood's performance during the reporting period of FY 2016 - 2017, and the achievement of its five-year strategic objectives and priorities as described in the Consolidated Plan.

The CAPEER will be available for public review during the 15-day comment period beginning Thursday, August 24, 2017. The City of Lakewood welcomes any written recommendations, suggestions, or other input on the CAPEER.

The City of Lakewood intends to provide reasonable accommodations in accordance with the Americans with Disabilities Act of 1990. If special accommodations are required, please call Carolyn Labouillier, Housing Specialist, at (562) 866-6371, extension 220, at least 48 hours prior to the Public Hearing.

Citizens wishing to comment on the FY 2016 - 2017 CAPEER may be heard at the September 12th Public Hearing or may do so in writing by September 11, 2017 to:

City of Lakewood, Community Development
Department
5000 Clark Avenue
Lakewood, CA 90712
Attn: Carolyn Labouillier, Housing Specialist

NOTICE IS FURTHER GIVEN that said Public Hearing will be held Tuesday, September 12, 2017, 6:00 p.m. in the Council Chambers of the Civic Center, 5000 Clark Avenue, Lakewood, California 90712. All interested persons are urged to attend in person and testify in this matter. The current proposed CAPEER is available for review in the City Clerk's office and Community Development Department of Lakewood City Hall, 5000 Clark Avenue, Lakewood, California, and at Lakewood Library, 4990 Clark Avenue, Lakewood, California.

NOTICE IS FURTHER GIVEN that if you challenge the aforementioned action in court, you may be limited to raise only those issues you or someone else raised at the Public Hearing described in this notice, or in written correspondence delivered to the City, or in writing prior to the Public Hearing.

Carol Flynn Jacoby
Dated this 24th day of August, 2017
Assistant City Manager, City of Lakewood

Pub Aug 24, 2017 (11) PT (997892)

**D
I
V
I
D
E
R
S
H
E
E
T**

Reports

COUNCIL AGENDA
September 12, 2017

TO: The Honorable Mayor and City Council

SUBJECT: Water Master Plan and Water Rate Study

INTRODUCTION

On November 8, 2016, the City Council approved an agreement with Stetson Engineers Inc. (Stetson) to prepare a Water Master Plan and Water Rate Study. The Water Master Plan is a comprehensive long-term capital improvement plan that supplements the proposed five-year Water Rate Study.

SUMMARY

Stetson completed the Water Master Plan and Water Rate Study for the City Council's review and approval. A summary of their findings was presented at a Council Study Session on May 9, 2017.

FISCAL IMPACT

Staff has worked with Stetson to develop a water system Capital Improvement Plan and proposed water rate structure to ensure rate stabilization to meet future operating and capital improvement costs.

RECOMMENDATION

Staff recommends that the City Council receive and file the Water Master Plan and Water Rate Study.

Jason J. Wen, Ph.D., P.E.
Water Resources Director



Thaddeus McCormack
City Manager



City of Lakewood

FINAL - 2017 Water System Master Plan



August 2017



Control Automation Design, Inc.



861 Village Oaks Drive, Suite 100 • Covina, California 91724
Phone: (626) 967-6202 • FAX: (626) 331-7065 • www.stetsonengineers.com

Northern California • Southern California • Arizona • Colorado

<Page Intentionally Left Blank>

TABLE OF CONTENTS

Page

EXECUTIVE SUMMARY	ES-1
CHAPTER 1	1-1
INTRODUCTION AND OVERVIEW	1-1
1.1 System Description	1-1
1.1.1 City of Lakewood Formation and Location	1-1
1.1.2 City Management	1-2
1.2 Organization of the Water System Master Plan Update Report	1-4
CHAPTER 2	2-1
WATER DEMANDS	2-1
2.1 Introduction	2-1
2.2 Water Service Connections and Population	2-1
2.3 Water System Demands	2-2
2.3.1 Historical, Current, and Projected Water Production and Demands	2-2
2.3.2 Historical Water Losses (Unaccounted for Water)	2-5
2.3.3 Maximum Day Potable Water Demands	2-5
2.4 Recycled Water Demands.....	2-6
CHAPTER 3	3-1
WATER SUPPLIES AND REGIONAL OPPORTUNITIES	3-1
3.1 Water Supplies.....	3-1
3.1.1 Central Basin Groundwater	3-1
3.1.2 Treated Imported Water.....	3-6
3.1.3 Emergency Interconnections.....	3-7
3.1.4 Recycled Water.....	3-7
3.2 Additional Recycled Water Use and Supply.....	3-10
3.3 Stormwater Capture Programs.....	3-19
3.3.1 Bolivar Park Stormwater Capture	3-20
3.3.2 Mayfair Park Stormwater Capture.....	3-21
3.3.3 Other Potential Stormwater Capture Sites.....	3-21
CHAPTER 4	4-1
WATER QUALITY REGULATORY REQUIREMENTS AND ISSUES	4-1
4.1 Water System Vulnerability	4-1
4.1.1 Drinking Water Source Assessment and Protection (DWSAP) Program	4-1
4.1.2 Bioterrorism Act.....	4-3
4.2 Drinking Water Quality Monitoring and Reporting	4-5
4.2.1 Title 22 Drinking Water Quality and Monitoring Regulations	4-5
4.2.2 Notification Levels	4-8
4.2.3 Federal Unregulated Contaminant Monitoring Rule.....	4-9
4.2.4 Disinfectant and Disinfection Byproduct Rule (D/DBPR).....	4-15

**TABLE OF CONTENTS
(Continued)**

	<u>Page</u>
4.2.5 Radionuclide Rule	4-17
4.2.6 Revised Total Coliform Rule	4-18
4.2.7 Groundwater Rule	4-19
4.2.8 Lead and Copper Rule	4-21
4.2.9 1,2,3-Trichloropropane	4-22
4.2.10 Drinking Water Regulations Process.....	4-23
4.3 Poly/Orthophosphate Treatment	4-24
4.4 Public Notification of Drinking Water Quality	4-25
4.4.1 Consumer Confidence Reports (CCR)	4-25
4.4.2 Public Health Goal Reports	4-26
4.5 Summary of Water Quality Regulatory Requirements	4-27
CHAPTER 5	5-1
EVALUATION OF FACILITY AGES, EFFICIENCIES, AND CONDITIONS	5-1
5.1 Summary of Groundwater, Pumping, Storage, and Treatment Facilities.....	5-1
5.1.1 Groundwater Wells.....	5-10
5.1.2 Booster Station Pumps	5-12
5.1.3 Reservoirs	5-13
5.1.4 Imported Water Connections	5-14
5.1.5 Emergency Interconnections	5-15
5.1.6 Treatment Facilities	5-16
5.1.7 Distribution Pipelines.....	5-19
5.1.8 Supervisory Control and Data Acquisition (SCADA).....	5-20
5.1.9 Advanced Meter Infrastructure (AMI).....	5-22
5.2 Remaining Service Life Evaluation	5-22
5.2.1 Remaining Service Life – Well Casing	5-23
5.2.2 Remaining Service Life – Well Pumps and Booster Pumps.....	5-25
5.2.3 Remaining Service Life – Water Storage Facilities.....	5-29
5.3 SCE Pump Efficiency Tests	5-31
5.3.1 SCE Pump Efficiency Tests – Well Pumps	5-31
5.3.2 Potential Annual Cost Savings – Well Pumps	5-32
5.3.3 SCE Pump Efficiency Tests – Booster Pumps	5-33
5.3.4 Energy Saving Analysis – Booster Pumps.....	5-34
5.3.5 Cost Saving Analysis – Energy Cost Versus Pump Refurbishment or Replacement Cost	5-35
5.4 Condition Assessment of Reservoirs.....	5-38
5.4.1 Removal of Reservoir 22	5-40
5.4.2 Reservoir Maintenance.....	5-40
5.4.3 Comprehensive Analysis Report	5-42
5.5 Asset Management Plan	5-43

**TABLE OF CONTENTS
(Continued)**

	<u>Page</u>
CHAPTER 6	6-1
EVALUATION OF FACILITY CAPACITIES TO MEET DEMANDS.....	6-1
6.1 Introduction	6-1
6.1.1 Evaluation Criteria	6-1
6.2 Existing Distribution System Overview and Evaluation	6-9
6.2.1 Evaluation of Finished Water Storage	6-13
6.2.2 Evaluation of Finished Water Pumping	6-14
6.3 Water Distribution System Hydraulic Evaluation Using the Hydraulic Modeling.....	6-15
6.3.1 Modeling Analysis No. 1 - Pressures, Pipe Velocities, and Head Loss of the Existing System (ADD and MDD)	6-18
6.3.2 Modeling Analysis No. 2 - Fire Flow Deficiencies of the Existing System (MDD+FF).....	6-23
6.3.3 Modeling Analysis No. 3 - Fire Flow Deficiencies of the Existing System without Reservoir 22 (MDD+FF)	6-27
6.3.4 Modeling Analysis No. 4 – Proposed Solutions to Address Fire Flow Deficiencies of the Existing System.....	6-31
6.3.5 Modeling Analysis No. 5 – Proposed Solutions to Address Fire Flow Deficiencies of the Existing System without Reservoir 22.....	6-35
6.3.6 Modeling Analysis No. 6 – Fire Flow Sensitivity Analysis of Additional Water Supplies.....	6-35
6.4 Water Main Replacement Program	6-38
6.4.1 Water Main Condition Assessment	6-39
6.4.2 Recommendations on Water Main Maintenance and Reliability Improvements.....	6-39
CHAPTER 7	7-1
IMPLEMENTATION PLAN AND COST ESTIMATES.....	7-1
7.1 Introduction	7-1
7.2 CIP Project Scheduling and Summary	7-2

TABLE OF CONTENTS (Continued)

LIST OF TABLES

Table 2-1	Current and Projected Population.....	2-2
Table 2-2	Historical Water Demands	2-3
Table 2-3	Projected Water Demands	2-4
Table 2-4	Maximum Day Potable Water Demands.....	2-6
Table 3-1	Historical Annual Water Production (AF)	3-2
Table 3-2	Carryover Water (AF).....	3-4
Table 3-3	Historical Leases (AFY).....	3-5
Table 3-4	Historical Storage Transactions (AF).....	3-6
Table 3-5	Recycled Water Connections and Usage (Fiscal Year 2015-16)	3-9
Table 3-6	Recycled Water Expansion	3-16
Table 4-1	Summary of UCMR 3 Sampling Results.....	4-11
Table 4-2	Summary of Water Quality Regulatory Requirements.....	4-27
Table 4-3	Summary of Title 22 Water Quality Monitoring Requirements	4-28
Table 5-1	Summary of Water Supply Facilities.....	5-2
Table 5-2	Groundwater Production Wells.....	5-12
Table 5-3	Booster Pump Facilities	5-13
Table 5-4	Water Storage Facilities.....	5-14
Table 5-5	Imported Water Connections (MWD / CBMWD).....	5-15
Table 5-6	Emergency Interconnections.....	5-16
Table 5-7	Summary of City’s Distribution Pipelines by Length (Feet)	5-20
Table 5-8	Initial Estimated Service Life for the Water Utility Facilities	5-23
Table 5-9	Remaining Service Life - Well Casings (Years)	5-25
Table 5-10	Remaining Service Life – Well Pumps (Years)	5-27
Table 5-11	Remaining Service Life – Booster Pump Facilities (Years).....	5-29
Table 5-12	Remaining Service Life - Water Storage Facilities (Years)	5-30
Table 5-13	Well Pump Efficiencies	5-32
Table 5-14	Potential Well Pump Energy Cost Savings.....	5-33
Table 5-15	Booster Pump Efficiencies	5-34
Table 5-16	Potential Booster Pump Efficiency Pump Energy Cost Savings.....	5-35
Table 5-17	Cost Analysis for Replacement or Refurbishment of Well Pumps	5-37
Table 5-18	Cost Analysis for Replacement or Refurbishment of Booster Pumps.....	5-37
Table 5-19	Reservoir Inspection Date	5-39
Table 5-20	Reservoir Inspection Summary.....	5-40
Table 5-21	Asset Inventory and Replacement Value	5-45
Table 5-22	Projected Asset Replacement and Rehabilitation Costs	5-46
Table 6-1	Design Guidelines for Transmission and Distribution Pipeline Mains.....	6-5
Table 6-2	Reservoir Storage Requirements.....	6-7
Table 6-3	Summary of Storage Evaluation	6-14
Table 7-1	Capital Improvement Plan (CIP) Budget Summary.....	7-4
Table 7-2	Capital Improvement Plan (CIP) Schedule.....	7-5

TABLE OF CONTENTS (Continued)

LIST OF FIGURES

Figure 1-1	Water System Service Boundary.....	1-3
Figure 3-1	Existing Recycled Water System	3-8
Figure 3-2	Proposed Recycled Water System Expansion.....	3-13
Figure 5-1	Summary of the City’s Water System Facilities	5-3
Figure 5-2	Plant 4 (Wells #4, #10, and #27)	5-4
Figure 5-3	Plant 13	5-5
Figure 5-4	Plant 22 (Well #22)	5-6
Figure 5-5	Well #2A.....	5-7
Figure 5-6	Well #6	5-7
Figure 5-7	Well #8	5-8
Figure 5-8	Well #13A.....	5-8
Figure 5-9	Well #15A.....	5-9
Figure 5-10	Well #17	5-9
Figure 5-11	Well #18	5-10
Figure 5-12	Arsenic Treatment Facility	5-19
Figure 6-1	Fire Flow Requirements By Category.....	6-3
Figure 6-2	Water System Schematic	6-11
Figure 6-3	System Pressure Distribution (ADD).....	6-19
Figure 6-4	System Pressure Distribution (MDD).....	6-21
Figure 6-5	Fire Flow Deficiencies (MDD+FF)	6-25
Figure 6-6	Fire Flow Deficiencies without Reservoir 22 (MDD+FF)	6-29
Figure 6-7	Proposed Pipeline Improvements ("First Priority") - Fire Flow Deficiencies	6-33
Figure 6-8	Proposed Pipeline Improvements ("First Priority") - Other.....	6-43
Figure 6-9	Proposed Pipeline Improvements ("Second Priority")	6-45

TABLE OF CONTENTS (Continued)

LIST OF APPENDICES

Appendix A	City Facility Photographs
Appendix B	Summary of Pipeline Materials, Sizes, and Ages
Appendix C	City of Lakewood's SCADA Master Plan 2017
Appendix D	Summary of Reservoir Inspection Reports
Appendix E	Replacement Projects (Based on Asset Management Plan)
Appendix F	Model Calibration Report
Appendix G	Listing of First Priority Pipelines
Appendix H	Sensitivity Analysis Scenario Results
Appendix I	Pipeline Leak Memorandum
Appendix J	Listing of Secondary Priority Pipelines



EXECUTIVE SUMMARY

The City of Lakewood's Department of Water Resources (City) 2017 Water System Master Plan Update (2017 Update) is an update of the City's 2002 Water System Master Plan. This 2017 Update provides details on the City's historical and future demands, its water supply sources and water quality requirements, the City's water production and distribution facilities, and the City's finished water pumping, storage, and distribution facilities. The 2017 Update also provides conclusions and recommendations, including cost estimates for improvements and an implementation plan.

Water Supplies and Demands

A summary of the City's historical and projected water demands is provided in Table ES-1 and Table ES-2. The following summarizes the water demand information provided.

- The majority of the City's potable water supplies comes from groundwater production. The City uses recycled water supplies from the Los Angeles County Sanitation Districts (LACSD) through the City of Cerritos. The City also has access to imported water from Metropolitan Water District of Southern California (MWD) through Central Basin Municipal Water District.
- The City's historical water demands averaged 9,175 AFY, with a range between 6,869 and 10,369 AFY.
- Projected water demands from 2020 to 2040 are estimated to be lower than the current water demand of approximately 7,100 AFY due to the City's built-out condition and the City's implementation of required water conservation measures.



Table ES-1 Historical Water Demands

Fiscal Year	Potable Water Demand (AF)	Recycled Water Demand (AF)	Total Water Demand (AF)
1996-97	9,473	541	10,015
1997-98	8,538	388	8,926
1998-99	8,878	446	9,324
1999-00	9,127	478	9,605
2000-01	8,718	405	9,123
2001-02	9,194	423	9,617
2002-03	9,070	346	9,416
2003-04	9,433	426	9,859
2004-05	8,841	303	9,144
2005-06	9,205	380	9,585
2006-07	9,929	440	10,369
2007-08	9,432	413	9,846
2008-09	8,641	383	9,024
2009-10	9,070	442	9,512
2010-11	7,713	429	8,143
2011-12	8,022	452	8,474
2012-13	9,275	487	9,762
2013-14	8,690	549	9,239
2014-15	7,177	468	7,645
2015-16	6,387	482	6,869
Average	8,741	434	9,175

Table ES-2 Projected Water Demands

Year	Potable Water Demand (AF)	Recycled Water Demand (AF)	Total Water Demand (AF)
2020	6,667	502	7,169
2025	6,801	502	7,303
2030	6,937	502	7,439
2035	7,076	502	7,578
2040	7,098	502	7,600



Water Production and Distribution Facilities

Summary listings of the City’s water production and distribution facilities are provided in Tables ES-3 through ES-7. The City’s water facilities include the following.

- 10 potable wells and 1 irrigation well
- Plant 4 includes 3 storage tanks, 7 booster pumps, 2 wells, and an arsenic treatment system.
- Plant 13 includes 5 storage tanks and 4 booster pumps.
- Plant 22 includes a reservoir, one well, and 4 booster pumps.
- Two imported water connections with MWD.
- Three emergency connections with the City of Cerritos, the City of Long Beach, and Golden State Water Company.

Table ES-3 Groundwater Production Wells

Name	Year of Installation	Well Depth (ft bgs)	Motor Size (hp)	Capacity (gpm)	Services
<u>Potable</u>					
Well #2A	1970	656	50	500	System
Well #4	1937	656	75	700	System
Well #8	1945	385	75	1,000	Plant 4 Tanks
Well #10	1950	876	60	975	Plant 4 Tanks
Well #13A	2003	1,120	100	1,200	Plant 13 Tanks
Well #15A	2001	1,050	100	1,750	Plant 4 Tanks
Well #17	1951	1,134	100	1,100	System
Well #18	1951	1,108	100	1,000	System
Well #22	1996	1,080	200	1,200	Plant 22 Reservoir
Well #27	2010	970	200	2,250	Plant 4 Tanks
Total				11,675	
<u>Irrigation</u>					
Well #6	1969	602	40	500	Irrigation



Table ES-4 Booster Pump Facilities

Name	Year of Installation	Power (hp)	Capacity (gpm)
Plant 4, Booster #2	1965	50	1,000
Plant 4, Booster #3	1965	50	1,000
Plant 4, Booster #4	1965	100	1,700
Plant 4, Booster #5	1965	100	2,000
Plant 4, Booster #6	1965	50	1,000
Plant 4, Booster #7	1965	60	1,120
Plant 4, Booster #8	2017	125	2,600
Plant 13, Booster #1	2017	40	800
Plant 13, Booster #2	2017	50	1,000
Plant 13, Booster #3	2017	75	1,500
Plant 13, Booster #4	2017	75	1,500
Plant 22, Booster #1	1990	40	750
Plant 22, Booster #2	1990	40	925
Plant 22, Booster #3	1990	40	950
Plant 22, Booster #4	1990	60	1,350
Total			19,195

Table ES-5 Water Storage Facilities

Name	Year of Installation	Material	Capacity (MG)	Source
Plant 4, Tank 1	1965	Steel	1.5	Wells #8, #10, #15A, #27
Plant 4, Tank 2	1965	Steel	1.5	Wells #8, #10, #15A, #27
Plant 4, Tank 3	1996	Pre-Stressed Concrete	5.4	Wells #8, #10, #15A, #27
Plant 13, Tank 1	1950	Steel	0.454	Well #13A
Plant 13, Tank 2	1950	Steel	0.454	Well #13A
Plant 13, Tank 3	1950	Steel	0.454	Well #13A
Plant 13, Tank 4	1997	Steel	0.454	Well #13A
Plant 13, Tank 5	1965	Steel	0.22	Well #13A
Reservoir 22	1954	Cast-in Place Concrete	2.5	Well #22
Total			12.9	

**Table ES-6 Imported Water Connections (MWD / CBMWD)**

Name	Location	Capacity (cfs)	Capacity (gpm)
CENB-43	Southeast corner of Allington Street and Woodruff Avenue (Inactive in 2017)	15	6,700
CENB-49	East Union Pacific Railroad right of way and south of Carson Street	15	6,700

Table ES-7 Emergency Interconnections

Name	Location	Direction	Size (Inches)	Capacity (gpm)
City of Cerritos	Palo Verde Avenue at Andy Street	2-way	12	5,000
City of Long Beach	Palo Verde Avenue south of Carson Street	2-way	12	5,000
Golden State Water Company (GSWC)	North side of Carson Street at the San Gabriel River	2-way	12	5,000

Conclusions and Recommendations

The 2017 Update recommends an initial 10-year CIP project schedule from fiscal year 2017-18 through fiscal year 2026-27. Additional improvements will be needed after the initial 10-year CIP project schedule to replace aging facilities and address other water system needs. As a result, the 2017 Update provides an additional CIP summary schedule from fiscal year 2027-28 through fiscal year 2036-37. The following is a listing of conclusions and recommendations from the 2017 Update for inclusion in the CIP project schedule.



Water Quality

- 1) Continue monitoring and reporting in accordance with Title 22 requirements. Continue monitoring for upcoming regulations (including establishment of a 1,2,3-Trichloropropane Maximum Contaminant Level). It is recommended the City update its existing Vulnerability Assessment and Emergency Response Plan reports as needed.

Groundwater Wells (Casings)

- 2) Based on current life expectancy projections, two wells (Wells #4 and #8) have a theoretical estimated remaining service life of less than five years. Replacement of these wells should be considered in the near future.
 - a. **The 2017 Update recommends construction of a new well in the near future.** Construction of a new well will provide sufficient replacement production capacity in the event Wells #4 and #8 are removed from service. The City is currently in the process of constructing a new production well which will be able to replace the combined capacities of Wells #4 and #8.
- 3) Three wells (Wells #10, #17, and #18) have an estimated remaining service life of less than ten years. Redevelopment of these well casings on a regular basis is recommended. Replacement of these wells should be considered in 10 to 25 years. **The 2017 Update recommends construction of a new well in the future to provide sufficient replacement production capacity.**
- 4) Two wells (Wells #2A and #6) have an estimated remaining service life of 11 years. All other wells (Wells #13A, #15A, #22, and #27) appear to have at least 20 years of projected remaining life expectancy. Although life expectancy projections for these wells should continue to be reviewed periodically, there are no immediate recommendations for these wells at this time.

Groundwater Wells (Pumps)

- 5) The Well #10 pump was originally installed in 1950 and the pump was last replaced in 2003. Although SCE pump tests indicate the well pump is currently efficient, the well pump should be scheduled for replacement if pump efficiency declines. Remaining well pump components should be replaced pursuant to the City's Asset Management Plan (see Item 23 below).



- 6) The Well #8 pump was originally installed in 1945 and the pump and motor were last replaced in 1997. The Well #8 pump should be scheduled for replacement (if the well is not replaced as recommended above). SCE pump tests for Well #8 are not available. Remaining well pump components should be replaced pursuant to the City's Asset Management Plan (see Item 23 below).
- 7) Based on recent SCE pump test results, there are currently five well pumps which are operating inefficiently (Wells #2A, #4, #15A, #18, and #6). However, the motors and/or pumps for Wells #2A, #4, #15A, and #18 have been replaced within the past seven years. Although there may be annual energy cost savings associated with improving or replacing these well pumps, there does not appear to be an overall economic benefit at this time.
 - a. **The City's Asset Management Plan (See Item 23 below) recommends replacement of the pumps for Wells #2A, #15A, and #18 within the next several years.** The immediate replacement of these well pumps have not been included in the 10-year CIP schedule.

Booster Pumps

- 8) Based on recent SCE pump test results, there are currently four booster pumps which are operating inefficiently (Plant 4, Boosters #2, #3, #4, and #6). Although there may be annual energy cost savings associated with improving or replacing these booster pumps, there does not appear to be an overall economic benefit at this time.
- 9) Plant 4 booster pumps (Boosters #2, #4, #6, and #7) have a remaining service life of two years and should be scheduled for replacement or refurbishment. **The 2017 Update recommends replacement of these booster pumps in the near future.**
- 10) Plant 22, Boosters #1, #2, #3, and #4 have a remaining service life of seven years. Replacement or refurbishment of should be considered periodically to increase the remaining service life. However, replacement of these booster pumps is not necessary if Reservoir 22 is removed from service (see recommendation below).



Storage Reservoirs

- 11) The City's existing reservoirs have sufficient storage capacity to meet equalization, emergency, and fire flow requirements under current and future conditions. In addition, the City's existing reservoirs have sufficient storage capacity under current and future conditions with Reservoir 22 removed from service.
- 12) The City's three oldest water storage facilities (Plant 13, Tank 1, Tank 2 and Tank 3) have an estimated remaining service life of 12 years. Although life expectancy projections for these reservoirs should continue to be reviewed periodically, there are no immediate recommendations for these reservoirs at this time.
 - a. The Asset Management Plan (see Item 23 below) recommends replacement of these three tanks in 2020. Replacement of these the three tanks have not been included in the 10-year CIP schedule.
- 13) In general, steel reservoirs should be recoated every 20 years (without cathodic protection) and 25 years (with cathodic protection) to ensure proper protection against corrosion.
 - b. Plant 13, Tanks 1, 2, 3, 4 and 5 were last coated over 20 years ago. **Although these reservoirs include cathodic protection, the 2017 Update recommends the City recoat these reservoirs in the next 5 to 10 years.**
- 14) Recent reservoir inspections reports prepared for each of the City's storage facilities recommend the following:
 - c. Perform regular cleaning, inspection and repair cycles every two years for each reservoir.
 - d. For Plant 13, Tanks 4 and 5, recoat roof exterior and do not use cathodic system rectifier until it is repaired for Tank 5. The City has indicated it has recently recoated the roof exterior for Plant 13, Tanks 4 and 5.
 - e. For Reservoir 22, repair the cracking in the interior roof and walls and floors or replace the concrete. Due to the high cost of required repairs, the inspection report recommends replacement of Reservoir 22.
- 15) The City may consider preparing comprehensive analysis reports for each of its reservoirs. The reports would include corrosion and structural/seismic evaluations based on applicable standards and guidelines (including from the American Water Works Association and the Occupation Safety and Health Administration).



- 16) **The 2017 Update recommends the City remove Reservoir 22 from service.** The inspection report for Reservoir 22 recommends replacement of the reservoir. The City's existing reservoirs have sufficient storage capacity under current and future conditions with Reservoir 22 removed from service. In addition, the hydraulic model only identified an additional 3 model node locations with fire flow deficiencies with as a result of Reservoir 22 being removed from service (see discussion below).

Imported Water Connections

- 17) Perform routine testing and maintenance on the CENB-49 connection located in the southwestern part of the system. The hydraulic model indicates retaining CENB-49 will provide a hydraulic benefit to the system. The City has placed the CENB-43 connection in an inactive status as of 2017.

Recycled Water System

- 18) The City's existing recycled water distribution system includes approximately six miles of pipeline and serves approximately 482 AFY to over 41 metered connections. A proposed recycled water expansion would increase the system by an additional 11 miles and serve an additional 159 AFY of recycled water. The estimated cost to construct the proposed recycled water system expansion is approximately \$7,700 per AF and is significantly higher than the City's existing cost of using potable water. It is not recommended the City pursue this expansion of its recycled water system at this time.
- 19) The City may be able to provide approximately 434 AFY of recycled water service to the Lakewood Golf Course if the City of Long Beach is unable to continue providing service (as a result of reduced recycled water supplies) and the City installs additional infrastructure. The proposed recycled water service would include construction of approximately 3 miles of pipeline. The estimated cost to construct the proposed recycled water system expansion is approximately \$500 per AF, which excludes the cost to purchase recycled water. The City should continue seeking potential grants to fund an expansion of City's existing recycled water system.

Supervisory Control and Data Acquisition (SCADA) System

- 20) Control Automation Design (CAD) performed a review of the City's existing SCADA system. CAD recommended radio network, SCADA software, and hardware (i.e. Programmable Logic Controller)



upgrades at various sites. **The 2017 Update recommends the City implement these SCADA improvements into its CIP schedule.**

AMI / Billing System

21) The City's current billing system is not designed for use with water systems. In addition, the City manually obtains meter readings and can only access data on a bimonthly basis. **The 2017 Update recommends the City incorporate advanced meter infrastructure (AMI) improvements into its CIP schedule** to improve data collection from meters and simplify the billing process for customers. The new system will include an AMI system, including software and managed services implementation and AMI network management, and replacement of all the City's meters and registers.

Asset Management Plan

22) GHD prepared an "Asset Management Plan" to serve as a long-range planning document for managing the water production facility assets owned and operated by the City (including all groundwater production wells and all facilities associated with Plants 4, 13, and 22), over the next 10 to 20 years. The Asset Management Plan provides a schedule of annual investment costs (including rehabilitation and replacement of facilities) required to maintain service. **The 2017 Update recommends the City incorporate the recommended Asset Management Plan replacement schedule into the City's CIP schedule.**

Hydraulic Modeling

23) The hydraulic model was updated with the 2014/2015 pipe replacement records and 2015 pump test data, and re-calibrated based on 2016 fire flow test data. Hydraulic modeling runs were performed for existing and future maximum day demands plus fire flow conditions. Distribution pipe deficiencies were identified based on certain pressure, velocity, head loss, and fire flow criteria.

24) The hydraulic model identified 125 model node locations with fire flow deficiencies under the maximum day demand plus fire flow conditions requirements based on an existing average annual demand of 7,100 AFY. The model also identified an additional 3 model node locations with fire flow deficiencies as a result of removing Reservoir 22 from service. The model was used to identify 133 pipeline improvements to resolve all the fire flow deficiencies. **The 2017 Update recommends**



replacement of these 133 pipelines (first priority) with larger diameter pipelines (See Section 6.3.4 and Appendix G).

25) **The 2017 Update recommend replacement of an additional 36 pipelines (first priority) due to historical maintenance problems and leaks (See Section 6.4.2 and Appendix G.**

26) Using the age, material, and pipeline size data in the hydraulic model, an additional 68 pipeline locations for upgrades (second priority) have been identified for the annual replacement program. These secondary priority pipelines include transmission mains 10-inches or larger and greater than 60 years old. These aging pipelines are critical in delivering water through the City's distribution system and should be replaced before they begin to fail. In addition, second priority pipelines include the replacement of 4-inch cast iron pipe and greater than 60 years old. Approximately 89 percent of the City's distribution system leaks have been associated with this type of pipe (i.e. 4-inch cast iron pipe greater than 60 years old). **The 2017 Update recommends replacement of these 68 pipeline replacements (second priority) (See Section 6.4.2 and Appendix J).**



Table ES-8 provides the summary of the City’s annual CIP budget based on the recommendations provided in the 2017 Update.

Table ES-8 Capital Improvement Plan (CIP) Budget Summary

Fiscal Year	Annual Total
2017-18	\$2,450,400
2018-19	\$2,500,300
2019-20	\$2,497,900
2020-21	\$2,509,000
2021-22	\$2,474,200
2022-23	\$2,488,800
2023-24	\$2,464,600
2024-25	\$2,449,800
2025-26	\$2,532,800
2026-27	\$2,457,900
2027-28	\$2,488,650
2028-29	\$2,496,950
2029-30	\$2,493,000
2030-31	\$2,506,200
2031-32	\$2,522,600
2032-33	\$2,522,800
2033-34	\$2,406,700
2034-35	\$2,494,700
2035-36	\$2,412,800
2036-37	\$2,548,000



CHAPTER 1

INTRODUCTION AND OVERVIEW

The City of Lakewood’s Department of Water Resources (City) 2017 Water System Master Plan Update (2017 Update) is an update of the City’s “Water Master Plan” originally prepared in 2002. This 2017 Update reviews and updates the City’s historical and current water demands and supplies and water quality requirements; evaluates and provides recommendations on the City’s groundwater, pumping, storage, and treatment facilities; and presents a capital improvement plan schedule and cost estimates of potential system improvements.

1.1 System Description

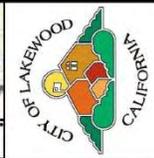
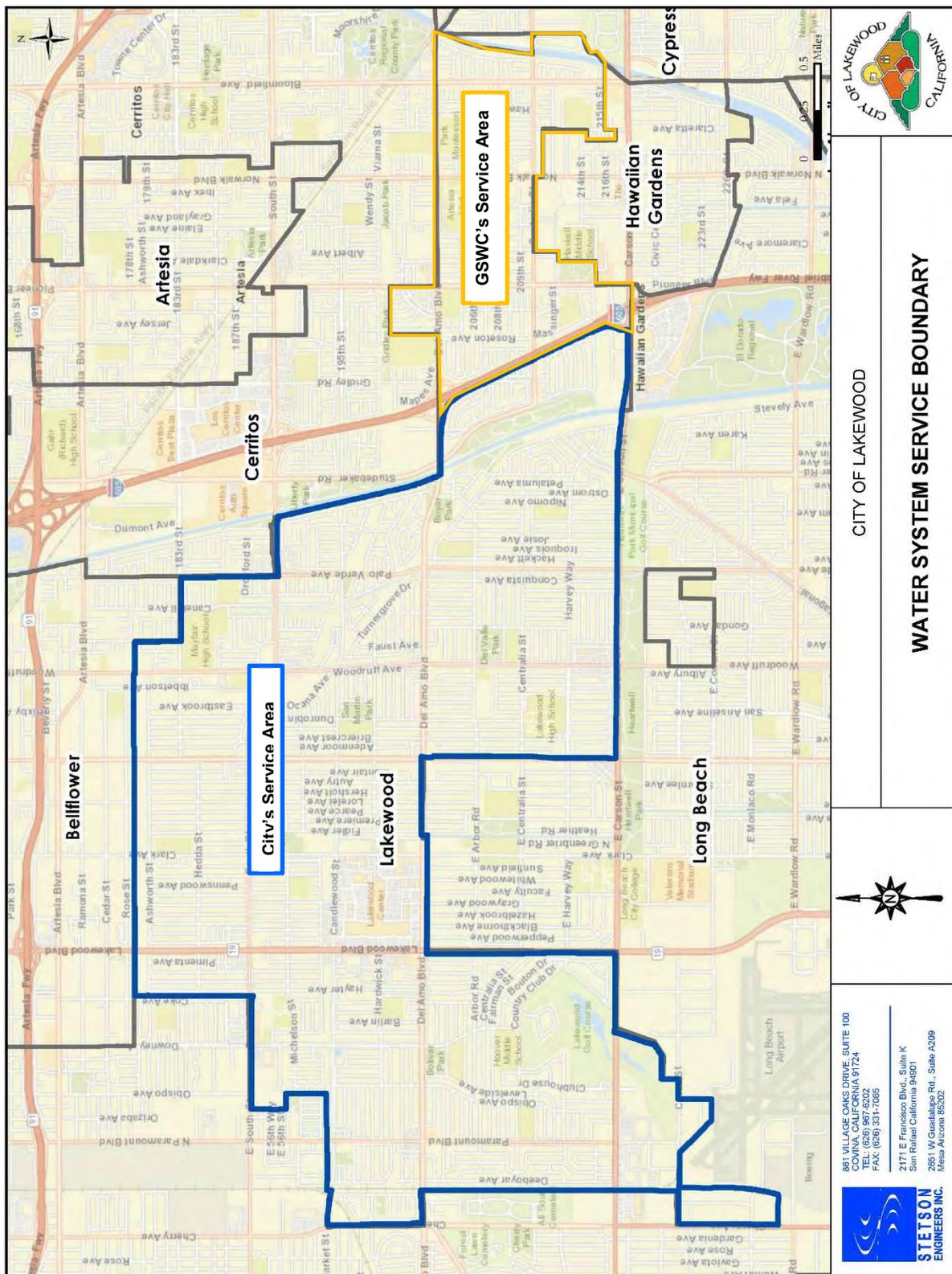
1.1.1 City of Lakewood Formation and Location

The City of Lakewood was incorporated on March 9, 1954. The City of Lakewood is located about 20 miles southeast of the City of Los Angeles and was estimated by the U.S. Census Bureau to have a population of approximately 81,600 in July of 2015. The City of Lakewood has an area of about 9.5 square miles and is surrounded by Long Beach on its southwest and west sides, Cypress and Hawaiian Gardens on its east side, Cerritos on its northeast side, and Bellflower on its north side. Water service to the City of Lakewood is provided by the City’s Department of Water Resources and Golden State Water Company (GSWC). The City provides water service west of the San Gabriel River (74 percent of the total population within the City of Lakewood’s municipal boundaries) and GSWC provides water service east of the San Gabriel River (26 percent of the total population within the City of Lakewood’s municipal boundaries). The location of the City’s service area is provided in Figure 1-1.



1.1.2 City Management

The City Council of Lakewood has five members, who each serve a four-year term. Once every year the city council elects one council member to serve as mayor and another to be the vice mayor. In 1959, the City gained the rights to use and sustain the water system. The City's Department of Water Resources is responsible for managing the City's water system.



CITY OF LAKEWOOD
WATER SYSTEM SERVICE BOUNDARY



861 VILLAGE OAKS DRIVE, SUITE 100
 COVINA, CALIFORNIA 91724
 TEL: (626) 967-6202
 FAX: (626) 331-7085

2171 E Francisco Blvd., Suite K
 San Rafael, California 94901
 2951 W Guadalupe Rd., Suite A209
 Mesa, Arizona 85202



Figure 1-1 Water System Service Boundary



1.2 Organization of the Water System Master Plan Update Report

This 2017 Update provides a comprehensive assessment of the water distribution system issues and water quality requirements confronting the City as it plans for the next 20 years. This Update is prepared to assist the City in making strategic and facility planning decisions. The report is organized as follows:

- Chapter 1 provides an introduction to the 2017 Master Plan Update.
- Chapter 2 projects water demands within the City's service area to the year 2040. Forecasts in this 2017 Update represent long-term average annual water use as well as seasonal and shorter term peak demands.
- Chapter 3 discusses the City's sources of water supply and includes opportunities which may increase the City's water supply reliability and utilize new water supply sources.
- Chapter 4 reviews the various water quality requirements the City must comply with in order to provide domestic potable drinking water service and summarizes the current quality of the water served by the City.
- Chapter 5 provides information on the City's groundwater production facilities (including wells, booster pumps, reservoirs, and treatment facilities). Information regarding the condition and performance of the City's existing finished water pumping, storage and distribution facilities is provided. It also presents recommendations for capital improvements to improve system operations and performance, and maintain system reliability and redundancy.
- Chapter 6 evaluates the current condition of water storage and water pumping facilities, and hydraulics in the distribution system. It also provides information



on proposed facilities, water main replacement needs, and reservoir improvements to enhance the performance of water pumping, storage, and distribution facilities.

- Chapter 7 provides a plan for implementing the facility improvements identified in this 2017 Update. Certain projects, studies, or monitoring activities for the substantive components of the water system are important for continued proper operation of the City's water system. This 2017 Update summarizes these actions, prioritizes the facility improvements, summarizes cost estimates, and provides implementation schedules.

Preparation of the City's 2017 Update was based on currently available information on the facilities and conditions of the City's water system. In addition, some evaluations, conclusions, and recommendations in the 2017 Update were based on the water system hydraulic model. This 2017 Update should be considered a guideline and the City may need to change the priorities presented in this report in response to considerations that cannot be foreseen at this time.



<Page Intentionally Left Blank>



CHAPTER 2

WATER DEMANDS

2.1 Introduction

This section presents current and projected water demands within the City's service area to the year 2040. Projected water demands in this 2017 Update represent long-term average annual water demand as well as seasonal and shorter term peak demands. The City's 2015 Urban Water Management Plan (2015 UWMP), dated June 2015, was reviewed in preparing this section.

2.2 Water Service Connections and Population

As discussed in Chapter 1, the City's Department of Water Resources serves approximately 74 percent of the total population within the City of Lakewood's municipal boundaries. The City of Lakewood's municipal boundaries had approximately 20,280 service connections in 2002 and approximately 20,340 service connections in 2015. A majority of the City's land use is for residential purposes. Pursuant to the City's 2015 UWMP, the City's population was estimated to be 81,601 by the U.S. Census Bureau on July 1, 2015. Table 2-1 shows the current and projected populations for the City of Lakewood and the City's Department of Water Resources' service area.

**Table 2-1 Current and Projected Population**

Year	City of Lakewood	City's Department of Water Resources Service Area
2010	80,048	59,704
2015	81,601	59,331
2020	81,500	60,019
2025	82,315	60,117
2030	83,138	60,335
2035	83,300	60,492
2040	84,152	60,705

Source:

Population data was obtained from Table 3-2 of the City's 2015 UWMP. Population projections for 2040 were interpolated based on 2010 to 2035 population data.

2.3 Water System Demands

2.3.1 Historical, Current, and Projected Water Production and Demands

The City's potable water supplies are from groundwater production, imported water from Metropolitan Water District of Southern California (MWD), and purchased water from other systems. The City also has access to recycled water supplies for irrigation purposes. Since fiscal year 2012-13, the City has delivered water to other water systems, adding to its production. Table 2-2 shows the historical and current total water demands for the City.



Table 2-2 Historical Water Demands

Fiscal Year	Potable Water Demand (AF) ⁽¹⁾	Recycled Water Demand (AF)	Total Water Demand (AF)
1996-97	9,473	541	10,015
1997-98	8,538	388	8,926
1998-99	8,878	446	9,324
1999-00	9,127	478	9,605
2000-01	8,718	405	9,123
2001-02	9,194	423	9,617
2002-03	9,070	346	9,416
2003-04	9,433	426	9,859
2004-05	8,841	303	9,144
2005-06	9,205	380	9,585
2006-07	9,929	440	10,369
2007-08	9,432	413	9,846
2008-09	8,641	383	9,024
2009-10	9,070	442	9,512
2010-11	7,713	429	8,143
2011-12	8,022	452	8,474
2012-13	9,275	487	9,762
2013-14	8,690	549	9,239
2014-15	7,177	468	7,645
2015-16	6,387	482	6,869
Average	8,741	434	9,175

Source:

Historical water demand data is based on groundwater production, imported water, purchased water, recycled water, and water delivery data provided by the City (see Section 3.1)

⁽¹⁾ Potable demand = (total groundwater production) - (Well #6 production) + (purchased water) - (water delivered to Long Beach)

Table 2-3 shows the projected total water demands for the City from 2020 to 2040. The City's projected water demand is calculated based on the urban per capita water use target developed pursuant to the Water Conservation Act of 2009, or Senate Bill 7 (SBX7-7), which is described in the City's 2015 UWMP. The projected water demands are consistent with projected water demands from the City's 2015 UWMP. The City's projected water demands over the next 20 years are generally lower than the current demand of 7,100 AFY. This is because the City is currently almost in build-out condition and the City will continue existing conservation programs to meet the requirements under the Water Conservation Act of 2009.



Table 2-3 Projected Water Demands

Year	Potable Water Demand (AF)	Recycled Water Demand (AF)	Total Water Demand (AF)
2020	6,667	502	7,169
2025	6,801	502	7,303
2030	6,937	502	7,439
2035	7,076	502	7,578
2040	7,098	502	7,600

Source:

Projected potable and recycled water demands through 2035 were obtained from Table 4-2B of the City's 2015 UWMP. Water demands for 2040 were estimated based on the City's projected water use target of approximately 104.4 GPCD in 2035, from Table 4-2 of the City's 2015 UWMP, and the City's projected 2040 population (see Table 2-1).

Methodologies for calculating baseline and compliance urban per capita water use for the consistent implementation of the Water Conservation Act of 2009 have been published by the California Department of Water Resources (DWR) in its February 2016 guidance document.¹ DWR's guidance document was used by the City to determine the required water use parameters which are discussed in the City's 2015 UWMP. The City developed the baselines and targets individually and not regionally. Based on the guidance document, the City's 2015 UWMP determined a "2015 Interim Urban Water Use Target" of 103 gallons per capita day (GPCD) and a "2020 Urban Water Use Target" of 99 GPCD. The City currently meets both the 2015 and 2020 water use targets. In addition, the City is projected to continue meeting the 2020 water use target. These urban per capita water use targets are further described in the City's 2015 UWMP.

¹ Methodologies for Calculating Baseline and Compliance Urban per Capita Water Use, California Department of Water Resources, February 2016.



2.3.2 Historical Water Losses (Unaccounted for Water)

Unaccounted-for water is the difference between the amount of water produced and the amount of water billed to customers. Within the water system, the following are expected sources of unaccounted-for water: inaccurate metering due to faulty meters and water use not metered such as firefighting, flushing of the water system, and washing filters at the treatment plants.

According to the City's 2015 UWMP, the volume of water loss in 2015 was approximately 327 AF, which is approximately 6 percent of the total water production in 2015.

2.3.3 Maximum Day Potable Water Demands

The City's average daily demand (ADD) for any year is calculated by dividing the total annual water usage for that year by 365 days. The Maximum Day Demand (MDD) is calculated by multiplying the average daily demand by a peaking factor of 1.5, which is based on recent production data provided by City Staff. Table 2-4 summarizes the projected maximum day water demands.



Table 2-4 Maximum Day Potable Water Demands

Year	Average Day Demands (AFY)	Average Day Demands (ADD) (MGD)	Maximum Day Demands (MDD) ⁽¹⁾ (MGD)
2020	6,667	5.9	8.9
2025	6,801	6.1	9.1
2030	6,937	6.2	9.3
2035	7,076	6.3	9.5
2040	7,098	6.3	9.5

Note:

⁽¹⁾ MGD=Million Gallons per day

⁽²⁾ MDD=ADDx1.5 (based on maximum day water production provided by City staff)

2.4 Recycled Water Demands

The City purchases recycled water produced by the Los Angeles County Sanitation Districts (LACSD) from the City of Cerritos, to fulfill some of its landscape irrigation demands for schools, medians, and parks. The City’s historical and projected recycled water demands are summarized in Table 2-2 and Table 2-3, respectively. A further discussion regarding the City’s recycled water supplies is provided in Section 3.1.3.



CHAPTER 3

WATER SUPPLIES AND REGIONAL OPPORTUNITIES

3.1 Water Supplies

The City's main source of water is groundwater from the Central Basin, but it also uses recycled water and has the ability to obtain treated imported water from MWD and purchased water from other systems. A summary of the City's water supply sources and water quantities from each is summarized in Table 3-1.

3.1.1 Central Basin Groundwater

The Central Basin is located in Los Angeles County approximately 20 miles southeasterly of downtown Los Angeles. Central Basin covers approximately 270 square miles and is bounded on the north by the Hollywood Basin and the Elysian, Repetto, Merced, and Puente Hills, to the east by the Los Angeles County/Orange County line, and to the south and west by the Newport-Inglewood Uplift.



Table 3-1 Historical Annual Water Production (AF)

Fiscal Year	Groundwater Production (1)	Imported Water (MWD) (2)	Recycled Water (LACSD) (3)	Purchased Water (4)	Total Water Production	Water Deliveries to Others (5)
1996-97	9,392	0	541	120	10,054	0
1997-98	8,536	0	388	36	8,960	0
1998-99	8,915	0	446	0	9,361	0
1999-00	9,167	0	478	0	9,645	0
2000-01	8,758	0	405	0	9,163	0
2001-02	9,229	0	423	0	9,652	0
2002-03	9,102	0	346	0	9,448	0
2003-04	9,464	0	426	0	9,890	0
2004-05	8,869	0	303	0	9,172	0
2005-06	9,234	0	380	0	9,614	0
2006-07	9,965	0	440	0	10,405	0
2007-08	9,472	0	413	0	9,885	0
2008-09	8,679	0	383	0	9,062	0
2009-10	9,108	0	442	0	9,549	0
2010-11	7,752	0	429	0	8,181	0
2011-12	8,061	0	452	0	8,513	0
2012-13	9,825	0	487	0	10,312	(522)
2013-14	10,152	0	549	0	10,701	(1,418)
2014-15	8,670	0	469	0	9,138	(1,462)
2015-16	7,087	0	482	0	7,569	(665)
Average:	8,972	0	434	8	9,414	(203)

Notes:

- (1) Groundwater production data was obtained from Water Replenishment District of Southern California reporting.
- (2) The City has not purchased imported water supplies from MWD since 1991.
- (3) Recycled water data was obtained from Central Basin Watermaster Annual Reports (1995-2015) and the City (2015-16).
- (4) Data for purchased water from other water systems (i.e. City of Cerritos) was provided by the City.
- (5) Data for water deliveries to other water systems (i.e. Long Beach Conjunctive Use Program) was provided by the City and from State Water Resources Control Board - Division of Drinking Water (SWRCB-DDW) reporting. Delivery data from 2012 SWRCB-DDW reporting was included within fiscal year 2012-13 totals.

Groundwater production in Central Basin is restricted to adjudicated rights fixed by the Central Basin Judgment and managed by a court-appointed Watermaster. The Central Basin was originally adjudicated in 1966 and the “Third Amended” Central Basin Judgment was filed by the Los Angeles Superior Court on December 23, 2013. The



Central Basin Judgment limits the annual amount of groundwater each party to the Judgment may extract from the Central Basin. The limit is referred to as an “Allowed Pumping Allocation” (APA). Pursuant to the Judgment, the total extraction right for each party includes a party’s APA, any contractual right acquired through lease or other agreements, and any right to extract stored water or carryover water. The Judgment contains the following provisions to provide flexibility in the control of groundwater extractions:

- A party may over extract groundwater from the Central Basin annually by up to 20 percent of its APA or 20 AF, whichever is greater.
- The Judgment allows parties to convert carryover water to storage in the Central Basin. A party may store up to 200 percent of its APA, provided storage is available, for later recovery.
- Beginning in fiscal year 2016-17, a party to the Judgment can carryover 60 percent of its unused APA (less water in its storage account) into the following fiscal year.
- During a declared water emergency, a party may carryover additional water (exceeding the normal carryover amount) up to an additional 35 percent of its APA (less water in its storage account)
- A party may not extract in excess of 140 percent of the sum of its APA and leased water amounts without Watermaster approval

Allowed Pumping Allocation

The City’s current APA in the Central Basin is 9,432 AF (as of fiscal year 2016-17).



Carryover

The City in FY 2016-17 has the right to carryover up to approximately 5,159 AF (or up to 60 percent of its APA of 9,432 AF, less the amount of water in storage which is currently 1,815 AF). The City also has drought carryover amounts of 1,500 AF from 1991.

Table 3-2 Carryover Water (AF)

Fiscal Year	Carryover for Following Fiscal Year (AF)			
	DCO-77 ⁽¹⁾	DCO-99 ⁽¹⁾	Normal ⁽²⁾	Total
2010-11	0.59	1,929.38	1,886	3,816
2011-12	0.59	1,929.38	1,858	3,788
2012-13	0.59	1,929.38	1,744	3,674
2013-14	0.59	1,929.38	724	2,654
2014-15	0.59	1,929.38	886	2,816
2015-16	0.00	1,500.00	346	1,846
Average:	0.49	1,857.82	1,241	3,099

Notes:

⁽¹⁾ Drought carryover (DCO) quantities obtained from Central Basin Watermaster Annual Reports

⁽²⁾ Normal carryover quantities obtained from Central Basin Watermaster Annual Reports

As shown in Table 3-2, over the past six years, the City's normal carryover has averaged approximately 1,241 AF and the City's total carryover (including drought carryover) has averaged approximately 3,099 AF.

Leases

As shown in Table 3-4, the City has historically leased water to and from other water agencies. The City has averaged a net lease of approximately 350 AFY of water to others.



Table 3-3 Historical Leases (AFY)

Fiscal Year	Leases by the City to Others ⁽¹⁾	Leases from Others to the City ^{(1) (2)}	Net Leases to the City
1995-96	(450)	400	(50)
1996-97	(50)	0	(50)
1997-98	0	0	0
1998-99	(500)	0	(500)
1999-00	(300)	0	(300)
2000-01	(500)	0	(500)
2001-02	(500)	300	(200)
2002-03	0	0	0
2003-04	(170)	0	(170)
2004-05	(750)	0	(750)
2005-06	(1,400)	900	(500)
2006-07	(300)	900	600
2007-08	(600)	500	(100)
2008-09	(435)	600	165
2009-10	(560)	185	(375)
2010-11	0	300	300
2011-12	(1,400)	0	(1,400)
2012-13	(420)	700	280
2013-14	(300)	0	(300)
2014-15	(1,500)	0	(1,500)
2015-16	(3,000)	1,000	(2,000)
Average	(625)	275	(350)

Notes:

⁽¹⁾ Data was obtained from Central Basin Watermaster Annual Reports (1995-2015) and the City (2015-16)

⁽²⁾ Lease amounts include 900 AF during fiscal year 2005-06 and 900 AF during fiscal year 2006-07 assigned by the City of Long Beach Water Department pursuant to a 2005 water storage agreement.

Historical data indicate the Central Basin has been well managed for over its adjudication period, resulting in a stable and reliable water supply. There are no contemplated basin management changes, other than the planned use of recycled water for groundwater replenishment. Based on these historical and on-going management



practices, the groundwater supply in the Central Basin has been reliable and the City will be able to rely on the Central Basin for adequate supply over the next 20 years under single year and multiple year droughts. Table 3-1 describes the total water produced by the City from Central Basin over the last twenty years.

Storage

The City currently has the right to store up to approximately 18,864 AF in the Central Basin (or up to 200 percent of its APA of 9,432 AF) if storage is available, for later recovery. As shown in Table 3-2, the City currently has 1,815 AF of water stored within the Central Basin (or approximately 10 percent of its storage right). In order to maximize its existing and future water supply opportunities, the City should continue to store water in addition to water it is able to carryover and lease.

Table 3-4 Historical Storage Transactions (AF)

Fiscal Year	Water Placed into Storage ⁽¹⁾	Water Extracted from Storage	Individual Storage Account Balance
2013-14	500	0	500
2014-15	0	0	500
2015-16	1,315	0	1,815

Notes:

⁽¹⁾ A Central Basin water storage program was implemented in fiscal year 2013-14, which allows the City to store up to 200 percent of their Allowed Pumping Allocation, provided if space is available. Storage data was obtained from Central Basin Watermaster Annual Reports and the City.

3.1.2 Treated Imported Water

Although the City has two connections with MWD through CBMWD to purchase imported treated water (see Section 5.1.4), the City has not purchased imported water



from its MWD connections since 1991. The City anticipates it will purchase imported water in the future only during emergency situations.

3.1.3 Emergency Interconnections

The City has emergency interconnections with the City of Cerritos, the City of Long Beach, and Golden State Water Company. Water has not been purchased from the City of Cerritos, the City of Long Beach, or Golden State Water Company since fiscal year 1997-98.

3.1.4 Recycled Water

The City started using recycled water in 1989. The City currently receives recycled water supplies from LACSD's Los Coyotes Reclamation Plant through the City of Cerritos. The City currently has over 41 metered connections in its recycled water system. Figure 3-1 shows the system's current recycled water system. The City's average recycled water use has been approximately 434 AF per year (AFY) over the last 20 years. The recycled water is used for landscape irrigation at schools, medians, and parks. Figure 3-1 also shows the City's recycled water customers. Recycled water use during fiscal year 2015-16 is provided in Table 3-5. A further discussion of potential recycled water use within the City is provided in Section 3.2.

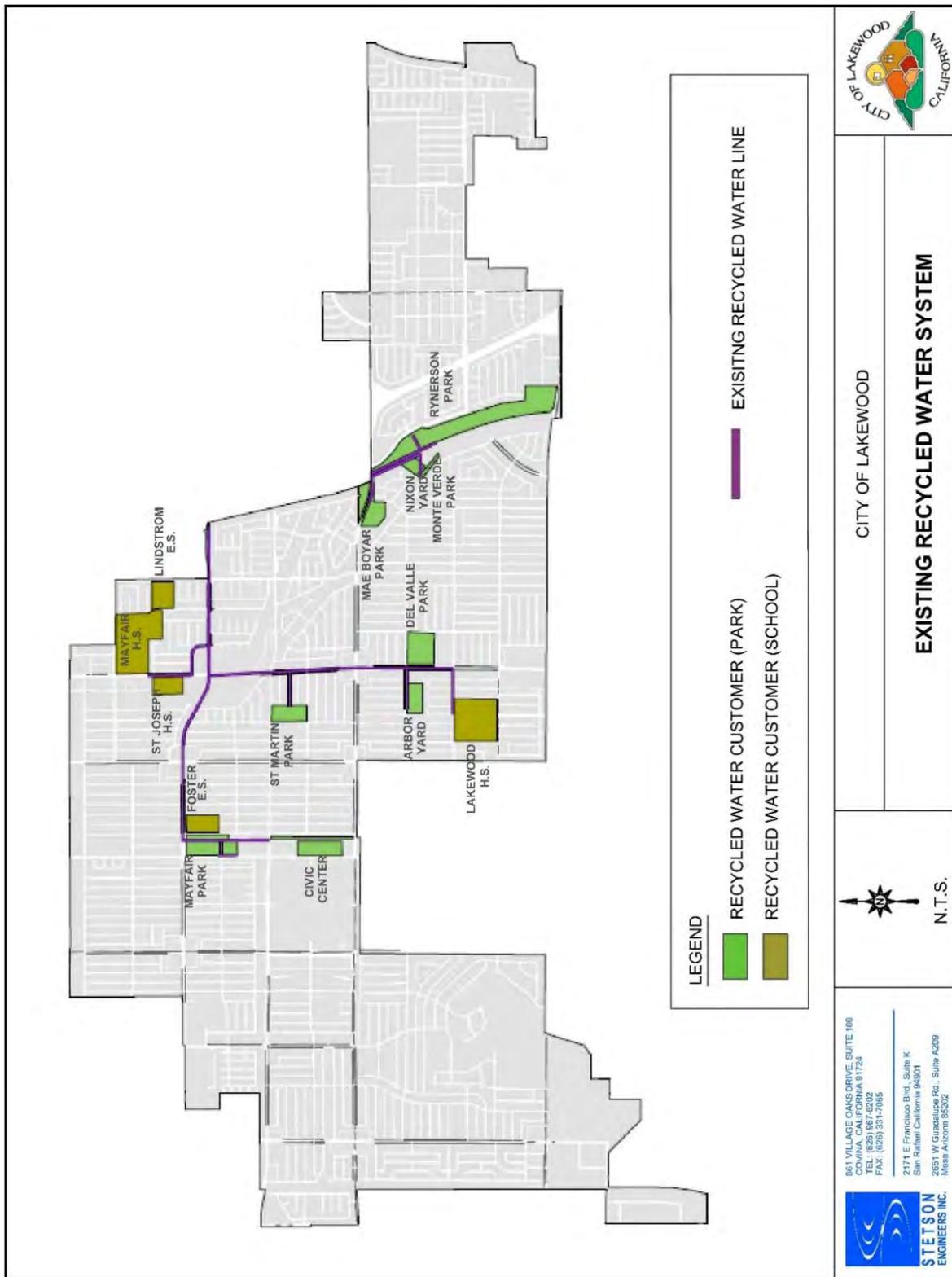


Figure 3-1 Existing Recycled Water System

**Table 3-5 Recycled Water Connections and Usage (Fiscal Year 2015-16)**

Location	Meter Size (inches)	Total Usage (AF)
Mae Boyer Park North (West San Gabriel 3)	4	15
Candlewood Street (Recycled Fire Hydrant)	4	31
River Park - South Side	4	56
River Park - East Side	2	7
Mae Boyer Park - North Side	4	24
Monte Verde Park	4	38
Mae Boyer Park - South Side	4	16
6344-Serves S/S North Side	2	1
6311 North Side	2	1
5557-Canehill South Side	2	0
6115 North Side	2	1
6103-Serves S/S North Side	2	0
5730 East Side	2	0
5836 East Side	2	24
Mayfair School	4	46
St. Joseph School	4	12
My Hoa Farm-Han Luong	3	10
South/Dunrobin South Side	2	1
5743 Hersholt South Side	2	1
South/Pearce South Side	2	1
Mayfair Park/South St.	2	10
Steven Foster School	2	19
Mayfair Park-Fidler	2	7
S/E Candlewood	2	11
S/W Candlewood	2	23
Mayfair Park-Clark	4	22
5800 Pearce North Side	2	1
5801 Hersholt North Side	2	1
5300 East Side	2	1
5148 East Side	2	0
5002 East Side	2	2
Dashwood West Side	2	11
Jose San Martin Park	4	20
Eberle West Side	2	1
4755 West Side	2	4
City Water Yard	4	26
Lakewood High School	4	27
Across from Del Valle in Parkway	2	13



Jose Del Valle Park	4	19
Loomis East Side	2	1
Del Amo Median with Studebaker	2	2
Total:	41	503
Supply Master Meters	3	482

Source:
Recycled water demands provided by City Staff.

Note:
503 AF represents the total metered amount from the 41 recycled water users
482 AF represents the total metered amount from the 3 recycled water supply master meters

3.2 Additional Recycled Water Use and Supply

As discussed in Section 3.1.4, the City’s existing recycled water distribution system includes approximately six miles of pipeline and serves approximately 482 AFY to over 41 metered connections. A proposed recycled water system expansion was reviewed in the City’s “Feasibility Study for the Proposed Expansion of the Lakewood Recycled Water System” in July 2010 (2010 Feasibility Study). A current evaluation of the proposed recycled water system expansion is provided below.

Proposed Recycled Water Expansion

The City’s 2010 Feasibility Study evaluated potential irrigation customers currently served by potable water that could be converted to recycled water through expansion of the City’s existing recycled water distribution system. The 2010 Feasibility Study identified and evaluated five phases of a recycled water system expansion for supplying recycled water to an additional 60 potential users / sites with an estimated usage of approximately 159 AFY. The total cost estimated by the 2010 Feasibility Study for the recycled water system expansion was approximately \$7.3 million.



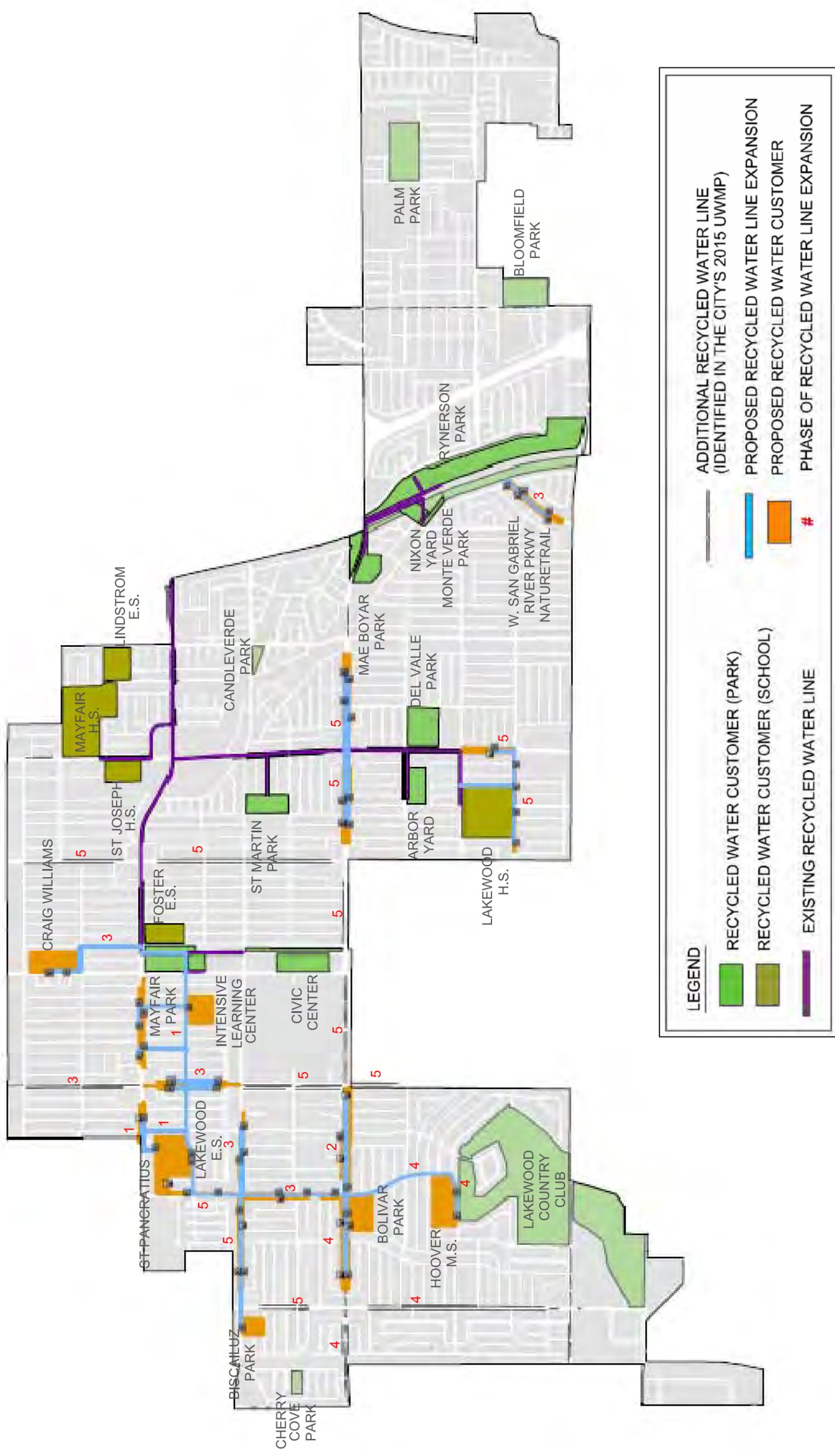
A map showing the potential recycled water system expansion phases is included in Figure 3-2. A summary breakdown of the estimated recycled water usage and costs for each phase is provided in Table 3-6. The unit prices and engineering costs provided in the 2010 Feasibility Study appear reasonable, based on a comparison with other similar recycled water projects located in Los Angeles County.

As noted in the City's 2015 UWMP, however, the 2010 Feasibility Study excluded approximately 3.9 miles of distribution pipeline needed to complete the recycled water system expansion. In addition, it was noted the 2010 Feasibility Study did not account for on-site retrofit costs required by each potential recycled water customer in order to receive recycled water service. The estimated costs for these missing pipelines and retrofits provided in the 2015 UWMP were reviewed and appear reasonable based on a comparison with other similar recycled water projects located in Los Angeles County. The 2015 UWMP estimated the total recycled water system expansion costs at approximately \$17.7 million (based on year 2015 dollars).



<Page Intentionally Left Blank>

FIGURE 3-2



861 VILLAGE OAKS DRIVE, SUITE 100
 COVINA, CALIFORNIA 91724
 TEL: (626) 967-6202
 FAX: (626) 331-7065

2171 E. Francisco Blvd., Suite K
 San Rafael, California 94901
 2651 W. Guadalupe Rd., Suite A209
 Mesa, Arizona 85202



CITY OF LAKEWOOD

PROPOSED RECYCLED WATER SYSTEM EXPANSION



<Page Intentionally Left Blank>



Based on building cost indexes from RS Means Construction Guides, the total recycled water system expansion costs in 2017 dollars is approximately \$18.7 million. The annual amortized cost based on a 5 percent interest rate over 30 years is approximately \$1.23 million. The resulting cost per AF for the City to construct recycled water infrastructure to provide service to additional customers is approximately \$7,700 per AF (or \$1.23 million / 159 AF), which excludes the cost to purchase recycled water. The current cost for the City to produce its groundwater supplies is approximately \$400 per AF, which includes production and operations costs and Water Replenishment District of Southern California assessments. The estimated cost on a per AF basis for the City to expand and serve additional recycled water users is significantly higher than the City's cost of using groundwater supplies. The cost to construct a new groundwater production well is approximately \$2 million (or approximately \$0.13 million per year based on a 5 percent rate over 30 years). The resulting cost rate based on a production capacity of 2,000 AFY is approximately \$70 per AF. The total cost for a new well (including construction, production and operations, and assessment costs) is approximately \$470 per AF and is cheaper than the proposed recycled water system expansion. As a result, it would not appear to be economically feasible for the City to proceed with the proposed recycled water system expansion as described in the 2010 Feasibility Study unless significant grant funding is available.

**Table 3-6 Recycled Water Expansion**

Phase	Estimated Length (Feet)	Estimated Cost ⁽¹⁾	Updated 2017 Estimated Cost ⁽²⁾	Recycled Water Yield (AFY) ⁽¹⁾	Amortized Cost per AF
1	5,600	\$1.57 M	\$2.93 M	45	\$4,200
2	8,000	\$1.45 M	\$3.08 M	31	\$6,500
3	6,900	\$0.75 M	\$2.01 M	18	\$7,300
4	10,700	\$0.65 M	\$2.32 M	25	\$6,000
5	27,000	\$2.86 M	\$8.33 M	40	\$13,500
Total	58,200	\$7.28 M	\$18.67 M	159	\$7,700

Notes:

(1) Total estimated cost and recycled water usage obtained from City's 2010 Feasibility Study for the Proposed Expansion of the Lakewood Recycled Water System.

(2) Updated estimated cost include additional 3.9 miles of recycled water pipeline and site retrofits conversion costs. 2017 costs indexed from the City's estimates in 2015 Urban Water Management Plan.

Potential Recycled Water Service to the Lakewood Golf Course

The Lakewood Golf Course is located within the City's service area but is currently served recycled water by the City of Long Beach. According to LACSD's annual reports, the Lakewood Golf Course's recycled water demand during fiscal year 2014-15 was approximately 434 AFY. The City may be able to provide recycled water service to the Lakewood Golf Course which would allow the City of Long Beach to serve its recycled water supplies to other customers within Long Beach.

According to the 2010 Feasibility Study, the proposed recycled water system expansion appears to include pipelines entering the Lakewood Golf Course. As a result, no significant additional infrastructure would be required. Assuming the same proposed costs, but with an additional 434 AFY to serve the Lakewood Golf Course, the proposed recycled water system expansion cost is approximately \$2,100 per AF (or \$1.23 million / 593 AF), which excludes the cost to purchase recycled water.



Alternatively, the City may be able to provide recycled water to the Lakewood Golf Course through use of CBMWD's recycled water supplies. As discussed previously, the City currently purchases recycled water supplies produced by LACSD from the City of Cerritos. In order to serve recycled water from CBMWD to the Lakewood Golf Course, the City would need to construct a pipeline and a connection to CBMWD's recycled water distribution system, located approximately three (3) miles to the north. Based on a capital cost of approximately \$3 million to install this infrastructure, the annual amortized cost based on a 5 percent interest rate over 30 years is approximately \$0.2 million. The cost to serve 434 AFY of recycled water from CBMWD to the Lakewood Golf Course is approximately \$500 per AF (or \$0.2 million / 434 AF), which excludes the cost to purchase recycled water.

The City should continue working with the Cities of Long Beach and Cerritos for potential expansion of City's existing recycled water system, including review of pipe alignments, supply, and hydraulics to provide service to the Lakewood Golf Course. In addition, the City should continue working with CBMWD for potential grants to fund an expansion of the City's existing recycled water system.

MWD and LACSD Carson Plant Project

MWD is currently partnering with LACSD to investigate the viability of providing Full Advanced Treatment (FAT) for up to 150 MGD (about 168,000 AFY) of treated wastewater from LACSD's Joint Water Pollution Control Plant in Carson, California (Carson Plant). The FAT recycled water from the Carson Plant would be delivered in up to 60 miles of transmission pipelines for Indirect Potable Reuse (IPR) by replenishing and/or injecting the recycled water into various groundwater basins within MWD's service area. The IPR water would subsequently offset an equal amount of untreated imported water from the State Water Project and/or the Colorado River, which otherwise historically may have been used for groundwater replenishment; and in the future, could be used for other potable purposes. Based on preliminary information provided by MWD, the



proposed pipeline alignment appears to be located near the vicinity of the City's service area. The City should continue monitoring the progress of the Carson Plant project for potential use of IPR water by the City.

Availability of Recycled Water Supply from LACSD

Another factor in the feasibility of the City's recycled water system expansion is the availability of recycled water supply from LACSD. According to a January 2017 discussion, LACSD staff confirmed sufficient recycled water is available through the City of Cerritos' contract with LACSD and sufficient recycled water is being produced at LACSD's Los Coyotes Water Reclamation Plant to supply the City's proposed recycled water system expansion. However, several unknown factors could potentially change the availability of the recycled water supply. Those factors are discussed below:

- LACSD has been experiencing a long-term decline in the amount of wastewater being discharged into the system as a result of the recent drought and subsequent conservation measures in its tributary sewer area. As a result, LACSD has been producing less recycled water from all treatment facilities, with a steady decline in production since 2006. LACSD is uncertain whether or not there will be sufficient recycled water supplies available for the City in the future to meet the additional recycled water demands as part of the proposed expansion.
- The California Water Code Section 1211 requires that LACSD file an application with the State Water Resources Control Board for a change of place of use for any recycled water that is diverted from its current discharge to the San Gabriel River. LACSD is currently working on an application to cover all current discharge to the entire San Gabriel River and planned reuse outside of the river, with an anticipated completion date within the next year. The timing and availability of recycled water to supply additional recycled water users within the City is dependent on the



outcome of the processing of this application, which cannot be predicted at this time.

3.3 Stormwater Capture Programs

The City is currently implementing projects to capture stormwater for infiltration and reuse purposes. The City is located within the Los Cerritos Channel, the Lower San Gabriel River, and the Lower Los Angeles River Watersheds which are subject to National Pollutant Discharge Elimination System (NPDES) requirements¹. In addition, the City is a permittee or a participating agency in the following watershed groups:

- Permittee under the Los Cerritos Channel Watershed Group (LCC)
- Participating agency of the Lower San Gabriel River Watershed Group (LSGR)
- Participating agency of the Lower Los Angeles River Watershed Group (LLAR).

These watershed groups have developed individual Watershed Management Programs² (WMPs) to establish programs and projects for compliance with the NPDES permit requirements, including meeting total maximum daily load (TMDL) limit requirements in urban runoff. As a permittee or participating agency, the City is currently implementing stormwater capture and infiltration/reuse projects. In addition to meeting NPDES requirements, these projects may result in groundwater recharge into the Central Basin and reduce the amount of potable water used for irrigation within the City. These stormwater projects are described below.

¹ NPDES Permit No. CAS004001 and NPDES Permit No. CAS004003

² Los Cerritos Channel Watershed Management Program, Los Cerritos Channel Management Group, June 8, 2015; Lower San Gabriel River Watershed Management Program, Lower San Gabriel Watershed Group, June 12, 2015; and Lower Los Angeles River Watershed Management Program, Lower Los Angeles River Watershed Group, June 27, 2014.



3.3.1 Bolivar Park Stormwater Capture

The City is currently implementing a “Stormwater and Runoff Capture Project” at Simon Bolivar Park (Bolivar Park) located in the western part of the City. The proposed Bolivar Park project is intended to reduce metals and other pollutants in the Del Amo Channel (located several hundred feet to the east) by capturing dry-weather runoff as well as the first-flush of wet weather runoff. In addition, it is estimated the project will provide approximately 623 AFY of stormwater for groundwater recharge and approximately 10 AFY of treated stormwater to offset potable water use for irrigation at Bolivar Park. The Bolivar Park project system consists of the following components:

- A channel diversion system, which would divert runoff from the Del Amo Channel to Bolivar Park;
- A pretreatment facility and pump station;
- An underground storage and infiltration facility (approximately 38,895 square feet); and
- A water treatment system (filtering unit and ultraviolet treatment) to filter and sanitize stored water. The quantity of treated water is estimated to meet approximately 99 percent of the irrigation requirements at Bolivar Park.

The stormwater capture project at Bolivar Park is estimated to cost \$11 million, which has been funded by the California Department of Transportation (Caltrans) for design and construction. The City will be responsible for operating and maintaining the proposed facilities.

The design for the Bolivar Park project was completed in January 2016 and an Initial Study/Mitigated Negative Declaration for the project was completed in June 2016. Construction of the Bolivar Park project began in November 2016 and is expected to be completed by Spring of 2018.



3.3.2 Mayfair Park Stormwater Capture

Similar to the project at Bolivar Park, the City is implementing a stormwater capture project at Mayfair Park located in the northern part of the City. Mayfair Park was identified by the LCC Watershed Group in their WMP as a first order water capture site, a site in which stormwater can be captured and reused for irrigation. However, the WMP noted that infiltration/recharge may not be feasible due to the depth to groundwater and the widespread presence of clay lenses in the subsurface.

The development and design of the stormwater capture project at Mayfair Park would be similar to the Bolivar Park project. The City is also expected to receive \$15 million from Caltrans to fully fund the project at Mayfair Park. According to the Los Cerritos WMP, implementation of the project at Mayfair Park is expected in 2019.

3.3.3 Other Potential Stormwater Capture Sites

The LCC Watershed WMP identified additional potential stormwater capture projects at Heartwell Park and the Skylinks Golf Course, located in the City of Long Beach near the City's southern border. Development of Concept Plans for these sites is planned for June 2018. The LSGR Watershed WMP identified additional potential stormwater capture projects located within the City at Palms Park, Bloomfield Park, an elementary school, and one high school for the Coyote Creek Sub-Watershed. The LSGR Watershed WMP also identified Rynerson Park, Boyar Park, and an open space trail (5104 Stevely Avenue) located within the City as potential capture sites for the San Gabriel River Sub-Watershed. The LLAR Watershed WMP identified Cherry Cove Park located within the City as a potential stormwater capture site. It is recommended the City continue to monitor these potential stormwater capture projects and pursue additional funding.



<Page Intentionally Left Blank>



CHAPTER 4

WATER QUALITY REGULATORY REQUIREMENTS AND ISSUES

The City must comply with various water quality requirements in order to provide domestic potable drinking water service. The City currently obtains its water supply from groundwater within the Central Basin. The City has the option to use treated imported surface water purchased from MWD through CBMWD. The City maintains three emergency interconnections with Golden State Water Company, City of Cerritos, and City of Long Beach. Because the City may use MWD water and purchased water for emergency purposes only, water quality requirements associated with surface water and purchased water use are not discussed in this section. The City's water quality requirements are discussed in the following sections and a summary of recommendations is provided in Table 4-2. The City can use the provided recommendations as strategy and backup for any current and future decision-making. It is important that the City continue to monitor and comply with all applicable regulations that could have material impact on the water system operations and its customers.

4.1 Water System Vulnerability

The City's water system vulnerability assessment follows the guidelines in the Drinking Water Source Assessment and Protection Program and the Bioterrorism Act.

4.1.1 Drinking Water Source Assessment and Protection (DWSAP) Program

Every state is required to develop and implement a Source Water Assessment Program in accordance with the 1996 Federal Safe Drinking Water Act (SDWA) amendments. Section 11672.60 of the California Health and Safety Code requires the



development and implementation of a program to protect sources of drinking water. In response to both of these legal mandates, the DWSAP Program was developed. The State Water Resources Control Board Division of Drinking Water (SWRCB-DDW) is the lead agency for developing and implementing the DWSAP Program. The assessment includes:

- Delineation of the area around a drinking water source through which contaminants might move and reach that drinking water supply;
- Inventory of possible contaminating activities (PCAs) that might lead to the release of microbiological or chemical contaminants within the delineated area; and
- Determination of the PCAs to which the drinking water source is most vulnerable.

The DWSAP Program addresses both groundwater and surface water sources. The groundwater portion of the DWSAP Program serves as the SWRCB-DDW's wellhead protection program. In developing the surface water components of the DWSAP Program, SWRCB-DDW integrated the existing requirements for watershed sanitary surveys.

The City completed the DWSAP requirements for its groundwater sources in 2003 and 2006. A general statement of the City's source water vulnerability based on the DWSAP assessment must be included in annual Consumer Confidence Reports. The City will continue to submit a source water assessment to SWRCB-DDW when a new well is placed into active service.

An underground storage tank (UST) is defined by law as "any one or combination of tanks, including pipes connected thereto, that is used for the storage of hazardous substances and that is substantially or totally beneath the surface of the ground." An Open leaking underground storage tank (LUST) site has an ongoing investigation and/or



remediation of potential contamination. LUST sites are identified as a PCA within a DWSAP assessment. According to the SWRCB-DDW, there are approximately 15 Open LUST sites within the service area of the City.

4.1.2 Bioterrorism Act

On June 12, 2002, the United States Congress passed Public Law 107-188, entitled the “Public Health Security and Bioterrorism Preparedness and Response Act of 2002” (Bioterrorism Act). The Bioterrorism Act requires public water systems serving populations greater than 3,300 to perform a Vulnerability Assessment and to complete or update an Emergency Response Plan. Water systems serving a population of 100,000 or greater were required to complete a Vulnerability Assessment by March 31, 2003 with an updated Emergency Response Plan certification due within six months of submittal of the Vulnerability Assessment. The City’s Emergency Response Plan and discussion of Vulnerability Assessment are included in a document entitled Emergency Operations Procedures (2013).

Vulnerability Assessment

The Vulnerability Assessment was required to detail the water system’s vulnerability to terrorist attacks or other intentional acts that are intended to disrupt the ability of the system to provide a reliable and safe supply of drinking water. The Vulnerability Assessment included a review of:

- Pipes and constructed conveyances;
- Physical barriers;
- Water collection, pre-treatment, treatment, storage, and distribution facilities;
- Electronic, computer or other automated systems;



- The use, storage, or handling of various chemicals;
- Operation and maintenance of the water system.

The City completed and submitted a Vulnerability Assessment in 2003, and prepared an update in 2006. Although there are no Federal or State requirements beyond completion and submittal of the report, the Vulnerability Assessment shall be maintained as a confidential, working document. The City shall implement all Vulnerability Assessment recommendations that are technically and financially feasible on an appropriate timescale. The City shall keep the document up-to-date as water system security upgrades are implemented. Water utility managers shall review the Vulnerability Assessment periodically as a way to ensure that the water system is operating within the acceptable level of security risk.

Emergency Response Plan

The Emergency Response Plan is required to identify responses to activities, or the results of activities, associated with the undesired events discussed in the Vulnerability Assessment. The Emergency Response Plan includes plans, procedures, and identification of staff and equipment to respond to, or significantly mitigate the consequences of such events. Federal guidelines state that the Emergency Response Plan must contain action plans for at least the following four events:

- Water System Contamination;
- Structural Damage/Physical Attack;
- Cyber Attack on SCADA or Operational Computer System;
- Hazardous Chemical Release from Water System Facilities.

SWRCB-DDW has required that California public water systems have and maintain an emergency preparedness plan. These plans mainly encompassed



responses to natural disasters such as earthquakes, fires, and floods. California water utilities subject to the requirements of the Bioterrorism Act were required to update this existing plan.

The City previously completed an Emergency Response Plan in 2004 and provided certification. SWRCB-DDW requires that water utilities submit the Emergency Response Plans to the district engineers each time the plan is updated. The City shall continue to revise and update its Emergency Response Plan to reflect any operational or system changes. In addition, all water system employees shall be trained on the Emergency Response Plan. At a minimum, all employees shall review the Emergency Response Plan annually. Appropriate training exercises shall also be conducted periodically. The City is currently preparing an update to its Emergency Response Plan.

4.2 Drinking Water Quality Monitoring and Reporting

4.2.1 Title 22 Drinking Water Quality and Monitoring Regulations

Chapter 15 of Title 22 California Code of Regulations (Title 22) “Domestic Water Quality and Monitoring Regulations” sets enforceable standards for chemical and bacteriological contaminants in drinking water. A drinking water standard under Title 22 includes a maximum permissible concentration allowed in drinking water, associated monitoring frequencies for potable water sources, best available technologies (BATs) for removing the contaminant from drinking water and public notification in the event of a violation of a standard. The categories of chemical contaminants regulated under Title 22 include radiological chemicals, organic chemicals, and inorganic chemicals. Distribution systems must also be monitored for bacteriological constituents (total coliform and E. Coli) and aesthetic properties of the water (color, odor and turbidity) under Title 22. Other chapters of the California Code of Regulations regulate disinfection residuals



(total and free chlorine) and disinfection byproducts (total trihalomethanes and haloacetic acids) in distribution systems and lead and copper at the tap.

There are two categories of drinking water standards in Title 22 (primary and secondary standards):

A primary drinking water regulation (or primary standard) is a legally enforceable standard that applies to public water systems. Primary standards place an emphasis on the protection of public health and establish a contaminant's maximum contaminant level (MCL) as close as is technically and economically feasible to its public health goal (PHG). Primary MCLs have been established for constituents for which there are known health effects and for which SWRCB-DDW has evaluated the technical and economic impacts of setting the MCL. A list of regulated constituents and current MCLs can be found at:

http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/MCLsandPHGs.shtml

A secondary drinking water regulation (or secondary standard) is an enforceable standard that applies to cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. Secondary MCLs have been established for certain constituents at levels for which there are no known health effects.

Primary Maximum Contaminant Levels – City Wells

The City is required to monitor for these constituents at its raw water sources at frequencies set forth by SWRCB-DDW. These frequencies are published every three years by SWRCB-DDW and are provided to the City in a tabular form called Vulnerability Assessment tables. The current vulnerability tables published by SWRCB-DDW are effective from January 1, 2017 through December 31, 2019. Some Title 22 Synthetic Organic Chemicals (depending on the source), asbestos, beta/photon emitters, strontium-90, and tritium are waived from the City source water monitoring requirements for this monitoring period.



The City monitors for the required Title 22 constituents. Water quality data indicate the past detection of arsenic above the MCL of 10 micrograms per liter (ug/l), as follows:

- Water from Well #27 has exceeded the MCL for arsenic in the past. Water from Well #27 is treated for arsenic by oxidation, coagulation, and filtration. Arsenic in Well #27 has not exceeded the MCL in recent years. An additional discussion of the City's arsenic treatment is provided in Section 5.1.6.

In order to remove the regulated constituent exceeding the MCL (arsenic), the City has implemented SWRCB-DDW-approved treatment technologies at the impacted source (see Section 5.1.6). The treatment technologies (oxidation, coagulation, and filtration) used by the City are included in the Title 22 list of BATs that are available for achieving compliance with the MCLs.

The City's currently meets all other water quality regulations, including for Perchlorate (MCL = 6 ug/L). As of August 1, 2017, the SWRCB-DDW removed the MCL of 10 ug/L for hexavalent chromium, which the City was in compliance, due to the economic feasibility statewide of complying with the MCL. The SWRCB-DDW is beginning work on establishing a new MCL for hexavalent chromium.

Secondary MCLs – City Wells

On May 2, 2006, SWRCB-DDW published a revision to the Secondary Drinking Water Standards in Title 22. A list of current secondary MCLs can be found at:

http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Chemicalcontaminants.shtml



These revisions include the removal of the acceptable limit for corrosivity and clarification of the Secondary MCL compliance determination procedure. Currently, constituents with Secondary MCLs must be sampled at least once every three years at all groundwater sources.

Water from Well #22 historically has experienced noticeable odor. The odor in the water from Well #22 never exceeded the secondary MCL. Well #22 is monitored for sulfides (total and dissolved), which may be contributing to the presence of odor. The revised Secondary MCL regulations have no expected impacts on the City's remaining groundwater wells.

4.2.2 Notification Levels

Notification Levels (NLs) are health-based advisory levels established by SWRCB-DDW for chemicals in drinking water that lack MCLs. A list of current NLs can be found at:

http://www.swrcb.ca.gov/drinking_water/certlic/drinkingwater/NotificationLevels.shtml

If chemicals are found at concentrations greater than their NLs, certain requirements and recommendations apply. The level at which SWRCB-DDW recommends removal of a drinking water source from service is called the "response level." If a drinking water NL is exceeded, the State law requires timely notification by the public water purveyor to the local governing bodies (e.g., city council, county board of supervisors, or both).

Water from Wells #2A, #8, and #17 currently exceeds the NL for 1,4-dioxane of 1 ug/l. Water from these wells is currently monitored quarterly.

The City should continue following SWRCB-DDW regulatory updates for 1,4-Dioxane closely and pursue appropriate actions, as necessary.



4.2.3 Federal Unregulated Contaminant Monitoring Rule

The 1996 SDWA amendments require the USEPA to issue a new list of no more than 30 unregulated contaminants to be monitored by public water systems (PWSs) once every five years.

UCMR 3

The third Unregulated Contaminant Monitoring Rule (UCMR 3) was finalized in 2012 and requires monitoring for 30 contaminants using USEPA and/or “consensus organization analytical methods” during calendar years 2013 to 2015. UCMR 3 includes a total of 30 new contaminants, grouped under three separate lists, which requires monitoring, as follows:

- **List 1 - Assessment Monitoring.** List 1 monitoring implements common analytical method technologies used by drinking water laboratories. For UCMR 3, all PWSs serving more than 10,000 people (plus 800 representative PWSs serving 10,000 or fewer people) are required to monitor for 21 “List 1” contaminants during a 12-month period between January 2013 and December 2015.
- **List 2 - Screening Survey.** List 2 monitoring implements specialized analytical method technologies not commonly used by drinking water laboratories. All PWSs serving more than 100,000 people, 320 representative PWSs serving 10,001 to 100,000 people, and 480 representative PWSs serving 10,000 or fewer people are required to monitor for seven “List 2” contaminants during a 12-month period between January 2013 and December 2015.
- **List 3 - Pre-Screen Testing.** List 3 monitoring implements newer method technologies not commonly used by drinking water laboratories. For UCMR 3,



USEPA is required to select 800 representative PWSs serving 1,000 or fewer people that do not disinfect. These PWSs with wells that are located in areas of karst or fractured bedrock, are required to participate in monitoring for two “List 3” viruses during a 12-month period between January 2013 and December 2015.

UCMR 3 monitoring is as follows:

- Time frame – One consecutive 12-month period between January 2013 and December 2015 (monitoring can span more than one calendar year, as long as conducted during a consecutive 12-month period).
- Monitoring Frequency:
 - Groundwater – Monitoring is required twice in one consecutive 12-month period. Sample events must occur 5 to 7 months apart.
 - Surface Water or Groundwater under Direct Influence of Surface Water (GWUDI) – Monitoring is required in four consecutive quarters, with sampling events occurring 3 months apart.
- Monitoring Location – “Entry Point to the Distribution System” (EPTDS) for all contaminants (Lists 1, 2 and 3), as well as at the distribution system maximum residence time (DSMRT) sampling locations for chromium, chromium-6, cobalt, molybdenum, strontium, vanadium and chlorate, which are included in List 1.
- Laboratories – Samples must be analyzed by USEPA-approved laboratories for UCMR 3.

The City conducted two UCMR 3 sampling events, five to seven months apart, during a 12-month period between February 2015 and October 2015 for Assessment Monitoring (List 1). Each sampling event consisted of collecting samples from ten EPTDS and one DSMRT location in the distribution system. The ten EPTDS locations are located



after the chlorination point for the City’s groundwater wells. The DSMRT location consists of a selected residential home located in the distribution system. Table 4-1 provides a summary of the UCMR 3 sampling results.

Table 4-1 Summary of UCMR 3 Sampling Results

Contaminant	Results (µg/L)	
	Entry Points to the Distribution System (EPTDS)	Distribution System Maximum Residence Time (DSMRT)
1,1-Dichloroethane	ND - 0.037	ND
1,4-Dioxane	ND - 3.5	ND
Chlorate	ND - 540	150 - 300
Chromium, Total	ND - 1.4	0.25 - 0.41
Chromium, Hexavalent	ND - 1.4	0.082 - 0.32
Molybdenum	2.3 - 5	3.1 - 4.8
Strontium	180 - 670	260 - 470
Vanadium	ND - 4.1	0.76 - 2.4

Note:

ND = not detected

Only detected contaminants listed.

The City was required to monitor for 21 “List 1” contaminants. Sampling results for 8 contaminants are provided in the table above. Concentrations of the remaining 13 sampled contaminants (including 1,2,3-Trichloropropane; 1,3-Butadiene; Chloromethane (methyl chloride); Bromomethane (methyl bromide); Chlorodifluoromethane (HCFC-22); Bromochloromethane (halon 1011); Cobalt; Perfluorooctanesulfonic sulfonate (PFOS); Perfluorooctanoic acid (PFOA); Perfluorononanoic acid (PFNA); Perfluorohexanesulfonic acid (PFHxS); Perfluoroheptanoic acid (PFHpA); Perfluorobutanesulfonic acid (PFBS) were ND.



UCMR 4

EPA published the fourth Unregulated Contaminant Monitoring Rule (UCMR 4) in the Federal Register on December 20, 2016. UCMR 4 became effective on January 19, 2017. UCMR 4 requires monitoring of 30 chemical contaminants (List 1 contaminants) using analytical methods developed by EPA and “consensus organizations” during calendar years 2018 through 2020, including the following:

10 Cyanotoxins

- One cyanotoxin group
 - Total microcystins
- Nine cyanotoxins
 - Microcystin-LA
 - Microcystin-LF
 - Microcystin-LR
 - Microcystin-LY
 - Microcystin-RR
 - Microcystin-YR
 - Nodularin
 - Anatoxin-a
 - Cylindrospermopsin

20 Additional Contaminants

- Two metals
 - Germanium
 - Manganese
- Nine pesticides/pesticide manufacturing by-product
 - Alpha-hexachlorocyclohexane
 - Chlorpyrifos
 - Dimethipin



- Ethoprop
- Oxyfluorfen
- Profenofos
- Tebuconazole
- Total permethrin (cis- and trans-)
- tribufos
- Three brominated haloacetic acid (HAA) groups
(notes: [1] brominated HAA monitoring also includes sampling for two indicators: total organic carbon [TOC] and bromide; [2] UCMR 4 HAA samples are not required for water systems that are not subject to HAA5 monitoring requirements under the Disinfectants/Disinfection Byproduct Rule [D/DBPR])
 - HAA5
 - HAA6Br
 - HAA9
- Three alcohols
 - 1-Butanol
 - 2-Methoxyethanol
 - 2-Propen-1-ol
- Three semi-volatile organic chemicals
 - Butylated hydroxyanisole
 - o-Toluidine
 - Quinoline.

PWSs, including the City, are required to monitor for all 10 List 1 cyanotoxins during a 4-consecutive month period from March 2018 through November 2020, and 20 List 1 additional contaminants during a 12-month period from January 2018 through December 2020, based on the following frequencies:

- 10 List 1 Cyanotoxins



- Surface Water (SW) and Groundwater Under the Direct Influence of Surface Water (GWUDI) Systems (not applicable to the City)
 - Twice per month for four consecutive months during monitoring timeframe of March 2018 through November 2020 (total of eight sampling events)
- Groundwater (GW) Systems (applicable to the City)
 - Not required
- 20 Additional List 1 Contaminants
 - SW and GWUDI Systems (not applicable to the City)
 - Four consecutive quarters over the course of 12 months during the monitoring timeframe of January 2018 through December 2020 (total of four sampling events, three months apart)
 - GW Systems (applicable to the City)
 - Twice over the course of 12 months during the monitoring timeframe of January 2018 through December 2020 (total of two sampling events, five to seven months apart).

Sampling locations are as follows:

- 10 List 1 Cyanotoxins – entry points to the distribution system (EPTDS)
- 20 Other List 1 Contaminants
 - Two Metals – EPTDS
 - Eight Pesticides and One Pesticide Manufacturing Byproduct – EPTDS
 - Three Brominated HAA Groups – D/DBPR HAA location(s) in the distribution system
 - TOC and Bromide (indicators) – source water intake location, prior to any treatment (concurrent with HAA sample collection in the distribution system)
 - Three Alcohols – EPTDS
 - Three Semivolatile Organic Chemicals – EPTDS.



All samples must be analyzed by EPA-approved laboratories for UCMR 4.

4.2.4 Disinfectant and Disinfection Byproduct Rule (D/DBPR)

Stage 1 D/DBPR

Disinfection of drinking water is one of the major public health advances in the 20th century; however, the disinfectants themselves can react with naturally-occurring materials in the water to form disinfection byproducts (DBPs) which may pose health risks. Amendments to the SDWA in 1996 require USEPA to develop rules to reduce DBPs in drinking water.

USEPA promulgated the Stage 1 Disinfectant and Disinfection Byproduct Rule (D/DBPR) on December 16, 1998. SWRCB-DDW adopted the Stage 1 D/DBPR on June 17, 2006. The Stage 1 D/DBPR updates and supersedes the 1979 regulations for total trihalomethanes (TTHM). The Stage 1 D/DBPR applies to all public water systems that add a chemical disinfectant to the drinking water supply. The Stage 1 D/DBPR reduces exposure to three disinfectants and many disinfection byproducts. The rule establishes maximum residual disinfectant level goals (MRDLGs) and maximum residual disinfectant levels (MRDLs) for three chemical disinfectants - chlorine, chloramines and chlorine dioxide. The MRDLs are 4 milligrams per liter (mg/l) (as Cl_2) for chlorine and chloramines, and 0.8 mg/l (as ClO_2) for chlorine dioxide. It also establishes MCL goals and MCLs for the following DBPs: four total trihalomethanes (TTHM), five haloacetic acids (HAA5), chlorite and bromate. Chlorite is monitored only in systems using chlorine dioxide as a disinfectant whereas bromate is required to be monitored only in systems using ozone. TTHM and HAA5 monitoring is required by any water system using chlorine as a disinfectant.



Under the Stage 1 D/DBPR, the MCL for TTHM is 0.080 mg/l and the MCL for HAA5 is 0.060 mg/l. The new MCL for TTHM lowers the previous standard of TTHM from 0.10 mg/l to 0.080 mg/l. Compliance is based on the running annual average of the quarterly results. A quarterly result is the average of the results from all of the sampling locations taken that quarter.

Stage 2 D/DBPR

USEPA published the final Stage 2 D/DBPR on January 4, 2006 and the final rule was effective on March 6, 2006. The Stage 2 D/DBPR applies to all public water systems that add a chemical disinfectant to the drinking water supply. The Stage 2 D/DBPR strengthens public health protection for customers of systems that deliver disinfected water by requiring such systems to meet MCLs as an average at each compliance monitoring location (instead of as a system-wide average as in previous rules) for two groups of DBPs, TTHM and HAA5. The rule targets systems with the greatest risk and builds incrementally on existing rules. This regulation will reduce DBP exposure and related health risks, and provide more equitable public health protection.

The major difference between the Stage 1 D/DBP Rule and Stage 2 D/DBP Rule is the compliance calculation of TTHM and HAA5. Stage 1 D/DBPR compliance is based on a system-wide running annual average (RAA), while Stage 2 D/DBPR compliance is based on the running annual average at each location, which is referred to as the locational running annual average (LRAA). Under the Stage 2 D/DBPR, the MCLs for TTHM and HAA5 remain the same as the Stage 1 D/DBPR

SWRCB-DDW has adopted the federal Stage 2 D/DBP Rule and the new regulation became effective on June 21, 2012. The State Stage 2 D/DBP Rule contains the provisions of the federal Stage 2 D/DBP Rule and additional State-only requirements.



Routine and Reduced Stage 2 D/DBPR Monitoring Requirements

The Stage 2 D/DBPR compliance monitoring for the City began in October 2012 in accordance with the SWRCB-DDW-approved site-specific Stage 2D/DBPR monitoring. The City monitors for TTHM and HAA5 at four locations throughout the distribution system once every quarter, under the Stage 2 D/DBPR.

4.2.5 Radionuclide Rule

USEPA promulgated the final drinking water standard for radionuclides on December 7, 2000. The final rule includes the MCLs and monitoring requirements for gross alpha, radium-226, radium-228, uranium, and beta/photon emitters. The final rule was effective on December 8, 2003. The State was required to adopt or issue a radionuclide rule that is no less stringent than the final Federal rule. SWRCB-DDW published the final Radionuclide Drinking Water Standards dated January 27, 2006. The State radionuclide rule was effective on June 11, 2006.

Under the radionuclide rule, radium-226 and radium-228 were to be analyzed and reported separately, in addition to gross alpha and uranium analysis. An initial round of four consecutive quarterly samples was to be completed by December 31, 2007. The MCL for gross alpha remains at 15 picocuries per liter (pCi/l) and the MCL for radium-226 and radium-228 remains as 5 pCi/l, as the sum of the two constituents. The MCL for uranium is 20 pCi/l.



Radionuclide monitoring varies depending on the initial results for gross alpha, radium-226, radium-228 and uranium monitoring frequency is based on the initial round of analysis results:

- a) If the results are below the detection limit for purposes of reporting (DLR), the monitoring requirement is one sample every nine years;
- b) If the results are below or equal to $\frac{1}{2}$ the MCL but above or equal to the DLR, the monitoring requirement is one sample every six years;
- c) If the results are above $\frac{1}{2}$ the MCL but below or equal to the MCL, the monitoring requirement is one sample every three years; and d) If the results are over the MCL, the sources have to be monitored quarterly continuously until the running annual average is below the MCL, or the owner must provide treatment at the State's discretion.

The City completed the initial round of four consecutive quarterly samples at all of its wells and radionuclide concentrations were low. The City's wells fit into category a or b, above, requiring future testing at either six or nine year intervals.

4.2.6 Revised Total Coliform Rule

In 1989, USEPA published the Total Coliform Rule (TCR) which became effective in 1990. The purpose of the TCR is to protect public health by requiring monitoring for the presence of microbial contamination in the drinking water distribution system. On February 13, 2013, USEPA published the Revised Total Coliform Rule (RTCR) which is intended to improve public health protection. The RTCR became effective on April 1, 2016.

According to SWRCB-DDW, the revisions include the new Coliform Treatment Technique requirement replacing the Total Coliform MCL, and a new E.coli MCL



regulatory limit. The RTCR establishes a “find-and-fix” approach for investigating and correcting causes of coliform problems within the water distribution system.

A water system that exceeds the current Total Coliform MCL must conduct a Level 1 Assessment. The completed assessment must be submitted to SWRCB-DDW within 30 days of the exceedance. Public notification (Tier 2) is required within 30 days of the exceedance. The Level 1 Assessment requires the water system to identify a possible cause for the total coliform positive samples and corrective actions taken/needed. Failure to complete the corrective actions is a violation of the Coliform Treatment Technique in the RTCR.

A water system that exceeds the E.coli MCL under the existing Acute Total Coliform MCL conditions in Title 22 must conduct a Level 2 Assessment. The water system must notify SWRCB-DDW by the end of the business day to schedule a Level 2 assessment. Public notification (Tier 1) is required within 24 hours of the exceedance. The Level 2 Assessment is performed by SWRCB-DDW. Similar to the Level 1 assessment, the Level 2 Assessment requires the water system to identify a possible cause for the total coliform positive samples and corrective actions taken/needed. Failure to return the assessment or complete the corrective actions is a violation of the Coliform Treatment Technique in the Federal RTCR.

4.2.7 Groundwater Rule

On November 8, 2006, the USEPA promulgated the federal Groundwater Rule to provide for increased protection against microbial pathogens in public water systems that use groundwater sources. The major components of the rule include:

- 1) Sanitary survey prepared by SWRCB-DDW every three years, unless the water system provides 4-log inactivation/removal of viruses;



- 2) Triggered source water monitoring when a routine distribution system sample is positive for total coliform, unless the water system provides 4-log inactivation/removal of viruses;
- 3) Notification of groundwater wholesaler by a consecutive system within 24 hours of the consecutive system being notified of a positive total coliform distribution system sample;
- 4) Triggered source water monitoring by a groundwater wholesaler within 24 hours of being notified by a consecutive system of a positive total coliform distribution system sample;
- 5) Corrective action is required if there is a significant deficiency or groundwater source of fecal contamination (“significant deficiencies” include, but are not limited to, defects in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that SWRCB-DDW determines to be causing, or have potential for causing, the introduction of contamination into the water delivered to consumers.); and
- 6) Monitoring to ensure disinfection treatment achieves 4-log inactivation/removal of viruses, if treatment is required or applied in lieu of performing triggered monitoring.

Under the Groundwater Rule, beginning December 1, 2009, if any sample collected during routine distribution system sampling has a total coliform-positive result, one sample must be collected at each well **not receiving 4-log virus inactivation/removal** and analyzed for *E. coli* within 24 hours of receiving the total coliform-positive result. If *E. coli* is detected, five more repeat samples must be collected from each well that was initially *E. coli*-positive and tested for *E. coli* within 24 hours.



SWRCB-DDW has adopted the federal Groundwater Rule which became effective in August 2011. The City will continue to perform compliance monitoring and reporting in accordance with SWRCB-DDW requirements. The City complies with the triggered source monitoring requirements.

4.2.8 Lead and Copper Rule

On January 12, 2000, USEPA promulgated revisions to the Lead and Copper Rule, previously adopted on December 11, 1995. On October 11, 2003, SWRCB-DDW published final lead and copper Requirements for Drinking Water. The revised rules clarify the lead and copper requirements, but do not substantially modify the requirements from what was previously required.

PWSs must monitor for lead and copper at a number of residential taps based on the population served. The required number of lead and copper samples may be reduced depending on the historical results. Compliance is based on the 90th percentile concentration for all samples collected. The Action Level (AL) for lead is 0.015 mg/l and for copper is 1.3 mg/l. The Action Level is the concentration which cannot be exceeded in more than 10 percent of the samples.

The City is currently on a reduced monitoring schedule for lead and copper and is required to collect lead and copper samples at a minimum of 30 taps in its distribution system once every three years. The most recent set of lead and copper samples was collected in 2015 and the 90th percentile concentrations for lead and copper were 0.0023 mg/l and 0.3 mg/l, respectively. The City is in compliance with the lead and copper ALs and will continue to monitor lead and copper levels in its distribution system once every three years.



4.2.9 1,2,3-Trichloropropane

In 1999, SWRCB-DDW established a NL of 0.005 ug/l for 1,2,3-trichloropropane (1,2,3-TCP) in drinking water. The NL is at the same concentration as the SWRCB-DDW DLR. Certain requirements and recommendations apply if 1,2,3-TCP is detected above its NL.

In 2009, the State Office of Environmental Health Hazard Assessment (OEHHA) established the PHG for 1,2,3-TCP at 0.0007 ug/l. The PHG was established by OEHHA for use by SWRCB-DDW to establish an MCL. Health and Safety Code Section 116365(a) requires SWRCB-DDW to establish an MCL at a level as close as is technically and economically feasible to the contaminant's PHG. PHGs are contaminant concentrations in drinking water that do not pose a significant risk to health. SWRCB-DDW will have to consider the economic and technical feasibility of treating 1,2,3-TCP-contaminated water to arrive at an MCL that is still protective of public health.

In July 2016, SWRCB-DDW held a public workshop to discuss the 1,2,3-TCP MCL development process. During the workshop, SWRCB-DDW announced a preliminary staff recommendation for the 1,2,3-TCP MCL at 0.005 ug/l, which is also the current NL and DLR. SWRCB-DDW provided a draft 1,2,3-TCP MCL schedule as follows (SWRCB-DDW indicated these dates may change):

- Spring 2017 – SWRCB-DDW adoption
- Summer 2017 – regulations become effective
- January 2018 – initial monitoring begins.

In July 2017, SWRCB-DDW adopted an MCL of 0.005 ug/l for 1,2,3-TCP. The City will be required to conduct initial monitoring consisting of four quarterly sampling of 1,2,3-TCP for all its wells beginning January 2018. Regulatory compliance for the City will be



based on the average of four quarters of sampling. If 1,2,3-TCP is not detected during the initial four quarters of sampling, subsequent routine monitoring will consist of two quarterly samples in one year during each subsequent 3-year compliance period (with the next period being from 2020 to 2022).

4.2.10 Drinking Water Regulations Process

As part of the MCL process, SWRCB-DDW evaluates the technical and economic feasibility of regulating a chemical contaminant. Technical feasibility includes an evaluation of commercial laboratories' ability to analyze for and detect the chemical in drinking water, the costs of monitoring, and the costs of treatment required to remove it. Costs are required by law to be considered whenever MCLs are adopted.

To determine the technical and economic feasibility, SWRCB-DDW generally goes through the following steps:

- 1) Receives the PHG from OEHHA
- 2) Selects possible alternative draft MCL concentrations for evaluation
- 3) Evaluates the occurrence data
- 4) Evaluates available analytical methods and estimates monitoring costs at alternative draft MCL concentrations
- 5) Estimates population exposures at the alternative draft MCL concentrations
- 6) Identifies best available technologies for treatment
- 7) Estimates treatment costs at the alternative draft MCL concentrations
- 8) Reviews the costs and associated health benefits (health risk reductions) that result from treatment at the alternative draft MCL concentrations
- 9) Proposes the draft MCL

Then the proposed MCL moves through the formal regulatory process (http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/MCLprocess.shtml).



4.3 Poly/Orthophosphate Treatment

The City has been injecting phosphates into water extracted from its groundwater wells since 1967. There are two types of phosphates; orthophosphates and polyphosphates. Orthophosphates consist of single phosphates which combine with the calcium hardness present in the water to provide a calcium orthophosphate film to reduce corrosion. Polyphosphates consist of phosphates that are linked together to form a long chain of sodium or potassium ions. Polyphosphates are used to sequester naturally-occurring minerals present in the water, such as iron, manganese, and calcium hardness. Polyphosphates sequester the minerals, allowing the minerals to remain in solution instead of reacting with chlorine, oxidizing and causing red water. The City has been injecting a blend of 50 percent orthophosphates and 50 percent polyphosphates.

The primary function of continuously injecting poly/orthophosphates in the City's water is to reduce corrosion in the City's distribution system, with the secondary function of sequestering iron present in the water. Water quality from the City's wells show concentrations of iron and manganese below secondary MCLs. In addition, the Aggressive Index of water from the City's wells appears to indicate water from the City's wells is non-corrosive. However, approximately 40 percent of the pipelines within the City's distribution system consist of ductile or cast iron material installed prior to 1960. The age and material of pipes are potential factors in corrosion and the presence of iron within the City's distribution system. The supplier of the poly/orthophosphates has indicated continuous application of poly/orthophosphates in the City's water is necessary to maintain the protective film that reduces corrosion in the City's distribution system. City staff reports that older pipelines that have been visually inspected appear to be in good condition. The City is currently reviewing methods to optimize the use of poly/orthophosphates within the City's distribution system.



4.4 Public Notification of Drinking Water Quality

The City's water customers are notified of their drinking water quality through an annual Consumer Confidence Report (CCR) and a triennial PHG report. These reports are further discussed below.

4.4.1 Consumer Confidence Reports (CCR)

In 1996, Congress amended the SDWA, adding a requirement that water systems deliver to their customers a brief annual water quality report. Based on the SDWA, effective May 26, 2001, the California Health and Safety Code (Title 22, Chapter 15, Article 20, Section 116470) requires every community water system to prepare an annual CCR and deliver the CCR to its customers by July 1. The City's water quality report for the year 2016 has been posted on the City's website.

The CCR must contain the following:

- 1) Water system information, which includes name and telephone number of contact person, information on public participation opportunities, information in Spanish that the report content is important, and information for other non-English speaking populations;
- 2) Source of water and the results of the source water vulnerability assessment;
- 3) Summary of data on detected regulated and unregulated contaminants, possible source(s) of each contaminant, and if the water system received any violations; and
- 4) Educational information on nitrate, arsenic, lead, radon and cryptosporidium, if applicable.



4.4.2 Public Health Goal Reports

Senate Bill 1307 was enacted on January 1, 1997 and requires water systems serving more than 10,000 service connections that detect one or more contaminants in drinking water exceeding the applicable PHG or the MCLG to prepare a written report to inform the public about the safety of the drinking water. The initial PHG report required by Senate Bill 1307 was due on July 1, 1998, and subsequent reports are due every three years thereafter. The latest PHG report for the City was completed on July 1, 2016. A new PHG report is scheduled to be completed by July 1, 2019. In accordance with Section 116470 (c) of the California Health and Safety Code, a public hearing must be held after the PHG reports are completed to receive comments on each water system's PHG report.



4.5 Summary of Water Quality Regulatory Requirements

The anticipated impacts to the City from water quality regulations discussed in this section are summarized in Table 4-2. The anticipated Title 22 water quality monitoring requirements for the City’s wells are summarized in Table 4-3.

Table 4-2 Summary of Water Quality Regulatory Requirements	
Water Quality Regulations	Expected Actions or Impacts to the City
Drinking Water Source Assessment Program	Reports completed in 2003 and 2006. New wells subject to DWSAP Program requirements.
Bioterrorism Act	Review and update vulnerability assessment and emergency response plan as needed.
Title 22 Regulated Constituents	Continue source water monitoring in accordance with Title 22 and the latest vulnerability tables by SWRCB-DDW. Continue treated water monitoring in accordance with water supply permit.
Secondary MCL Regulations	No expected impacts.
Federal UCMR3	The City completed Assessment Monitoring completed in 2015.
Federal UCMR4	Review/update water system information on EPA’s electronic reporting system; monitor for unregulated contaminated pursuant to scheduled established by EPA
Stage 2 D/DBP Rule MCL Compliance	Continue monitoring in accordance with Stage 2 rule.
Radionuclide Rule	Perform follow-up monitoring based on latest results.
Revised Total Coliform Rule	Continue monitoring in accordance with the RTCR.
Groundwater Rule	Continue to perform compliance monitoring and reporting in accordance with SWRCB-DDW requirements. Continue complying with the triggered source monitoring requirements.
Lead and Copper Rule	Continue monitoring once every three years; no impacts expected.
1,2,3-TCP	Begin initial four quarters of sampling in 2018.
Consumer Confidence Reports	Complete report annually and distribute to customers by July 1 each year.
Public Health Goal Reports	A new PHG report is scheduled to be completed by July 1, 2019.



Table 4-3 Summary of Title 22 Water Quality Monitoring Requirements

Title 22 Monitoring	Well									
	2A	4	8	10	13A	15A	17	18	22	27
VOCs - Table 64444-A Part (a) (from Title 22 of the California Code of Regulations)										
Annually	√	√	√	√	√	√	√	√	√	√
Quarterly if ≥ DLR but ≤ MCL								PCE		
Monthly if > MCL										
SOCs - Table 64444-A Part (b)										
Two quarterly samples in one year during 3-year period 2017-2019										
Alachlor	√						√	√	√	√
Atrazine	√						√	√	√	√
Bentazon	√						√	√	√	√
Benzo(a)pyrene										
Carbofuran	√						√	√	√	√
Chlordane	√						√	√	√	√
2,4-D	√						√	√	√	√
Dalapon										
Dibromochloropropane									√	√
Di(2-ethylhexyl) adipate										
Di(2-ethylhexyl) phthalate	√	√	√	√	√	√	√	√	√	√
Dinoseb	√						√	√	√	√
Diquat	√						√	√	√	√
Endothall	√						√	√	√	√
Endrin	√						√	√	√	√
Ethylene Dibromide									√	√
Glyphosate	√						√	√	√	√
Heptachlor										
Heptachlor Epoxide										
Hexachlorobenzene										
Hexachlorocyclopentadiene										
Lindane	√						√	√	√	√
Methoxychlor	√						√	√	√	√
Molinate										
Oxamyl	√						√	√	√	√
Pentachlorophenol	√						√	√	√	√
Picloram										
Polychlorinated Biphenyls										
Simazine	√						√	√	√	√
Thiobencarb										
Toxaphene	√						√	√	√	√
2,3,7,8-TCDD (Dioxin)										
1,2,3-TCP (initial monitoring: <u>four quarterly samples during 2018</u>) (4Q)	4Q	4Q	4Q	4Q	4Q	4Q	4Q	4Q	4Q	4Q
2,4,5-TP (Silvex)										



Title 22 Monitoring	Well									
	2A	4	8	10	13A	15A	17	18	22	27
INORGANIC CHEMICALS - Table 64431-A										
Asbestos	Waived									
Chromium, Hexavalent										
Every three years	√	√	√	√	√	√	√	√	√	√
Nitrate										
Annually if < 1/2 MCL	√	√	√	√	√	√	√	√	√	√
Quarterly if ≥ 1/2 MCL but ≤ MCL										
Nitrite										
Every three years if < 1/2 MCL	√	√	√	√	√	√	√	√	√	√
Quarterly if ≥ 1/2 MCL but ≤ MCL										
Perchlorate										
Every three years	√	√	√	√	√	√	√	√	√	√
Quarterly if ≥ DLR but ≤ MCL										
Other inorganic chemicals										
Every three years	√	√	√	√	√	√	√	√	√	√
GENERAL MINERAL - Section 64449(b)(2)										
Every three years	√	√	√	√	√	√	√	√	√	√
SECONDARY STANDARDS - Table 64449-A										
Every three years	√	√	√	√	√	√	√	√	√	√
SECONDARY STANDARDS - Table 64449-B										
Every three years	√	√	√	√	√	√	√	√	√	√
RADIONUCLIDES - Sections 64442 and 64443										
One sample in 9 years, if < DLR (9Y)										
One sample in 6 years, if ≥ DLR but ≤ 1/2 MCL (6Y)										
One sample in 3 years, if > 1/2 MCL but ≤ MCL (3Y)										
Gross Alpha Particle Activity	9Y	9Y	9Y	6Y	9Y	9Y	9Y	6Y	9Y	9Y
Radium-226 and Radium-228	9Y	9Y	9Y	9Y	9Y	9Y	9Y	9Y	9Y	9Y
Uranium	6Y	9Y	9Y	6Y	9Y	9Y	9Y	6Y	9Y	9Y
Others										
Tritium	Waived									
Strontium	Waived									
Beta/Photon Emitters	Waived									
OTHERS - with Notification Level										
1,4-Dioxane										
Quarterly (per recommendation based on past detections above the Notification Level)	√						√	√		

VOCs = Volatile Organic Chemicals
DLR = Detection Limit for Purposes of Reporting
MCL = Maximum Contaminant Level
PCE = Tetrachloroethylene
SOCs = Synthetic Organic Chemicals

2,4-D = 2,4-Dichlorophenoxyacetic acid
2,3,7,8-TCDD = 2,3,7,8-Tetrachlorodibenzo-p-Dioxin
1,2,3-TCP = 1,2,3-Trichloropropane
2,4,5-TP = 2(2,4,5-Trichlorophenoxy) propionic acid



<Page Intentionally Left Blank>



CHAPTER 5

EVALUATION OF FACILITY AGES, EFFICIENCIES, AND CONDITIONS

5.1 Summary of Groundwater, Pumping, Storage, and Treatment Facilities

The City's primary source of potable water supply is groundwater, which is currently produced from ten active wells located within the Central Basin. The City has an additional well for irrigation purposes. To supplement the City's groundwater supply, the City has two connections with CBMWD (one active and one inactive) to obtain treated imported water from MWD. In addition, the City has three (3) emergency connections with the City of Cerritos, City of Long Beach, and Golden State Water Company.

The City's water system facilities, including its wells, treatment plants, booster stations, and reservoirs, are summarized in Table 5-1 and are discussed in the following sections. The locations of the City's wells, reservoirs, and booster stations are provided in Figure 5-1 through Figure 5-11. Photographs of the City's water system facilities are provided in Appendix A.



Table 5-1 Summary of Water Supply Facilities

Facility Name	Reference
<u>Plant 4</u>	
Tanks 1, 2, and 3	(Table 5-3)
Boosters #2, #3, #4, #5, #6, #7, and #8	(Table 5-4)
Well #4	(Table 5-2)
Well #27	(Table 5-2)
Arsenic Treatment	
<u>Plant 13</u>	
Tanks 1, 2, 3, 4, and 5	(Table 5-3)
Boosters #1, #2, #3, and #4	(Table 5-4)
<u>Plant 22</u>	
Reservoir 22	(Table 5-3)
Well #22	(Table 5-2)
Boosters #1, #2, #3, and #4	(Table 5-4)
<u>Other Facilities</u>	
Well #2A	(Table 5-2)
Well #8	(Table 5-2)
Well #10	(Table 5-2)
Well #13A	(Table 5-2)
Well #15A	(Table 5-2)
Well #17	(Table 5-2)
Well #18	(Table 5-2)
Well #6 (Irrigation)	(Table 5-2)
CENB-43	(Table 5-5)
CENB-49	(Table 5-5)
Interconnection (Long Beach)	(Table 5-6)
Interconnection (Cerritos)	(Table 5-6)
Interconnection (Golden State Water Company)	(Table 5-6)

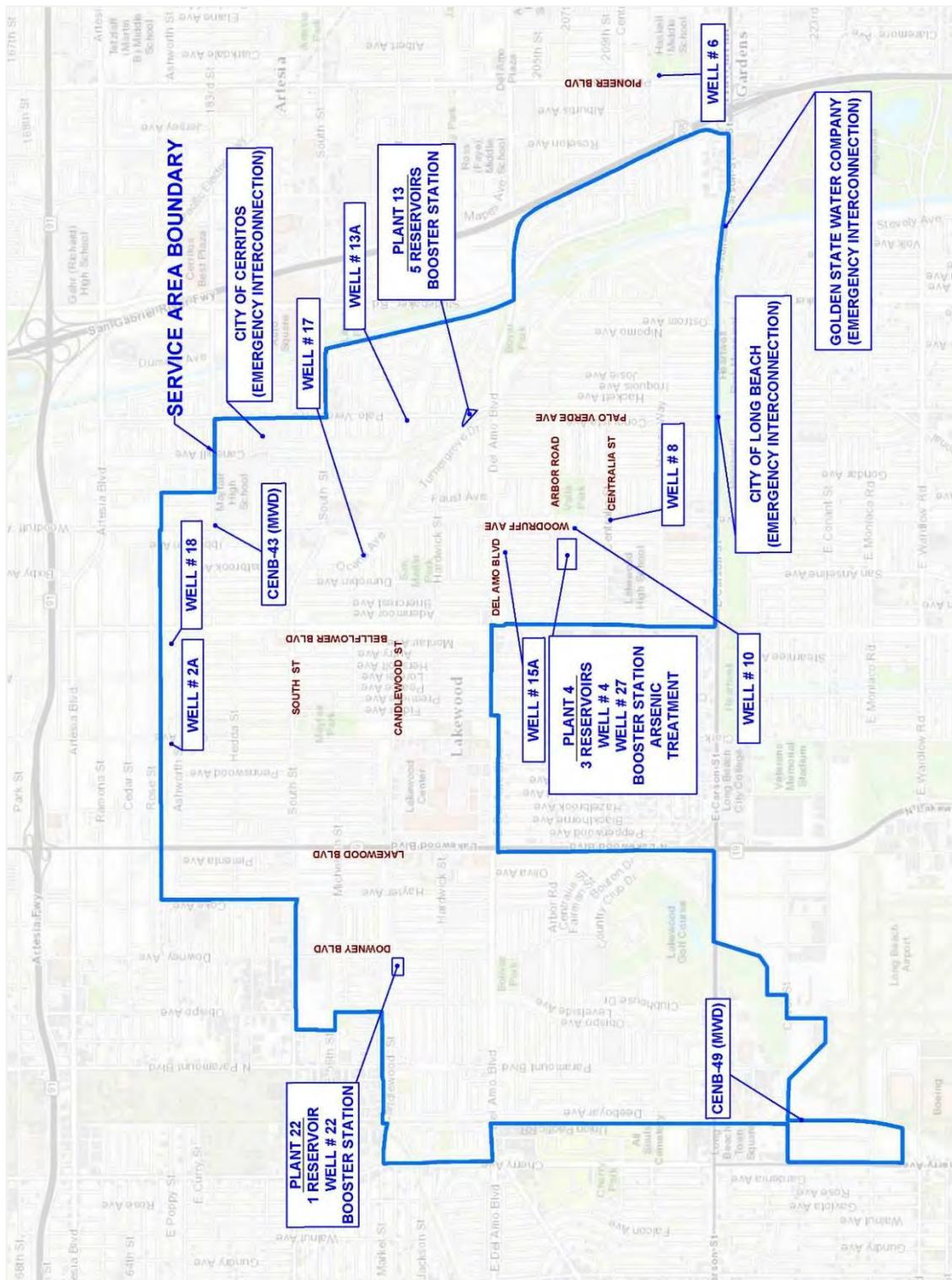
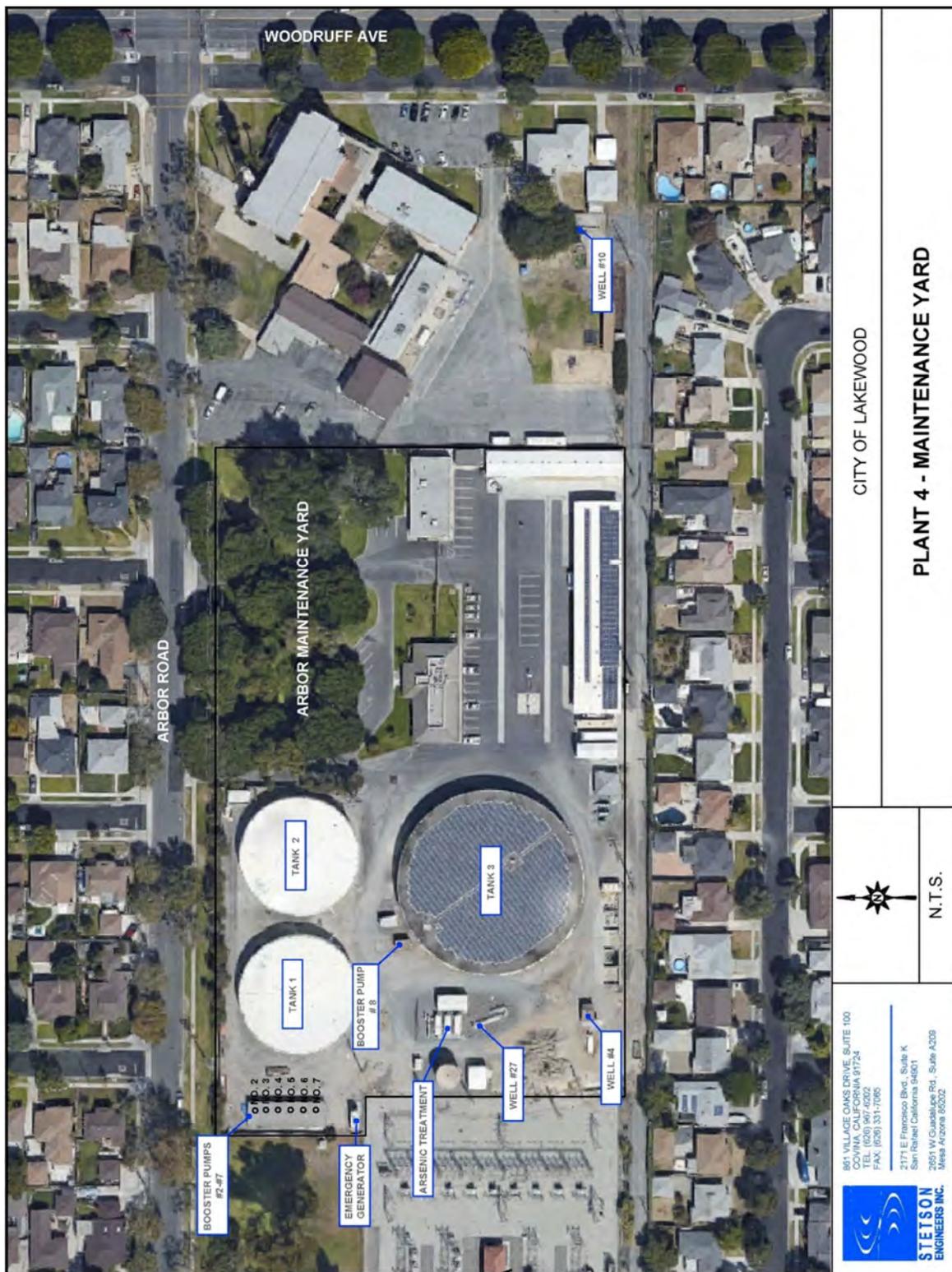


Figure 5-1 Summary of the City's Water System Facilities



CITY OF LAKEWOOD	
PLANT 4 - MAINTENANCE YARD	
	N.T.S.
<p>861 VILLAGE OAKS DRIVE, SUITE 100 COVINA, CALIFORNIA 91724 TEL: (626) 947-4202 FAX: (626) 331-7060</p> <p>2171 E. Francisco Blvd., Suite K San Rafael, California 94901 2651 W. Guadalupe Rd., Suite A205 Mesa, Arizona 85202</p>	

Figure 5-2 Plant 4 (Wells #4, #10, and #27)



CITY OF LAKEWOOD

PLANT 13



N.T.S.

851 VILLAGE OAKS DRIVE, SUITE 100
LAKEWOOD, CALIFORNIA 91724
TEL: (925) 987-6202
FAX: (925) 331-7095
2171 E Francisco Blvd., Suite K
San Rafael, California 94901
2651 W. Guadalupe Rd., Suite A209
Mesa, Arizona 85202



Figure 5-3 Plant 13



Figure 5-4 Plant 22 (Well #22)



Figure 5-5 Well #2A



Figure 5-6 Well #6



Figure 5-7 Well #8



Figure 5-8 Well #13A



Figure 5-9 Well #15A



Figure 5-10 Well #17



Figure 5-11 Well #18

5.1.1 Groundwater Wells

The City currently produces potable groundwater from ten wells (Wells #2A, #4, #8, #10, #13A, #15A, #17, #18, #22, and #27) located in Central Basin. The City also produces groundwater from Well #6 for irrigation at Bloomfield Park. Wells #4 and #27 are located at Plant 4 and Well #22 is located at Plant 22. The combined capacity of the ten potable wells is about 11,675 gallons per minute (gpm). Information on these wells is summarized in Table 5-2.



Hydropneumatic Tanks

The City currently owns hydropneumatic tanks at several well sites, including at Wells #2A, #4, #6, #17, #18, and #22 (the tanks at Wells #2A, #17, and #22 are located below ground). Hydropneumatic tanks contain both water and air under pressure and can exert or absorb pressure. The City previously used its hydropneumatic tanks to deliver water under pressure to the distribution system. However, the City has since installed additional water storage reservoirs and booster pumps and does not currently require use of its hydropneumatic tanks. Although the City does not use its hydropneumatic tanks to deliver water, the City can use its hydropneumatic tanks to reduce pressure surges at its well sites which are not equipped with an air release valve. Air valves are used to regulate air discharge from the well pump column during pump start up to prevent shock and air entering the system resulting from the accelerating water column. Currently, the hydropneumatic tanks are not operational and would need to be refurbished prior to returning to use. The use of hydropneumatic tanks to deliver water to the distribution system might provide some minimal reduction in run time for a few of the booster pumps in the system. Refurbishment of the hydropneumatics tanks could require the following: cleaning and recoating tanks, repairing/replacing pressure relief valves, pressure gauges, gaskets, and repairing rust, corrosion and/or cracks, etc. Many of the hydropneumatics tanks are buried, which would increase the cost of the returning the tanks to service. The minimal benefit that would be provided by the hydropneumatic tanks does not appear to justify the cost to refurbish them. However, the City should further evaluate the condition of its hydropneumatic tanks and whether it is feasible to operate these tanks.



Table 5-2 Groundwater Production Wells

Name	Year of Installation	Well Depth (ft bgs)	Motor Size (hp)	Capacity (gpm)	Services
<u>Potable</u>					
Well #2A	1970	656	50	500	System
Well #4	1937	656	75	700	System
Well #8	1945	385	75	1,000	Plant 4 Tanks
Well #10	1950	876	60	975	Plant 4 Tanks
Well #13A	2003	1,120	100	1,200	Plant 13 Tanks
Well #15A	2001	1,050	100	1,750	Plant 4 Tanks
Well #17	1951	1,134	100	1,100	System
Well #18	1951	1,108	100	1,000	System
Well #22	1996	1,080	200	1,200	Plant 22 Reservoir
Well #27	2010	970	200	2,250	Plant 4 Tanks
Total				11,675	
<u>Irrigation</u>					
Well #6	1969	602	40	500	Irrigation

Source:

Well data provided by the City

Notes:

ft = feet

bgs = below ground surface

hp = horsepower

gpm = gallons per minute

5.1.2 Booster Station Pumps

Information on the City's booster station pumps is summarized in Table 5-3. Currently there are a total of 15 booster pumps, with a total capacity of approximately 19,195 gpm.

**Table 5-3 Booster Pump Facilities**

Name	Year of Installation	Power (hp)	Capacity (gpm)	Notes
Plant 4, Booster #2	1965	50	1,000	
Plant 4, Booster #3	1965	50	1,000	Newer motor installed (2013)
Plant 4, Booster #4	1965	100	1,700	
Plant 4, Booster #5	1965	100	2,000	Newer motor installed (2015)
Plant 4, Booster #6	1965	50	1,000	
Plant 4, Booster #7	1965	60	1,120	
Plant 4, Booster #8	2017	125	2,600	Includes VFD
Plant 13, Booster #1	2017	40	800	Completed Early 2017
Plant 13, Booster #2	2017	50	1,000	Completed Early 2017
Plant 13, Booster #3	2017	75	1,500	Completed Early 2017
Plant 13, Booster #4	2017	75	1,500	Completed Early 2017
Plant 22, Booster #1	1990	40	750	
Plant 22, Booster #2	1990	40	925	
Plant 22, Booster #3	1990	40	950	
Plant 22, Booster #4	1990	60	1,350	
Total			19,195	

Source:

Booster pump data provided by the City. The years of installation for Plant 4, Boosters #2 through #7 are estimated based on discussion with City staff. The year of installation for Plant 4, Booster #8 is estimated based on the year of installation of Plant 4, Tank 3.

Notes:

hp = horsepower

gpm = gallons per minute

VFD = Variable Frequency Drive

5.1.3 Reservoirs

The City currently utilizes 7 steel reservoirs and 2 concrete reservoirs with a total physical water storage capacity of approximately 12.9 million gallons (MG). Information on the City's reservoirs is summarized in Table 5-4.



Table 5-4 Water Storage Facilities

Name	Year of Installation	Material	Capacity (MG)	Source
Plant 4, Tank 1	1965	Steel	1.5	Wells #8, #10, #15A, #27
Plant 4, Tank 2	1965	Steel	1.5	Wells #8, #10, #15A, #27
Plant 4, Tank 3	1996	Pre-Stressed Concrete	5.4	Wells #8, #10, #15A, #27
Plant 13, Tank 1	1950	Steel	0.454	Well #13A
Plant 13, Tank 2	1950	Steel	0.454	Well #13A
Plant 13, Tank 3	1950	Steel	0.454	Well #13A
Plant 13, Tank 4	1997	Steel	0.454	Well #13A
Plant 13, Tank 5	1965	Steel	0.22	Well #13A
Reservoir 22	1954	Cast-in Place Concrete	2.5	Well #22
Total			12.9	

Source:

Reservoir data provided by the City

Notes:

MG = million gallons

5.1.4 Imported Water Connections

The City has two connections with CBMWD to purchase imported treated water from MWD. Information on the City’s imported water connections is summarized in Table 5-5. The City has placed the CENB-43 connection in an inactive status as of 2017.

**Table 5-5 Imported Water Connections (MWD / CBMWD)**

Name	Location	Capacity (cfs)	Capacity (gpm)	Number of Meters	Meter Size	Number of Discharge Lines	Discharge Line Size
CENB-43	Southeast corner of Allington Street and Woodruff Avenue	15	6,700	1	14"	1 2 2	6" 8" 12"
CENB-49	East Union Pacific Railroad right of way and south of Carson Street	15	6,700	1	14"	1 1	6" 10"

Source:

City's 2002 Water Master Plan

Notes:

cfs = cubic feet per second

gpm = gallons per minute

5.1.5 Emergency Interconnections

The City has one emergency connection each with the City of Cerritos, the City of Long Beach, and Golden State Water Company. The total capacity of the three connections is 15,000 gpm. Information on the City's emergency interconnections is shown in Table 5-6.



Table 5-6 Emergency Interconnections

Name	Location	Direction	Size (Inches)	Capacity (gpm)	Notes
City of Cerritos	Palo Verde Avenue at Andy Street	2-way	12	5,000	Metered / Automatically operated if pressure drops below ~35 psi for either system
City of Long Beach	Palo Verde Avenue south of Carson Street	2-way	12	5,000	Metered / Manually operated
Golden State Water Company (GSWC)	North side of Carson Street at the San Gabriel River	2-way	12	5,000	Metered / Automatically operated if pressure drops below ~35 psi for the City or below ~35 psi for GSWC

Source:

City's 2002 Water Master Plan

Notes:

gpm = gallons per minute

psi = pounds per square inch

5.1.6 Treatment Facilities

The City operates an arsenic treatment facility located at Plant 4 to remove arsenic contamination from Well #27. In 2008, concentrations of arsenic at Well #27 were detected above water quality standards. As a result, the City constructed an arsenic treatment facility which includes three filtration vessels in parallel formation, chemical storage tanks, and a backwash tank. The locations of the arsenic treatment facility components are provided in Figure 5-12. Chemicals used in the treatment facility operations include the following:

- Sodium hypochlorite is used as a disinfectant and oxidizer
- Ferric chloride is used to add iron to enhance arsenic removal.



- Sulfuric acid was used to lower the pH in influent water to improve treatment; however, the City has not used sulfuric acid since January 2011 due to acceptable pH levels in the influent water.
- Sodium hydroxide was used to increase pH and provide corrosion control, but has not been used since January 2011.

Arsenic is removed through an oxidation, coagulation, and adsorption / filtration process. Raw groundwater from Well #27 is mixed with sodium hypochlorite and then ferric chloride through an in-line static mixer. After mixing, the water is then sent to three filtration vessels (two are active and one is on standby) containing media with manganese dioxide, which attracts oxidized forms of arsenic (as well as iron and manganese). Each filter vessel has the capacity to treat approximately 1,125 gpm of water. The finished water is then pumped in Plant 4, Tank 3 reservoir.

The City performs a backwash of the arsenic treatment filter vessels approximately every 12 hours to remove precipitated arsenic and iron compounds from the filter media and to reduce the pressure in the filter vessels. The water produced from each backwashing event is approximately 9,000 gallons which is stored in a backwash tank (with a capacity of 65,000 gallons). The precipitated solids settle inside the backwash tank and the remaining top layer of backwash water is pumped to the beginning of the arsenic treatment process. The settled sludge is periodically hauled away for proper disposal.

Due to decreasing concentrations of arsenic in Well #27, the City has recently submitted a letter to the SWRCB-DDW requesting a permit amendment to allow the City to allow water produced from Well #27 to bypass the arsenic treatment system. Arsenic concentrations over the past 5 years have averaged approximately 7.6 ug/L, which is below 80 percent of the MCL.



LACSD Disposal of Backwash Water

As an alternative to periodic hauling of sludge away from the backwash tank, the City may consider disposing the backwash water produced by the arsenic treatment into LACSD's wastewater system. Assuming the disposal of 9,000 gallons of backwash water over a 30-minute period (or about 300 gpm) in order to avoid sludge settling inside the backwash tank, a 6-inch diameter pipeline and connection would need to be constructed to deliver the backwash water to LACSD's wastewater system. However, the City will need to submit an application to LACSD to determine the requirements for disposal of backwash water. LACSD may require the City to construct a pipeline directly connecting with LACSD's industrial waste discharge line. In addition, LACSD may have certain arsenic discharge limits and may require the City to remove the suspended solids within the backwash water prior to discharge. Assuming the City meets LACSD's application requirements, it is estimated the City would construct a new 6-inch pipeline to the LACSD's 27-inch diameter Joint Outfall C – Unit D sewer main located at the intersection of Arbor Road and Clark Avenue approximately one mile westerly of the arsenic treatment plant. The estimated industrial waste connection fee is about \$200,000 based on a discharge rate of 18,000 gallons per day. In addition to the connection fee, an annual treatment surcharge of approximately \$2,000 would be required based on the volume of industrial waste and the location of the discharge. The estimated cost to construct the 6-inch diameter backwash discharge line is approximately \$1 million. The amortized cost of the pipeline construction and connection fee at 5 percent interest over 30 years is approximately \$80,000 per year. However, City staff has indicated the cost to haul away the backwash tank sludge is approximately \$32,000 per year. In addition, in the event that LACSD requires the City to connect to an industrial waste line further from Plant 4 than Joint Outfall C – Unit D sewer main, it would result in higher construction cost. Due to the high capital investment needed to construct the new backwash discharge line along with the industrial waste connection fee, it appears to be more economically feasible to continue hauling the backwash sludge offsite for disposal.



Figure 5-12 Arsenic Treatment Facility

5.1.7 Distribution Pipelines

The City has approximately 950,000 feet of distribution pipelines. The pipes range from 4 inches to 27 inches in diameter and are made up of a variety of materials, including cast iron, asbestos cement, polyvinyl chloride (PVC) pipe, ductile iron, concrete cylinder pipe, and steel. A breakdown of the City's pipelines by size, type, and age is provided in Appendix B. A further discussion regarding the City's distribution pipelines is provided in Section 6.4.1. A summary of the City's distribution pipelines is provided in Table 5-7.

**Table 5-7 Summary of City's Distribution Pipelines by Length (Feet)**

Pipe Size (inches)	CI	AC	ST	DI	CCP	C900	Total	Percentage
4	140,567	12,559	0	64	0	0	153,190	16.2%
6	50,644	122,666	488	31,022	0	25	204,846	21.6%
8	78,852	78,172	1,371	51,845	0	192,728	402,968	42.5%
10	36,505	948	818	1,432	0	407	40,110	4.2%
12	34,845	23,557	1,163	12,523	344	7,218	79,650	8.4%
14	3,551	46	0	0	0	0	3,597	0.4%
16	5,898	287	1,932	1,493	14,847	0	24,457	2.6%
18	2,896	86	338	35	0	0	3,354	0.4%
20	0	0	15	0	18,087	0	18,102	1.9%
24	0	0	0	1,490	360	0	1,850	0.2%
27	0	0	0	21	15,935	0	15,956	1.7%
Total	353,758	238,322	6,124	99,924	49,574	200,379	948,080	100.0%

Notes:

CI = Cast Iron

AC = Asbestos Cement

ST = Steel

DI = Ductile Iron

CCP = Concrete Cylinder

C900 = Polyvinyl Chloride

5.1.8 Supervisory Control and Data Acquisition (SCADA)

The City incorporates a SCADA system to control different parts of its water system facilities from one central location. The City's SCADA system is composed of SCADA software, Programmable Logic Controllers (PLCs), and communications connections. The PLCs are located at 14 sites (all of the wells and all of the plants). Plant 4 serves as the central location and is connected to all the other sites via radio network or modems. Plant 4 controls facilities including the wells, reservoirs, booster stations, and the treatment plant. The SCADA computers communicate to six (6) of the remote sites with



hardwired modems; and to the remaining eight (8) remote sites with a radio network. Each remote site is equipped with a PLC to monitor and control the site's reservoirs, boosters, wells, or treatment plant.

Three (3) SCADA improvement projects have been identified (radio network upgrades, SCADA software upgrades, and PLC upgrades) are summarized below. Additional information on the City's current SCADA system and potential improvements is provided in the City of Lakewood's SCADA Master Plan 2017 (Appendix C). It is recommended the City implement these SCADA improvements into its CIP schedule.

- SCADA computers at Plant 4 are operating on older computers running on a Windows XP Pro operating system which is no longer supported by Microsoft. SCADA software also will only run on Windows XP Pro. It is recommended the City replace its SCADA computers with updated operating systems and software.
- The MDS 9810 radios used at various sites (including Plant 13, Well 2A, Well 4, Well 6, Well 13A, Well 17, Well 18, Well 22, and Well 27) to communicate with Plant 4 are obsolete and should be replaced. In addition, the MDS 9810 radios do not offer encryption. The remaining sites are currently hardwired to communicate through telephone lines and modems (including Plant 4, Well 8, Well 10, and Well 15). The modems are obsolete and should be replaced with new radios for ease of use and maintenance (the location of the conduits for the existing copper lines cannot be easily traced or identified). A Radio Survey can be done prior to installation of the new radio system to ensure that the radio signals are adequate.
- The PLCs located at Well 6 and Well 27 are obsolete and should be replaced.



5.1.9 Advanced Meter Infrastructure (AMI)

The City plans to invest in a new billing system, provided by Fathom, which offers technology and software specifically designed for water systems. The new system includes advanced meter infrastructure (AMI) which will enhance the efficiency of the water system through: maximizing reading success rate and billing accuracy; reduce meter reading and equipment costs; improve data collections from the system (i.e. meters), and improve the billing process for customers. The new system will also upgrade the City's current billing system (Munis), which is not designed to be used for water systems. The City has difficulty obtaining information regarding meter readings from the existing system. In addition, the information is only provided bimonthly.

The new AMI system will include software, managed services, and AMI network management, and replacement of all the City's meters and registers. It is recommended the City incorporate the AMI, and billing system improvements into its CIP schedule.

5.2 Remaining Service Life Evaluation

The projected service life of the City's facilities varies depending on the equipment type. The California Public Utilities Commission's (CPUC) "Standard Practice for Determination of Straight-Line Remaining Life Depreciation Accruals", provides average ranges of equipment service life for different types of utilities, including water systems. These service life ranges are based upon factors such as the future effect of wear and tear, decay, action of the elements, inadequacy, and public requirements. Based upon these CPUC ranges, Stetson Engineers Inc. has previously developed specific service life estimates for use in valuation projects in Los Angeles County. Table 5-8 provides initial service life estimates, developed by Stetson Engineers Inc., for the purpose of determining the need to replace the different types of facilities operated by the City:



Table 5-8 Initial Estimated Service Life for the Water Utility Facilities

Facility Type	Initial Estimated Service Life (Years)	Iowa / Survivor Curve (To Determine Remaining Life)
Well Casing	40	S ₁ (40)
Well Pumps	25	S ₁ (25)
Booster Pumps	25	S ₁ (25)
Steel Reservoirs	50	S ₁ (50)
Concrete Reservoirs	50	L1 (50)

Source:

California Public Utilities Commission's "Standard Practice for Determination of Straight-Line Remaining Life Depreciation Accruals, Standard Practice U-4" (January 1961)

The initial service life estimates provided in Table 5-8 are only applied to new equipment. Service life estimates can change slightly once the equipment is actually in operation. The CPUC relies on various "Iowa Curves" (or Survivor Curves) to determine the remaining service life of equipment that has been in operation. Based on the current age of facilities, the corresponding Iowa Curves can be used to determine and/or interpolate the remaining service life. In some cases, Iowa Curves can also be used to determine the remaining service life of operating equipment that has already exceeded its original estimated service life. The Iowa Curves have been applied to the City's facilities to estimate the remaining service life of certain facilities for the purposes of making replacement recommendations.

5.2.1 Remaining Service Life – Well Casing

An important factor in determining the service life of a well casing is the ability of the casing to resist corrosion, which can cause holes to develop in the well casing and cause screen/perforation slot sizes to increase, allowing sand, fines and gravel pack to enter the well. Typically, the area of a well casing most vulnerable to corrosion lies between the static water level and pumping level, due to the alternating wet and dry conditions. Greater than average corrosion occurs in this area for steel casing, which a



majority of the City's wells are constructed of. Doubling the wall thickness may extend the life of a well casing four or more times. The use of copper bearing material in a well casing can increase corrosion resistance by approximately two times.

Although a standard method has not been developed to determine the life of a well based on constituents of the water, it is generally accepted that the presence of bicarbonate retards corrosion and chloride accelerates corrosion. Groundwater containing calcium carbonate (alkaline waters), which is present in the City wells, tends to encrust, rather than corrode, which promotes well casing longevity. Because encrustation tends to reduce production capacity, it must be removed periodically to restore the production capacity of the well.

Well casings should be inspected with video equipment whenever the pump is pulled to visually inspect the need for remedial work. Several maintenance and rehabilitation techniques can maintain or restore the well casing effectiveness including redevelopment (sand pumping, swabbing, air lift pumping, and surging and backwashing), chemical redevelopment (acid treatment and dispersing agents), mechanical redevelopment (wire brushing and high-pressure water jetting), screen cleaning (vibratory explosives), structural repairs (liners, complete relining, and screen replacement), and well deepening. The appropriate technique can be determined from the video survey.

As discussed previously, the service life for a well casing is estimated to be 40 years. The remaining service life projections for well casings were estimated using the S₁ (40) Iowa Curve. According to Table 5-9, there are seven wells that have exceeded the original service life of 40 years. However, based on the current life expectancy projections, five wells (Wells #4, #8, #10, #17, and #18) have an estimated remaining service life of less than ten years. The City is currently in the process of constructing a new production well, which will be able to replace the combined capacities of Wells #4 and #8. Redevelopment of the remaining well casings could maintain their production



capacity. Replacement of the remaining casings should be considered in the near future if redevelopment is not practical. Two additional wells have an estimated remaining service life of 11 years (Wells #2A and #6). All other well casings appear to have at least 20 years of projected remaining life expectancy.

Table 5-9 Remaining Service Life - Well Casings (Years)

Name	Year of Installation	Current Age ⁽¹⁾	Original Service Life (Years)	Estimated Remaining Service Life ⁽²⁾
<u>Potable</u>				
Well #2A	1970	47	40	11
Well #4	1937	80	40	4
Well #8	1945	72	40	5
Well #10	1950	67	40	6
Well #13A	2003	14	40	27
Well #15A	2001	16	40	26
Well #17	1951	66	40	6
Well #18	1951	66	40	6
Well #22	1996	21	40	23
Well #27	2010	7	40	33
<u>Irrigation</u>				
Well #6	1969	48	40	11

Notes:

⁽¹⁾ Age is based on a current year of 2017

⁽²⁾ Estimated remaining service life for well casings are based on an S₁(40) Iowa Curve using the CPUC's "Standard Practice for Determination of Straight-Line Remaining Life Depreciation Accruals, Standard Practice U-4" (January 1961)

5.2.2 Remaining Service Life – Well Pumps and Booster Pumps

A major cause of deterioration in pump performance is damage resulting from cavitation, pumping of air or sand, encrustation, corrosion, rust, normal wear or any combination of these conditions. Cavitation occurs when gas bubbles in the water collapse under high pressure, which can cause severe vibration of pump components.



Air intrusion reduces pump capacity and efficiency due to the volume the air occupies. Sand pumping wears down the impeller, bearings, and pump bowl, making them less efficient. Encrustation can plug the impellers, bowls, and even the pump head. Corrosion of the impellers, bowls, or column pipe may increase the wear and failure of pump components. Rust on pump components can increase friction losses and decrease operating efficiency.

For the purposes of this 2017 Update, refurbishment and replacement are considered maintenance options to increase the service life and efficiency of well or booster pumps. Replacement consists of replacing the existing pump and/or motor. Refurbishment activities include motor repairs, rebuilding of the motor, head shaft installation, trimming the pump impellers, and re-setting of bowl depth (to prevent pumping of air or sand).

As discussed previously, the service life for well and booster pumps is estimated to be 25 years. The remaining service life projections for well and booster pumps were estimated using the S_1 (25) Iowa Curve. According to Table 5-10, the wells pump for Well #6 has an estimated remaining service life of three years based on the original equipment. Well #6 has undergone partial replacement since the year 2010 to increase the remaining service life. All other well pumps have an estimated remaining service life of more than 10 years.



Table 5-10 Remaining Service Life – Well Pumps (Years)

Name	Year of Original Installation	Date of Last Motor Replacement	Date of Last Pump Replacement	Current Age ⁽¹⁾	Original Service Life	Estimated Remaining Service Life of Pump/Motor ⁽²⁾
<u>Potable</u>						
Well #2A	1970	Jan 2010	Sep 2002	15	25	13
Well #4	1937	May 2015	May 2015	2	25	23
Well #8	1945	Jun 1997	Jun 1997	20	25	10
Well #10	1950	Jun 2010	Feb 2003	14	25	14
Well #13A	2003	Mar 2016	Mar 2016	1	25	24
Well #15A	2001	May 2011	May 2011	6	25	19
pWell #17	1951	May 2015	May 2015	2	25	23
Well #18	1951	Mar 2012	Mar 2012	5	25	20
Well #22	1996	Jul 2015	Jul 2015	2	25	23
Well #27	2010	Jul 2016	Jul 2016	1	25	24
<u>Irrigation</u>						
Well #6 ⁽⁷⁾	1969	Nov 2010	(Original Motor)	48	25	3

Notes:

⁽¹⁾ Age is based on a current year of 2017

⁽²⁾ Estimated remaining service life for well casings are based on an S₁(40) Iowa Curve using the CPUC's "Standard Practice for Determination of Straight-Line Remaining Life Depreciation Accruals, Standard Practice U-4" (January 1961)

According to Table 5-11, there are six booster pumps at Plant 4 that have a remaining service life of two years based on the original equipment (Boosters #2, #3, #4, #5, #6, and #7). Two of these booster pumps (Boosters #3 and #5) have had motor replacements within the past five years, likely increasing the remaining service life. The remaining Plant 4 booster pumps should be scheduled for replacement or refurbishment. Five booster pumps have an estimated remaining service life of five to ten years (Plant 4, Booster #8 and Plant 22, Boosters #1, #2, #3, and #4). Replacement or refurbishment of these booster pumps should be considered in the near future to increase the remaining



service life. The City's remaining booster pumps were installed in 2017 (at Plant 13) and have an estimated remaining service life of 25 years.

The following is a summary of potential improvements for the City's booster pumps:

- Plant 4 booster pumps (Boosters #2, #4, #6, and #7) should be scheduled for replacement or refurbishment.
- Replacement or refurbishment of Plant 22, Boosters #1, #2, #3, and #4 should be considered in the near future to increase the remaining service life. However, replacement of these booster pumps is not necessary if Reservoir 22 is removed from service (see Section 5.4.1).
- Additional replacement and/or refurbishment of booster pumps should be scheduled based on declining pump efficiencies from pump tests (see Section 5.3) and from the City's Asset Management Plan (see Section 5.5).

It is recommended the City continues its program to periodically replace and refurbish well and booster pumps to maintain adequate service life and efficiency.



Table 5-11 Remaining Service Life – Booster Pump Facilities (Years)

Name	Year of Installation	Date of Last Motor Replacement ⁽³⁾	Current Age ⁽¹⁾	Original Service Life (Years)	Estimated Remaining Service Life (Based on Original Equipment) ⁽²⁾
Plant 4, Booster #2	1965	-	52	25	2
Plant 4, Booster #3	1965	2013	52	25	2
Plant 4, Booster #4	1965	-	52	25	2
Plant 4, Booster #5	1965	2015	52	25	2
Plant 4, Booster #6	1965	-	52	25	2
Plant 4, Booster #7	1965	-	52	25	2
Plant 4, Booster #8	2017	2017	0	25	25
Plant 13, Booster #1	2017	-	0	25	25
Plant 13, Booster #2	2017	-	0	25	25
Plant 13, Booster #3	2017	-	0	25	25
Plant 13, Booster #4	2017	-	0	25	25
Plant 22, Booster #1	1990	-	27	25	7
Plant 22, Booster #2	1990	-	27	25	7
Plant 22, Booster #3	1990	-	27	25	7
Plant 22, Booster #4	1990	-	27	25	7

Notes:

⁽¹⁾ Date of last motor replacement based on City records. The motor for Plant 4, Booster #6 appears to have previously been replaced, however, the replacement date is unknown.

⁽²⁾ Age is based on a current year of 2017.

⁽³⁾ Estimated remaining service life for booster pumps are based on an S₁(25) Iowa Curve using the CPUC's "Standard Practice for Determination of Straight-Line Remaining Life Depreciation Accruals, Standard Practice U-4" (January 1961)

5.2.3 Remaining Service Life – Water Storage Facilities

The City has nine water storage facilities. Two of these water storage facilities are constructed from concrete (Plant 4, Tank 3 and Reservoir 22), while the remaining facilities are constructed from steel. As discussed previously, the service life for either



steel or concrete water storage facilities is estimated to be 50 years. While concrete water storage facilities are relatively maintenance free, steel water storage facilities require periodic maintenance. A significant maintenance activity for steel tanks involves periodic repainting to avoid rust and corrosion. The remaining service life projections for the reservoirs were estimated using the S_1 (50) Iowa Curve. The remaining service life projections for concrete reservoirs were estimated using the L_1 (50) Iowa Curve. As shown in Table 5-11, the City’s concrete reservoirs have a remaining service life projection of at least 18 years and its steel reservoirs have a remaining service life projection of at least 12 years. The three oldest water storage facilities (Plant 13, Tank 1, Tank 2 and Tank 3) have an estimated remaining service life of 12 years; however, these facilities were relined or recoated in 1966 and cleaned in 2015 which could extend the service life, but it is not quantifiable. Additional recommendations regarding reservoir improvements are provided in Section 5-4.

Table 5-12 Remaining Service Life - Water Storage Facilities (Years)

Name	Year of Installation	Current Age ⁽²⁾	Original Service Life (Years)	Estimated Remaining Service Life ⁽³⁾	Date of Last Cleaning	Date of R-lined or Coated
Plant 4, Tank 1	1965	52	50	16	2006	2006
Plant 4, Tank 2	1965	52	50	16	2015	2006
Plant 4, Tank 3 ⁽¹⁾	1996	21	50	34	2008	-
Plant 13, Tank 1	1950	67	50	12	2015	1996
Plant 13, Tank 2	1950	67	50	12	2015	1996
Plant 13, Tank 3	1950	67	50	12	2015	1996
Plant 13, Tank 4	1997	20	50	32	2015	1997
Plant 13, Tank 5	1965	52	50	16	2015	1996
Reservoir 22 ⁽¹⁾	1954	63	50	18	2016	-

Notes:

⁽¹⁾ Concrete reservoirs

⁽²⁾ Age is based on a current year of 2017.

⁽³⁾ Estimated remaining service life for steel and concrete tanks are based on $S_1(50)$ Iowa Curves and $L_1(50)$ Iowa Curves, respectively, using the CPUC’s “Standard Practice for Determination of Straight-Line Remaining Life Depreciation Accruals, Standard Practice U-4” (January 1961)



5.3 SCE Pump Efficiency Tests

Southern California Edison (SCE) periodically performs pump tests on a majority of the City's wells and booster pumps. These SCE pump tests help the City identify inefficient pumps. Based on recommendations provided by SCE, inefficient pumps may need to be replaced or refurbished depending on their age, plant efficiency, and power requirements. In general, increasing the efficiency of a low efficiency pump that is operating at full capacity will result in significant electrical cost savings. Furthermore, as plant efficiencies typically decrease over time, there is an increased potential for electrical cost savings through upgrading or replacing pumps. However, if an inefficient pump is operating at a reduced capacity, the electrical cost savings may not be significant. Changes in the City's operation of pumping plants may result in revisions to the conclusions presented in this Master Plan based on the SCE pump tests.

5.3.1 SCE Pump Efficiency Tests – Well Pumps

The results of recent SCE pump tests for the City's well pumps are summarized in Table 5-13. According to the results, well pump operation efficiencies range between 54.7 percent to 67.2 percent. In addition, SCE has identified the well pumps which are "efficient" or "inefficient". It should be noted the City has installed a new pump and motor at Well 13A since the time of the SCE pump tests. Based on the SCE pump test results, there are currently four well pumps which are operating inefficiently (Wells #2A, #4, #15A, #18, and #6). A cost analysis review of the replacement of these well pumps is provided in Section 5.3.5.



Table 5-13 Well Pump Efficiencies

Well Pump	Test Date	Pumping Capacity (gpm) ⁽¹⁾	Plant Efficiency ⁽¹⁾	SCE Classification ⁽¹⁾	Date of Last Motor Replacement	Date of Last Pump Replacement
<u>Potable</u>						
Well #2A	Feb 2017	411	57.7%	Inefficient ⁽²⁾	Jan 2010	Sep 2002
Well #4	Feb 2017	653	58.7%	Inefficient ⁽²⁾	May 2015	May 2015
Well #8	-	-	-	-	Jun 1997	Jun 1997
Well #10	Feb 2017	774	60.4%	Efficient	Jun 2010	Feb 2003
Well #13A	Aug 2017	1,139	62.7%	Efficient	Mar 2016	Mar 2016
Well #15A	Feb 2017	1,457	61.1%	Inefficient ⁽²⁾	May 2011	May 2011
Well #17	Feb 2017	904	64.5%	Efficient	May 2015	May 2015
Well #18	Feb 2017	601	61.1%	Inefficient ⁽²⁾	Mar 2012	Mar 2012
Well #22	Feb 2017	846	67.2%	Efficient	Jul 2015	Jul 2015
Well #27	Feb 2017	2,349	66.0%	Efficient	Jul 2016	Jul 2016
<u>Irrigation</u>						
Well #6	Feb 2015	317	54.7%	Inefficient ⁽⁴⁾	Nov 2010	-

Notes:

- ⁽¹⁾ Based on Southern California Edison (SCE) pump test results
- ⁽²⁾ SCE indicates there is potential to improve pump efficiency.
- ⁽³⁾ The motor and pump for Well #13A have been replaced since the date of the most recent SCE pump test.
- ⁽⁴⁾ Not available. Well #6 SCE pump test result from March 2011 incorporated.

5.3.2 Potential Annual Cost Savings – Well Pumps

SCE indicates there is a potential for annual energy savings by improving well pump efficiency to at least 65 to 70 percent. Although there is an increased potential for energy savings through upgrading or replacing older pumps, the economics of replacing inefficient pumps that were recently replaced or installed may also need to be considered. Table 5-14 summarizes the potential annual energy cost savings for the City’s well pumps that have the potential for significant costs savings.



Table 5-14 Potential Well Pump Energy Cost Savings

Well Pump	Test Date	Existing Annual Energy Use (kWh) ⁽¹⁾	Average Cost per kWh ⁽¹⁾	Existing Annual Energy Cost ⁽¹⁾	Pump Efficiency (Existing) ⁽¹⁾	Pump Efficiency (Proposed) ⁽¹⁾	Proposed Annual Energy Savings ⁽¹⁾
Potable							
Well #2A	Feb 2017	180,984	\$0.10	\$18,250.89	57.7%	65.0%	\$2,048
Well #4	Feb 2017	326,376	\$0.10	\$31,095.14	58.7%	65.0%	\$3,036
Well #8	-	-	-	-	-	-	-
Well #10	Feb 2017	178,404	\$0.09	\$16,819	60.3%	-	-
Well #13A	Aug 2017	134,868	\$0.12	\$16,543.46	62.7%	-	-
Well #15A	Feb 2017	443,868	\$0.09	\$40,597.94	61.2%	65.0%	\$2,400
Well #17	Feb 2015	598,704	\$0.13	\$75,089	69.4%	-	-
Well #18	Feb 2017	407,160	\$0.09	\$36,346	61.1%	69.0%	\$4,173
Well #22	Feb 2017	608,700	\$0.18	\$112,020	67.2%	-	-
Well #27	Feb 2017	222,876	\$0.17	\$38,248	66.0%	-	-
Irrigation							
Well #6	Feb 2015	16,908	\$0.28	\$4,709	54.7%	65.0%	\$747

Notes:

⁽¹⁾ Based on Southern California Edison (SCE) pump test results

⁽³⁾ The motor and pump for Well #13A have been replaced since the date of the most recent SCE pump test.

5.3.3 SCE Pump Efficiency Tests – Booster Pumps

The results of recent SCE pump tests for the City’s booster pumps are summarized in Table 5-15. According to the results, booster pump operation efficiencies range between 59.9 percent to 71.5 percent. In addition, SCE has identified the well pumps which are “efficient” or “inefficient”. Based on the SCE pump test results, there are currently four booster pumps which is operating inefficiently (Plant 4, Booster #2, #3, #4, and #6). A cost analysis review of the replacement of these booster pumps is provided in Section 5.3.5.



Table 5-15 Booster Pump Efficiencies

Booster Pump	Test Date	Pumping Capacity (gpm) ⁽¹⁾	Plant Efficiency ⁽¹⁾	SCE Classification ⁽¹⁾	Date of Last Motor Replacement
Plant 4, Booster #2	Jan 2017	746	61.0%	Inefficient ⁽²⁾	-
Plant 4, Booster #3	Jan 2017	656	61.2%	Inefficient ⁽²⁾	2013
Plant 4, Booster #4	Jan 2017	1,397	59.9%	Inefficient ⁽²⁾	-
Plant 4, Booster #5	Jan 2017	1,590	71.5%	Efficient	2015
Plant 4, Booster #6	Jan 2017	769	61.8%	Inefficient ⁽²⁾	-
Plant 4, Booster #7	Jan 2017	1,113	71.0%	Efficient	-
Plant 4, Booster #8	Apr 2017	1,970	68.4%	Efficient	-
Plant 13, Booster #1	Aug 2017	900	62.7%	Efficient	-
Plant 13, Booster #2	Aug 2017	1,011	63.7%	Efficient	-
Plant 13, Booster #3	Aug 2017	1,663	60.2%	Efficient	-
Plant 13, Booster #4	Aug 2017	1,722	62.8%	Efficient	-
Plant 22, Booster #1	Feb 2017	930	69.2%	Efficient	-
Plant 22, Booster #2	Feb 2017	842	67.8%	Efficient	-
Plant 22, Booster #3	Feb 2015	790	66.1%	Efficient	-
Plant 22, Booster #4	Feb 2017	1,111	65.1%	Efficient	-

Notes:

⁽¹⁾ Based on Southern California Edison (SCE) pump test results

⁽²⁾ SCE indicates there is potential to improve pump efficiency.

5.3.4 Energy Saving Analysis – Booster Pumps

Similar to well pumps, there is potential for annual energy savings by improving booster pump efficiency to at least 65 to 70 percent. Although there is an increased potential for energy savings through upgrading or replacing older pumps, the economics of replacing inefficient pumps that were recently replaced or installed may also need to be considered. Table 5-16 summarizes the potential annual energy cost savings for the City’s booster pumps that have the potential for significant costs savings.



Table 5-16 Potential Booster Pump Efficiency Pump Energy Cost Savings

Well Pump	Test Date	Existing Annual Energy Use (kWh) ⁽¹⁾	Average Cost per kWh ⁽¹⁾	Existing Annual Energy Cost ⁽¹⁾	Pump Efficiency (Existing) ⁽¹⁾	Pump Efficiency (Proposed) ⁽¹⁾	Proposed Annual Energy Savings ⁽¹⁾
Plant 4, Booster #2	Jan 2017	55,368	\$0.11	\$5,931	61.0%	66.0%	\$446
Plant 4, Booster #3	Jan 2017	120,372	\$0.11	\$12,893	61.3%	66.0%	\$926
Plant 4, Booster #4	Jan 2017	22,872	\$0.11	\$2,449	59.9%	68.0%	\$293
Plant 4, Booster #5	Jan 2015	55,104	\$0.08	\$4,465	69.9%	-	-
Plant 4, Booster #6	Jan 2017	12,288	\$0.11	\$1,316	61.9%	66.0%	\$82
Plant 4, Booster #7	Jan 2015	120	\$0.08	\$10	69.4%	-	-
Plant 4, Booster #8	Apr 2017	120,600	\$0.11	\$12,916	68.4%	-	-
Plant 13, Booster #1	Aug 2017	182,172	\$0.15	\$26,916	62.7%	-	-
Plant 13, Booster #2	Aug 2017	211,236	\$0.15	\$31,209	63.7%	-	-
Plant 13, Booster #3	Aug 2017	4,572	\$0.15	\$677	60.2%	-	-
Plant 13, Booster #4	Aug 2017	4,248	\$0.15	\$627	62.9%	-	-
Plant 22, Booster #1	Feb 2017	456	\$0.18	\$84	69.2%	-	-
Plant 22, Booster #2	Feb 2015	218,064	\$0.11	\$24,356	66.4%	-	-
Plant 22, Booster #3	Feb 2017	15,936	\$0.18	\$2,932	67.7%	-	-
Plant 22, Booster #4	Feb 2017	156	\$0.18	\$31	65.0%	-	-

Notes:

⁽¹⁾ Based on Southern California Edison (SCE) pump test results

5.3.5 Cost Saving Analysis – Energy Cost Versus Pump Refurbishment or Replacement Cost

In addition to the SCE cost savings analysis of increasing pump efficiencies provided above, applicable SCE pump tests have been evaluated to determine if refurbishment or replacement of the well or booster pumps is the most economical way to increase efficiency. For the purposes of evaluation, refurbishment is assumed to



provide an additional 12.5 years of service life to a pump at a cost of approximately \$20,000 for booster pumps and \$45,000 for well pumps. Refurbishment should generally be applied only to newer pumps. Replacement of a pump is assumed to provide 25 years of service life at a cost of approximately \$40,000 for booster pumps and \$150,000 for well pumps. The present worth of the potential annual power cost savings, using a 5 percent rate of return over the estimated life of the pump, is compared to the cost for refurbishment and replacement. If the present worth of the potential annual power cost savings is greater than the cost for refurbishment or replacement, it has been assumed that refurbishment or replacement of a well or booster pump is economical.

The City's well and/or booster pumps considered for refurbishment or replacement are summarized in Table 5-17 and Table 5-18, respectively. The refurbishment and/or replacement of well and booster pumps do not appear economical. In general, a relatively newer pump should be refurbished, with the possibility of future replacement when plant efficiency declines again. Alternatively, a relatively older pump should be replaced, with the possibility of future refurbishment.



Table 5-17 Cost Analysis for Replacement or Refurbishment of Well Pumps

Pump Name	Proposed Annual Energy Savings ⁽¹⁾	Present Worth of Potential Annual Power Savings ⁽²⁾		Present Worth of Savings over 12.5 Years Less Refurbishment Costs (\$45,000) ⁽³⁾	Present Worth of Savings over 25 Years Less Replacement Costs (\$150,000) ⁽⁴⁾
		Refurbishment (12.5 yrs @ 5%)	Replacement (25 yrs @ 5%)		
Well #2A	\$2,048	\$18,701	\$28,863	(\$26,299.30)	(\$121,137)
Well #4	\$3,036	\$27,721	\$42,785	(\$17,279.06)	(\$107,215)
Well #15A	\$2,400	\$21,918	\$33,829	(\$23,081.77)	(\$116,171)
Well #18	\$4,173	\$38,109	\$58,818	(\$6,891.36)	(\$91,182)
Well #6	\$747	\$6,819	\$10,524	(\$38,181.40)	(\$139,476)

Notes:

- (1) Based on Southern California Edison (SCE) pump test results
- (2) Refurbishment is assumed to provide 12.5 years of service life. Replacement is assumed to provide 25 years of service life. The present worth assumes a refurbishment or replaced pump remain at an equal efficiency level compared to the original pump over the projected service life.
- (3) Present worth of refurbishment (5.0% for 12.5 years) minus \$45,000, the assumed cost for well pump refurbishment.
- (4) Present worth of replacement (5.0% for 25 years) minus \$150,000, the assumed cost for well pump replacement.

Table 5-18 Cost Analysis for Replacement or Refurbishment of Booster Pumps

Pump Name	Proposed Annual Energy Savings ⁽¹⁾	Present Worth of Potential Annual Power Savings ⁽²⁾		Present Worth of Savings over 12.5 Years Less Refurbishment Costs (\$20,000) ⁽³⁾	Present Worth of Savings over 25 Years Less Replacement Costs (\$40,000) ⁽⁴⁾
		Refurbishment (12.5 yrs @ 5%)	Replacement (25 yrs @ 5%)		
Plant 4, Booster #2	\$446	\$4,073	\$6,287	(\$15,926.56)	(\$33,713)
Plant 4, Booster #3	\$926	\$8,456	\$13,051	(\$11,543.91)	(\$26,949)
Plant 4, Booster #4	\$293	\$2,676	\$4,130	(\$17,324.43)	(\$35,870)
Plant 4, Booster #6	\$82	\$752	\$1,161	(\$19,248.01)	(\$38,839)

Notes:

- (1) Based on Southern California Edison (SCE) pump test results
- (2) Refurbishment is assumed to provide 12.5 years of service life. Replacement is assumed to provide 25 years of service life. The present worth assumes a refurbishment or replaced pump remain at an equal efficiency level compared to the original pump over the projected service life.
- (3) Present worth of refurbishment (5.0% for 12.5 years) minus \$20,000, the assumed cost for booster pump refurbishment.
- (4) Present worth of replacement (5.0% for 25 years) minus \$40,000, the assumed cost for booster pump replacement.



5.4 Condition Assessment of Reservoirs

The City's facilities include two concrete reservoirs and seven steel reservoirs. Concrete reservoirs are either partially or predominantly buried underground. All of the steel reservoirs are constructed above ground.

The City's concrete reservoirs should periodically be inspected for damage and cracking. Exterior inspections are typically limited to external areas above ground. Generally, the exterior face of a reservoir, in addition to weathering, is under tension and is more likely to crack. Conversely, the interior face of a reservoir is under compression and is less likely to crack. Reservoir areas covered in dirt may exhibit different cracking tendencies, although cracks cannot be determined unless earthwork is performed or if there is a presence of water leakage. Reservoir cracks can be repaired or resealed to prevent further spreading of cracks and possible water leakage.

An important maintenance concern regarding steel reservoirs is periodic repainting to avoid rust and corrosion. The presence of rust is likely caused by damaged paint, in which case the reservoir should be sandblasted and repainted. All the City's steel reservoirs are equipped with a cathodic protection system to protect against internal corrosion.

Dive / Corr Inc. has been periodically performing inspection and prepares inspection reports for the City's reservoirs. Table 5-19 summarizes the dates of the most recent City reservoir inspections:



Table 5-19 Reservoir Inspection Date

Reservoir Name	Dive / Corr Inspection Date
Reservoir 22	February 16, 2016
Plant 4, Tank 1	February 27, 2014
Plant 4, Tank 2	June 12, 2015
Plant 4, Tank 3	May 1, 2017
Plant 13, Tank 1	June 12, 2015
Plant 13, Tank 2	June 12, 2015
Plant 13, Tank 3	June 12, 2015
Plant 13, Tank 4	June 12, 2015
Plant 13, Tank 5	June 12, 2015

The inspection reports provide recommendations for each reservoir (a summary is provided in Appendix D), including the following:

- Regular cleaning, inspection and repair cycles every two years for each reservoir.
- For Reservoir 22, repair the cracking in the interior roof and walls and floors or replace the reservoir.
- For Plant 13, Tanks 4 and 5, recoat roof exterior and do not use cathodic system rectifier until it is repaired for Tank 5. The City indicated it has recently recoated the roof exterior for Plant 13, Tanks 4 and 5. In addition, the City removed the rectifiers for Tanks 4 and 5 in May 2017, and passive sacrificial anodes were installed in each tank.

A summary of recommendations is provided in Table 5-20 below.

**Table 5-20 Reservoir Inspection Summary**

Name	Recommendations
Reservoir 22	Replacement or repair (considerable leakage at wall to floor joint line, notable roof cracking. Overflow openings are clogged)
Plant 4, Tank 1	Reattach vent straps, Annual roof cleaning
Plant 4, Tank 2	Recoat rust zones on roof exterior
Plant 4, Tank 3	Monitor cracking in roof underside, Monitor and remove interior deposits (possibly filter media)
Plant 13, Tank 1	Monitor previous leak at the corner on the rectangular manway quarterly
Plant 13, Tank 2	Reinspect reservoir in 2 years
Plant 13, Tank 3	Reinspect reservoir in 2 years
Plant 13, Tank 4	Recoat roof exterior
Plant 13, Tank 5	Recoat roof exterior

5.4.1 Removal of Reservoir 22

It is recommended the City remove Reservoir 22 from service. The inspection report for Reservoir 22 recommends replacement of the reservoir. The City's existing reservoirs have sufficient storage capacity under current and future conditions with Reservoir 22 removed from service (see Section 6.2). In addition, the hydraulic model identified only an additional three (3) model nodes with fire flow deficiencies at MDD plus fire flow as a result of Reservoir 22 being removed from service (see Section 6.3).

5.4.2 Reservoir Maintenance

In general, regular cleaning, inspection, and repair cycles are recommended every two (2) years for each reservoir.



An important maintenance item for steel reservoirs is periodic repainting to avoid rust and corrosion. Reservoir damage should be repaired or resealed when found to prevent further rusting and possible water leakage. The City periodically inspects the external and internal conditions of its reservoirs. In order to maintain reservoirs in good condition, a routine maintenance schedule is required to recoat these reservoirs. In general, steel reservoirs should be recoated every 20 years (without cathodic protection) and 25 years (with cathodic protection) to ensure proper protection against corrosion. Although the frequency of recoating will vary based on the use of the reservoir and the water quality, the City should plan to recoat each reservoir at least every 20 years because not all of its reservoirs are equipped with cathodic protection.

When maintenance is deferred, coating systems will not achieve the designed life they are intended for, potentially resulting in premature failure and structural damage to the underlying substrate. Structural damage includes the deterioration of the interior rafters and lateral braces, requiring partial or full replacement. In addition, deep pitting or perforations in the tank bottom, deterioration of the center vent structure or the ladder, and severe pitting of the shell may also occur and require reservoir replacement.

Concrete reservoirs should periodically be inspected for damage and cracking. Exterior inspections of the concrete reservoir are limited to external areas above ground. Generally, the exterior face of a reservoir, in addition to weathering, is under tension and is more likely to crack. Conversely, the interior face of a reservoir is under compression and is less likely to crack. Reservoir areas covered in dirt may exhibit different cracking tendencies, although cracks cannot be determined unless earthwork is performed or if there is a presence of water leakage. Reservoir cracks can be repaired or resealed to prevent further spreading of cracks and possible water leakage.



5.4.3 Comprehensive Analysis Report

The City may consider preparing comprehensive analysis reports for each of its reservoirs. The reports include structural and seismic evaluations based on applicable standards and guidelines (including from AWWA and the Occupation Safety and Health Administration (OSHA)). The reports can include various safety and structural retrofit recommendations to comply with AWWA guidelines. These retrofits can include the following installation and/or replacements:

- In accordance with Section 3.6.1.4 of AWWA guidelines D100-11 roof rafters (structural beams used to support the roof of a reservoir) shall be designed using the allowable stress design provisions of the American Institute of Steel Construction (AISC) for A36 material when the roof design live load is 50 lb/ft² or less. For roof design live loads greater than 50 pounds per square foot, roof rafter design may utilize higher allowable stresses when using material with minimum specified yield strength greater than A36 material. Other design components, including lateral support of rafters, placement of rafters, coating, and maximum rafter spacing are also detailed in Section 3.6.1 of AWWA guidelines D100-11.
- A seismic evaluation may need to be performed on the City's reservoirs to determine if reservoirs are at risk from seismic action, including roof damage, shell hoop tension failure, shell elephant foot buckling due to seismic overturning moments, piping damage and foundation failure.
- Reservoir roof damage can occur due to sloshing wave forces. AWWA D100-11 includes freeboard calculation guidelines to protect the reservoir roof, lowering the overflow pipe location and reducing storage capacity. AWWA D110-04 guidelines provide similar guidelines for concrete reservoirs.



- According to AWWA D110-04 guidelines, which were unavailable when the City's reservoirs were constructed, unanchored reservoirs have a minimum bottom pipe penetration limit to prevent leak and/or tears if the bottom shell were to uplift during a seismic event. Increasing the height of these penetrations is not desirable because it impacts the useable capacity of the reservoir. If the reservoir is anchored, the pipe penetration limit does not apply, and it minimizes the impact to the useable capacity. Existing reservoirs may be equipped with flex couplings to mitigate piping damage in all of the unanchored reservoirs. Unanchored reservoirs are also at a higher risk of buckling and overturning forces that result in uplift on the bottom of the reservoirs.
- In accordance with Section 7.4.1 of AWWA guidelines D-100-11 for carbon steel tanks, general access to the reservoir, including ladders, stairs, platforms, rails, access openings, and safety devices, shall comply with OSHA standards.
- In accordance with Section 7.4.4 of AWWA guidelines D-100-11, two shell manholes shall be provided in the first ring of a tank shell.

5.5 Asset Management Plan

GHD prepared a working draft of the City's "Asset Management Plan" in January 2017. The Asset Management Plan was prepared as a long-range planning document for managing the water production facility assets owned and operated by the City, over the next 10 to 20 years. The Asset Management Plan provides a framework to manage costs, risks, and levels of service of the City's assets, while additionally identifying future funding requirements. The City's water production facility assets covered by the Asset Management Plan include the Plant 4, Plant 13, and Plant 22 facilities as well as other water distribution system assets including other wells, SCADA, etc.



The Asset Management Plan provides information regarding the following water supply facility categories:

- Booster Pump Station (including pumps, motors, valves, enclosures, and starters)
- Well (including pumps, motors, valves, meters, and control building)
- Reservoir (including storage tanks, ladders, pumps, and valves)
- Treatment Plant (including pumps, electrical buildings, valves, tanks, and control panels)
- General (including electrical conduits, pipes, and fittings)

Assets are categorized by location and type. Table 5-21 provides a summary of the number of City assets reviewed and their replacement value.

**Table 5-21 Asset Inventory and Replacement Value**

Plant	Category	Number of Assets	Value (\$M)
Plant 13	Booster Pump Station	43	0.3
	General	2	1.1
	Reservoir	10	3.5
	Treatment Plant	24	0.6
	Well	12	2.4
Plant 22	General	2	0.3
	Reservoir	13	7.7
	Well	66	3.2
Plant 4	Booster Pump Station	79	0.9
	General	2	5.1
	Reservoir	29	22.4
	Treatment Plant	77	1.5
	Well	124	12.3
System	Well	66	6.5
City Wide	General	1	0.2
Total		550	68.0

Source:

City Draft Asset Management Plan, January 2017

An asset management strategy will enable assets to provide the desired levels of service, while managing risk at the lowest life cycle cost. High-risk assets were identified in the Asset Management Plan and prioritized over lower risk assets for replacement and maintenance. A life cycle analysis was prepared and recommended the budget required to provide service in a sustainable way. Analysis of the asset registry gives the long-term costs of replacing and/or maintaining (rehabilitating) assets. Table 5-22 provides the projected annual investment costs required to maintain service.

**Table 5-22 Projected Asset Replacement and Rehabilitation Costs**

Year	Replacement Costs	Rehabilitation Costs	Total Costs
2017	\$2,411,963	\$308,496	\$2,720,459
2018	\$126,325	\$69,569	\$195,894
2019	\$307,710	\$94,464	\$402,174
2020	\$2,591,951	\$39,054	\$2,631,005
2021	\$28,800	\$112,752	\$141,552
2022	\$401,700	\$61,763	\$463,463
2023	\$25,225	\$159,956	\$185,181
2024	\$604,100	\$51,774	\$655,874
2025	\$349,800	\$180,405	\$530,205
2026	\$31,550	\$47,970	\$79,520
2027	\$2,655,737	\$112,627	\$2,768,364
2028	\$28,625	\$45,192	\$73,817
2029	\$521,210	\$87,084	\$608,294
2030	\$1,453,425	\$44,969	\$1,498,394
2031	\$2,468,600	\$64,836	\$2,533,436
2032	\$440,508	\$107,519	\$548,027
2033	\$37,600	\$88,516	\$126,116
2034	\$5,435,590	\$94,492	\$5,530,082
2035	\$507,600	\$63,412	\$571,012
2036	\$260,150	\$98,721	\$358,871
20 Year Total			\$22,621,740
Average Annual Renewal			\$1,131,087

Source:

City Draft Asset Management Plan, January 2017

It is recommended the City incorporate the schedule of asset replacements recommended in the Asset Management Plan into the City's CIP schedule with the following modifications:



- The immediate replacement of the pumps for Wells #2A, #10, #15A, and #18 are not included in the CIP schedule. These well pumps have been refurbished or replaced since at least 2002 and do not require immediate replacement. It should be noted the Asset Management Plan schedules periodic replacement of these well pumps in the long-term which are included in the CIP schedule.
- The replacement of Plant 13, Tank 1, Tank 2 and Tank 3 (by 2020) are not included in the CIP schedule. These storage facilities currently have an estimated remaining service life of 12 years. Although life expectancy projections for these reservoirs should continue to be reviewed periodically, there are no replacement recommendations for these reservoirs at this time.
- The replacement of wells in 2030 and 2031 is not included in the CIP schedule.
- The replacement of one of two reservoirs in 2034 is not included in the CIP schedule.

A summary of the recommended replacements based on the draft Asset Management Plan is provided in Appendix E.

The City should continue updating the Asset Management Plan annually in order to reflect the continuous improvement of asset management practices and data refinement.



<Page Intentionally Left Blank>



CHAPTER 6

EVALUATION OF FACILITY CAPACITIES TO MEET DEMANDS

6.1 Introduction

This section evaluates the condition and performance of the City's existing finished water pumping, storage and distribution facilities and presents recommendations for capital improvements to improve system operations and performance, to accommodate future growth and development, and to maintain system reliability and redundancy. This section also presents the criteria against which the existing system facilities were evaluated.

6.1.1 Evaluation Criteria

The adequacy of existing system facilities to meet current and projected water demands and to deliver adequate fire flows was evaluated using a hydraulic model of the distribution system. Meeting system requirements depends upon the proper design and performance of distribution and transmission piping, storage reservoirs, booster pumps, and regulating valves. The following criteria for distribution piping (Section 6.1.1.1) and storage (Section 6.1.1.2) were used to evaluate the City's existing distribution system and to plan for future improvements, upgrades, and expansions of distribution and storage facilities.

6.1.1.1 Evaluation Criteria for Transmission and Distribution Piping

Design guidelines for transmission and distribution vary from state to state and from utility to utility. The American Water Works Association (AWWA) provides some guidelines and many states regulate certain performance criteria. Also, the CPUC,



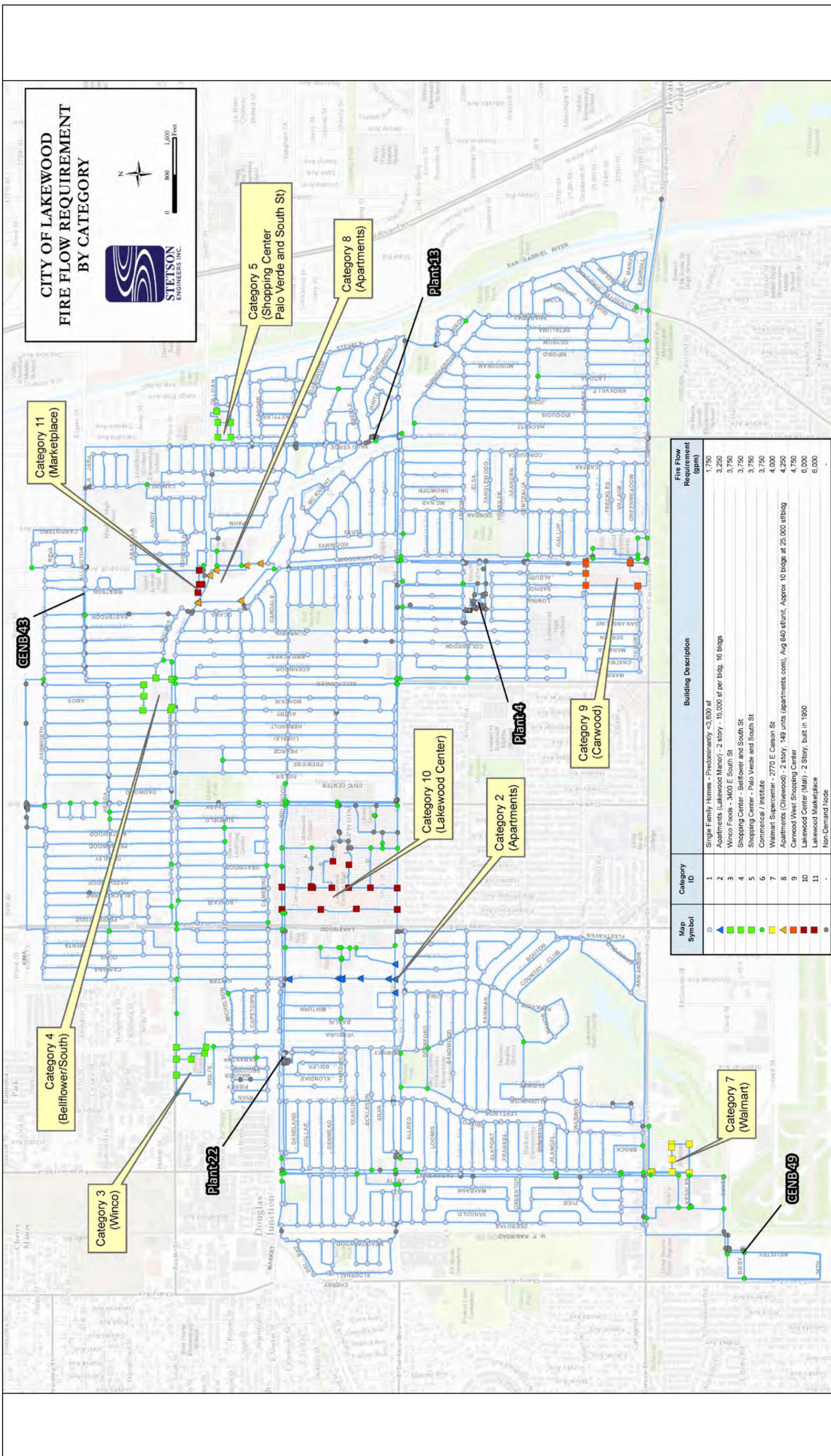
counties, cities, fire agencies, and the Insurance Service Office (ISO) set standards for fire flow requirements for individual structures within a service area. However, design criteria are often left to the discretion of the water utility.

In general, the City's network of water distribution piping must accommodate multiple objectives:

- **Capacity:** Achieve adequate delivery capacity and acceptable pipeline head losses.
- **Fire Flow:** Supply fire flows at recommended levels.
- **Growth:** Accommodate future service area development through system expansion.
- **Redundancy:** Provide multiple delivery points to areas.
- **Reliability:** Maintain physical condition of system through pro-active rehabilitation and replacement to minimize unscheduled loss of service.

To evaluate the performance of the existing transmission and distribution piping system and to plan conservatively for future growth while maintaining system reliability, the criteria presented in Table 6-1 were used for hydraulic evaluation (including hydraulic modeling) of transmission and distribution pipeline mains for this Master Plan Update. The fire flow criteria shown in Table 6-1 are also presented in Figure 6-1.

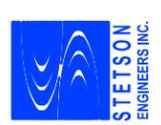
FIGURE 6-1



CITY OF LAKEWOOD

FIRE FLOW REQUIREMENTS BY CATEGORY

861 VILLAGE OAKS DRIVE, SUITE 100
 COVINA, CALIFORNIA 91724
 TEL: (626) 967-6232
 FAX: (626) 331-7055



2171 E Francisco Blvd., Suite K
 San Rafael, California 94901
 2851 W Guadalupe Rd., Suite A209
 Mesa, Arizona 85202

<Page Intentionally Left Blank>



Table 6-1 Design Guidelines for Transmission and Distribution Pipeline Mains

Parameter	Criteria
Minimum Pressure at MDD	35 psi
Maximum Pressure at MDD	120 psi
Pipe Velocity ⁽¹⁾ at MDD	< 7 feet per second
Maximum Head Loss ⁽¹⁾ at MDD	10 feet per 1,000 feet (Single pipe maximum loss of 1 foot)
Fire Flow (Commercial and Industrial) ⁽²⁾ at MDD	
Southwest Lakewood (Walmart)	4,000 gpm for 4 hrs
Northwest Lakewood (Winco Foods)	3,750 gpm for 3 hrs
Central Lakewood (Lakewood Center)	6,000 gpm for 4 hrs
North Lakewood (Shopping center at Bellflower and South)	3,750 gpm for 3 hrs
East Lakewood (Lakewood Marketplace)	6,000 gpm for 4 hrs
East Lakewood (Shopping center at Palo Verde and South)	3,750 gpm for 3 hrs
Southeast Lakewood (Carwood West)	4,750 gpm for 4 hrs
Fire Flow (Residential) ⁽²⁾ at MDD	
Northwest Lakewood (Multi family)	3,250 gpm for 3 hrs
East Lakewood (Multi family)	4,250 gpm for 4 hrs
Single Family Homes (Average of 1,900 square feet)	1,750 gpm for 2 hrs

Notes:

MDD = Maximum Day Demand

gpm = gallons per minute

psi = pounds per square inch

⁽¹⁾ AWWA Standard

⁽²⁾ Based on the 2016 California Fire Code and the Los Angeles County Fire Department standards

6.1.1.2 Evaluation Criteria for Distribution System Storage Facilities

Water is stored to provide water pressure, equalize pumping rates, equalize supply and demand over periods of high consumption, provide surge relief, and furnish water during fires and other emergencies. Storage may also serve as part of the treatment process, either by providing increased detention time or by blending water supplies to obtain a desired concentration.



Storage facilities must be sized to sufficiently provide for the following:

- **Equalization Storage:** Provide equalization to the daily fluctuation of water demand.
- **Fire Suppression Storage:** Meet the demands of fire fighting for a specified period of time within the service area.
- **Emergency Storage:** Provide water reserves for contingencies such as system failures, power outages and other emergencies.

Equalization Storage

The operational component of storage is determined by the fluctuation in hourly demand during the maximum day of operation. The amount of equalization storage required is a function of the finished water pumping capacity, distribution piping capacity, and system demand characteristics. Equalization storage is generally less expensive than increased capacities of finished water pumps and distribution piping beyond that required to meet the maximum day demand (MDD) or peak day demand. Consequently, it is desirable to size the pumping and piping systems to carry MDD, with equalization storage sized to carry demands in excess of the MDD up to the peak hour demand (PHD). According to *Distribution Network Analysis for Water Utilities* (AWWA), equalization storage should be approximately 50 percent of the total storage required and between 20 to 25 percent of the Average Day Demand (ADD). The U.S. Army Corps of Engineers (USACE) recommends that the combined equalization and emergency storage be 50 percent of average total daily domestic demand plus all industrial demands (Source: USACE, 1984: Engineering and Design Manual - Water Supply, Water Storage – Mobilization Construction). An equalization storage requirement of 25 percent of the



MDD, which is approximately 42.5 percent of the ADD was used to evaluate storage in this Master Plan Update.

The current and projected (2040) potable MDDs in the City’s service area are approximately 8.0 MGD and 9.0 MGD, respectively. Based on an equalization storage requirement of 25 percent of the MDD, the estimated equalization storage for the City’s service area is summarized in Table 6-2.

Table 6-2 Reservoir Storage Requirements

Year	Potable Demands			Storage Requirements			
	Potable Water Demands ⁽¹⁾	ADD ⁽²⁾	MDD ⁽³⁾	Equalization Storage ⁽⁴⁾	Fire Storage ⁽⁵⁾	Emergency Storage ⁽⁶⁾	Total Required Storage
	(AFY)	(MGD)	(MGD)	(MG)	(MG)	(MG)	(MG)
2015	6,174	5.5	8.0	2.0	1.4	1.4	4.8
2020	6,668	6.0	9.0	2.3	1.4	1.5	5.2
2025	6,801	6.1	9.0	2.3	1.4	1.5	5.2
2030	6,937	6.2	9.0	2.3	1.4	1.6	5.2
2035	7,076	6.3	9.0	2.3	1.4	1.6	5.3
2040	7,098	6.3	9.0	2.3	1.4	1.6	5.3

Notes:

ADD = Average Day Demand

MDD = Maximum Day Demand

⁽¹⁾ Potable water demands from Table 2-3

⁽²⁾ 1 MGD = 1,120 AFY

⁽³⁾ MDD = 1.5 x ADD

⁽⁴⁾ Equalization storage is based on 25 percent of the MDD

⁽⁵⁾ Fire storage is based on 6,000 gpm for 4 hours.

⁽⁶⁾ Emergency storage is based on 25 percent of the ADD



Fire Suppression Storage

The fire suppression reserve requirement is often determined by local governments or fire marshals. The fire flow requirements for different land uses within the City were based on the 2016 California Fire Code and the Los Angeles County Fire Department standards. The maximum fire flow requirement within the City's service area is 6,000 gpm for 4 hours based on the size of the Lakewood Center mall the Lakewood Marketplace. The estimated fire flow requirements within the City's service area are summarized in Table 6-1. The required fire suppression storage within the City's service area is based on the highest required fire flow rate multiplied by the required fire flow duration. The estimated fire suppression storage within the City's service area is summarized in Table 6-2. The total required fire storage in the City's service area is estimated to be approximately 1.4 MG.

Emergency Storage

Emergency storage is the volume of water required to supply a system during planned or unplanned outages. The amount of emergency storage included within a particular water distribution system is an owner option based upon an assessment of risk and a capability to pay for the standby provisions. Emergency storage may be included at only one or a limited number of storage sites.

AWWA recommends that an emergency storage equal to 20 to 25 percent of the ADD be provided. This emergency storage should meet customer demands for a period of six hours to allow for repair of main breaks, restoration of power, or repair of equipment failures. For the purposes of developing this Master Plan Update, an emergency storage requirement of 25 percent of the ADD was used to calculate required emergency storage.

The current and projected (2040) potable ADDs in the City's service area are approximately 5.5 MGD and 6.3 MGD, respectively. Based on an emergency storage



requirement of 25 percent of the ADD, the total estimated emergency storage requirements for the City's service area is summarized in Table 6-2.

6.1.1.3 Evaluation Criteria for Water Pumping Facilities

Pumping facilities are usually sized to meet the range of demands from average day demands to maximum day demand while maintaining desirable pressures. This section provides criteria for evaluating the pumping facilities in the City's distribution system.

Groundwater Pumping Facilities

The water supply facilities in the system should be capable of providing sufficient water to meet the MDD with the largest capacity well out of service. For example, loss of power, pipeline failure, or the presence of contamination could result in one groundwater production being out of service.

Booster Pumping Facilities

If adequate storage facilities are available, booster pump facilities should be capable of delivering the MDD to a system, with the largest capacity booster pump out of service, while providing desired pressures of 35 psi to 120 psi. For larger systems including the City, the adequacy of water facilities, including booster pumps, are normally evaluated through reliable hydraulic modeling.

6.2 Existing Distribution System Overview and Evaluation

The City's water distribution system contains approximately 180 miles of pipes in diameters ranging from 4 to 27 inches (Table 5-7). Pipe sizes of 6 and 8 inches make up approximately 64 percent of the distribution system. Most of the pipe materials in the

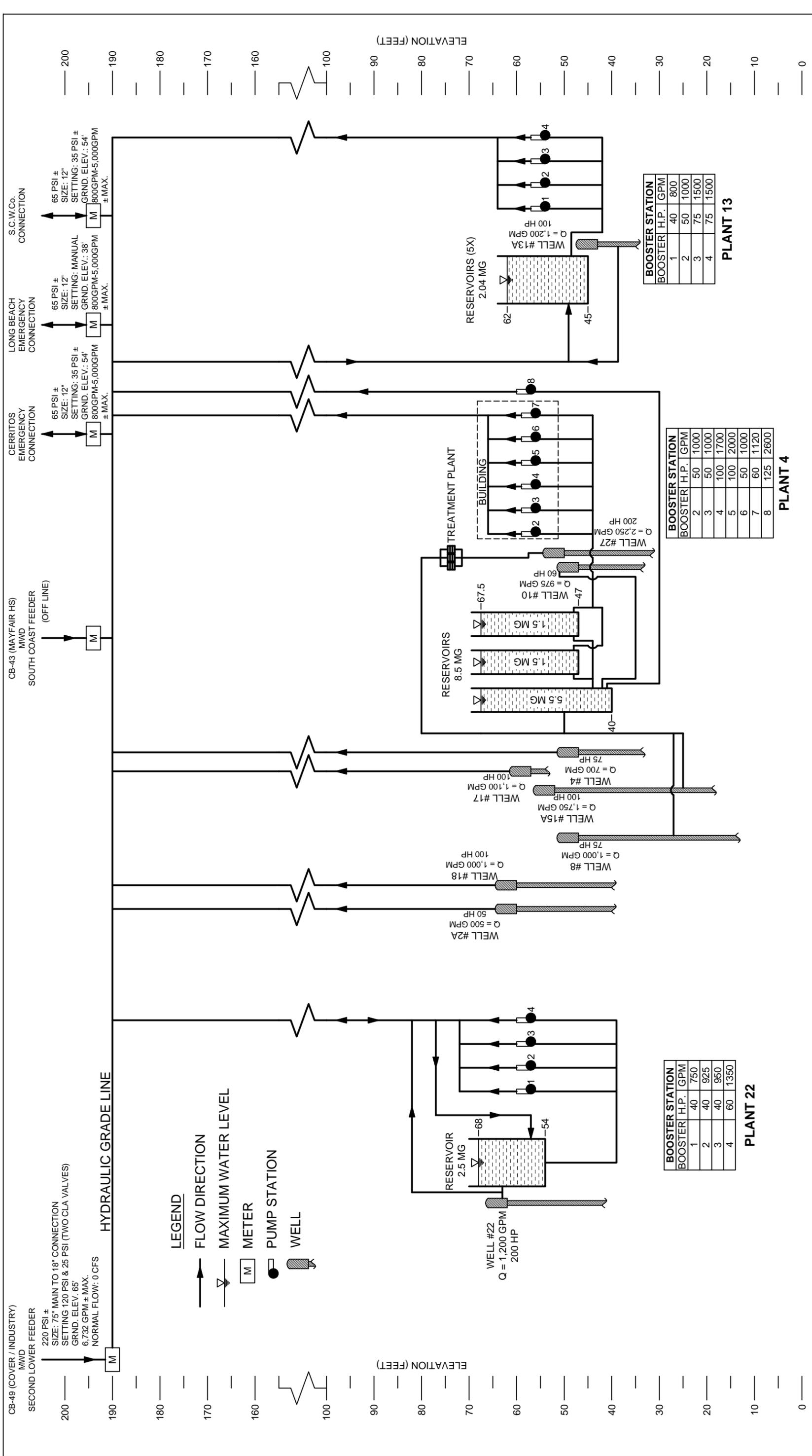


City's distribution system are cast iron pipe, with substantial amounts of asbestos cement, polyvinyl chloride, and ductile iron pipe as well.

Ground elevations within the City's service area range from about 35 feet to 70 feet above Mean Sea Level (MSL). The City's water system consists of one pressure zone. In general, pressure zone boundaries are established to maintain acceptable distribution system pressures shown in Table 6-1.

The City's distribution schematic is shown on Figure 6-2.

FIGURE 6-2



STETSON ENGINEERS INC.

861 VILLAGE OAKS DRIVE, SUITE 100
 SAN RAFAEL, CALIFORNIA 94724
 TEL: (925) 987-6202
 FAX: (925) 331-7065

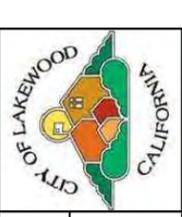
CITY OF LAKEWOOD

2171 E Francisco Blvd., Suite K
 San Rafael, California 94901
 2651 W Guadalupe Rd., Suite A209
 Mesa, Arizona 85202

CITY OF LAKEWOOD

WATER SYSTEM SCHEMATIC

F:\DATA\2624\AutoCAD\Schematic\ Water System Profile(Erlind).dwg



<Page Intentionally Left Blank>



6.2.1 Evaluation of Finished Water Storage

The City's distribution system includes nine finished water storage reservoir facilities. The total physical capacity or rated storage capacity of the existing water system is approximately 12.9 MG. However, for the purposes of this Master Plan Update, a useable or operating capacity has been used and is based on freeboard requirements. Reservoir freeboard is defined as the distance from the maximum operating level of water within the reservoir to the lowest level of the roof framing. Although methods to determine the freeboard height criteria above the maximum operating level are provided in AWWA Standard D100-11 (Standard for Welded Carbon Steel Tanks for Water Storage) for carbon steel tanks and AWWA Standard D110-04 (Wire & Strand Wound, Circular, Prestressed Concrete Water Tanks) for concrete tanks, it is estimated the useable capacity of the City's reservoirs is approximately 85 percent of the physical capacities. As a result, the total useable capacity of the City's water system is approximately 11.0 MG.

As discussed above, the existing and future finished storage requirements are evaluated based on three requirements consisting of the operational equalization, fire suppression reserve, and emergency supply. Table 6-4 summarizes the City's current and projected storage requirements through 2040. Table 6-5 indicates there are no current or projected storage shortages within the City's distribution system.

As discussed in Section 5.4.1, it is recommended the City remove Reservoir 22 from service. According to Table 6-4, there are no current or projected storage shortages within the City's distribution system with Reservoir 22 removed from service.



Table 6-3 Summary of Storage Evaluation

Year	Total Required Storage (1)	Existing Storage			Proposed Storage (Excludes Reservoir 22) (3)		
		Total Rated Capacity	Total Operating Capacity (2)	Storage Surplus / (Shortage)	Total Rated Capacity	Total Operating Capacity (2)	Storage Surplus / (Shortage)
	(MG)	(MG)	(MG)	(MG)	(MG)	(MG)	(MG)
2015	4.8	12.9	11.0	6.2	10.4	8.8	4.0
2020	5.2	12.9	11.0	5.8	10.4	8.8	3.6
2025	5.2	12.9	11.0	5.8	10.4	8.8	3.6
2030	5.2	12.9	11.0	5.8	10.4	8.8	3.6
2035	5.3	12.9	11.0	5.7	10.4	8.8	3.5
2040	5.3	12.9	11.0	5.7	10.4	8.8	3.5

Notes:

ADD = Average Day Demand

MDD = Maximum Day Demand

(1) Total required storage from Table 7-2 based on equalization, fire flow, and emergency storage requirements

(2) Based on a reservoir operating capacity estimate of 85 percent of the rated capacity

(3) Proposed storage is based on removal of Reservoir 22 from service (2.5 MG of rated capacity)

6.2.2 Evaluation of Finished Water Pumping

The City’s groundwater supplies are produced from the Central Basin. There are ten (10) active potable wells in the service area with a pumping capacity of approximately 11,675 gpm (or 16.8 MGD). As discussed in Section 6.1.1.3, the water supply facilities in the system should be capable of providing sufficient water to meet the MDD with the largest capacity well out of service. Excluding Well #27 (the City’s largest capacity well), the total capacity of the City’s remaining groundwater wells is approximately 9,425 gpm (or 13.6 MGD). The remaining total well capacity is sufficient in meeting the City’s projected MDD of 9.5 MGD in future years (See Section 2.3.3).

The City’s booster pumps are summarized in Section 5.1.2. Currently there are fifteen (15) booster pumps with a total capacity of approximately 19,195 gpm (or 28.5 MGD). As discussed in Section 6.1.1.3, the booster pump facilities should be capable of



providing sufficient water to meet the MDD with the largest booster pump out of service. In addition, as discussed in Section 5.4.1, it is recommended the City remove Reservoir 22 from service. Excluding the largest capacity booster pump (Plant 4, Booster #8) and the Plant 22 boosters (tied into Reservoir 22), the remaining booster pump facilities have a total capacity of approximately 12,620 gpm (or 18.1 MGD) and are sufficient in meeting the City's projected MDD of 9.5 MGD in future years.

6.3 Water Distribution System Hydraulic Evaluation Using the Hydraulic Modeling

Computer hydraulic modeling analysis is a method of predicting the hydraulic gradient pattern, pressures, and flows across a water distribution network under a given set of conditions. The hydraulic gradient pattern depends upon the magnitude and location of system demands, the characteristics of the pipes in the distribution system, and the flows and gradients at network boundaries such as reservoirs and pumping stations. The head loss through each pipe is a function of flow rate, pipe diameter, length, and internal roughness. The available pressure or head, at any point in the network is the difference between the hydraulic gradient and the pipeline centerline elevation.

As part of this investigation, a hydraulic network model developed using H2OMAP software was used to assess hydraulic capacity, water supply reliability, and fire flow capabilities throughout the City of Lakewood's water transmission and distribution system. The original hydraulic model (model) provided by the City (previously developed and calibrated by IDModeling in 2013) was updated by Stetson to represent all water mains (pipe sizes of 4 inches and greater), groundwater pumps and booster pumps, regulating valves, storage reservoirs, groundwater wells and water demands that were provided by the City in 2016. The updated model was recalibrated to the observed system pressures during the 2016 fire flow tests (refer to Appendix F for detailed information about the model update and recalibration). The recalibrated model was then used to determine nodal pressures and hydraulic gradient, pipe flows, velocities and head loss, and available fire flow at hydrant for different conditions. The updated and recalibrated



model of the distribution system initially contained 1,949 pipe segments (total pipe length of 180 miles) and 1,315 model nodes. The model nodes are typically pipe intersections, changes in direction, changes in pipe size, or demand locations. During the fire flow analysis, in order to more accurately simulate fire flow capabilities of the system, an additional 61 nodes (representing hydrants) were inserted at all fire hydrant locations along 4-inch diameter pipes. The resulting model used for hydraulic analysis in Section 6.3 included a total of 1,376 model nodes.

The criteria listed in Section 6.1.1.1 were used to evaluate system performance. Limitations or deficiencies within the system under different conditions were identified. Alternative improvements were investigated to identify those most effective in fixing the identified deficiencies.

The following hydraulic analyses were conducted using the updated and recalibrated hydraulic model:

- 1) Hydraulic analysis of pressure distributions, pipe velocities, and head loss within the existing system under the current ADD and MDD conditions (7,100 AFY)
- 2) Hydraulic analysis of fire flow capabilities of the existing system under the current MDD condition (7,100 AFY)
- 3) Hydraulic analysis of fire flow capabilities of the existing system with Reservoir 22 taken out of service under the current MDD condition (7,100 AFY)
- 4) Hydraulic analysis of proposed solutions for the existing system under the current demand condition (7,100 AFY)
- 5) Hydraulic analysis of proposed solutions for the existing system with Reservoir 22 taken out of service under the current demand condition (7,100 AFY)
- 6) Sensitivity analysis evaluating the relative hydraulic benefits to the existing system with MWD connections (CENB-43 and CENB-49), a proposed 12-inch emergency interconnection with Long Beach, or modified booster pump operation at Plant 4 under the current MDD condition (7,100 AFY)



The first analysis was performed to evaluate the system pressures, pipe velocities, and head loss of the existing system under ADD and MDD conditions (7,100 AFY in fiscal year 2015-16; see Section 2.3.1) and to identify system deficiencies. The second analysis was conducted to evaluate the fire flow capability of the existing system under the current MDD condition. The third analysis was performed to evaluate the fire flow capabilities of the existing system with Reservoir 22 taken out of service under MDD conditions. As discussed in Section 5.4.1, it is recommended the City remove Reservoir 22 from service. The fourth and the fifth analyses were conducted to identify effective solutions in fixing the identified deficiencies. The sixth sensitivity analysis was intended to evaluate the relative hydraulic benefit of additional water supply sources including operation of the MWD connections, a proposed emergency interconnection, and modified booster pump operations at Plant 4.

Operational settings of pumps, valves, and reservoirs for the hydraulic analyses were determined based on the operating conditions during the 2016 fire flow tests, which was considered as the “normal operations condition”. Specifically, the normal operations condition assumes the following wells/boosters turned on:

- Wells: #2A, #4, #17, #18;
- Plant 4 Boosters: #2, #3, #5, #7;
- Plant 13 Booster: #1; and
- Plant 22 Boosters: #1, #3.

The remaining wells connected to storage tanks were left on for estimating well outflows, except Well #14 which has been abandoned in 2013, and Well #27 which has water quality issues. The imported water supply from MWD at CENB-43 and CENB-49 is assumed to be unavailable under the normal operations condition. All simulation runs were conducted using the steady state model.



6.3.1 Modeling Analysis No. 1 - Pressures, Pipe Velocities, and Head Loss of the Existing System (ADD and MDD)

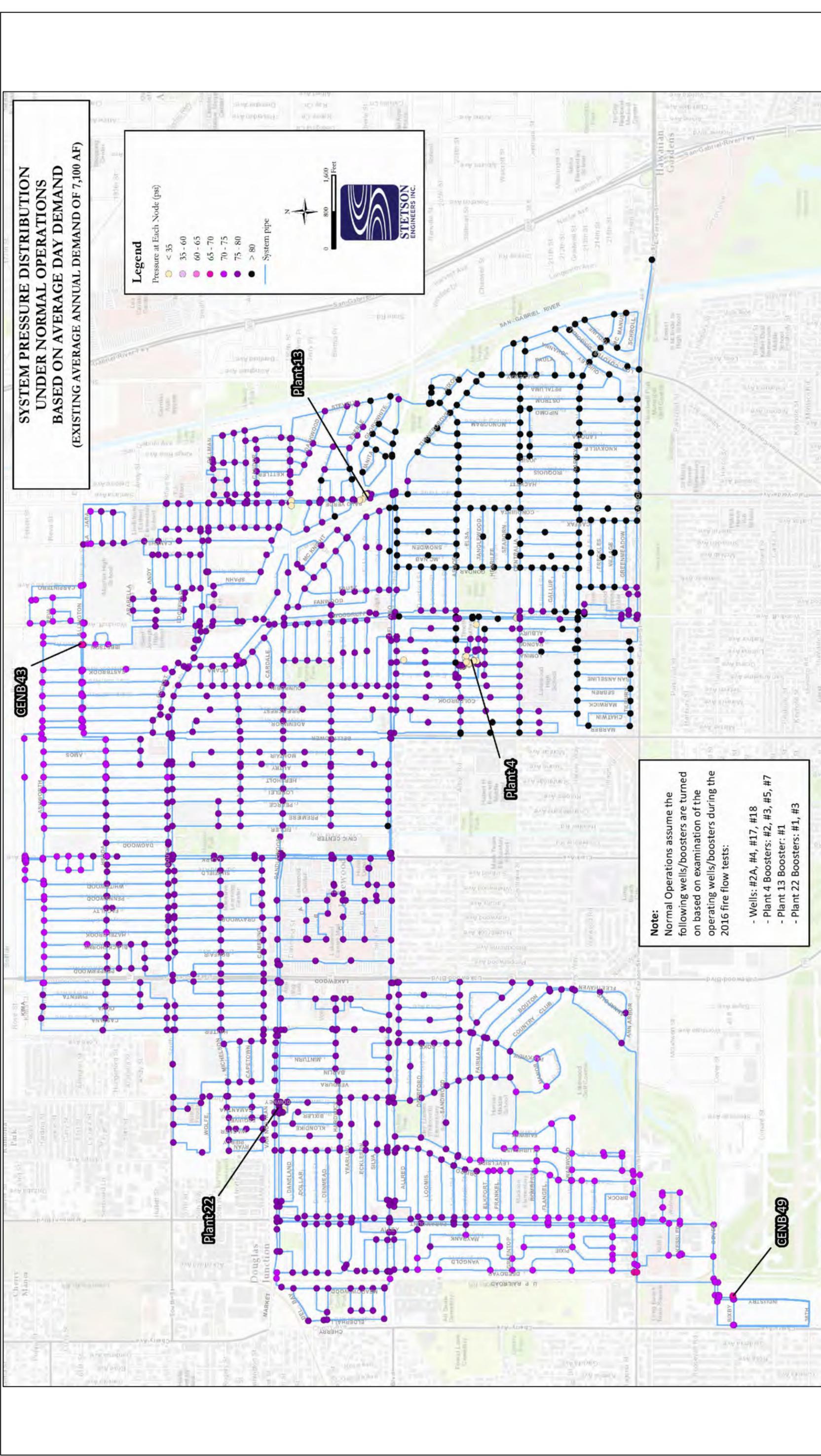
This analysis was intended to evaluate the system pressures, pipe velocities, and head loss of the existing system under ADD and MDD conditions (7,100 AFY) and to identify system deficiencies. The ADD condition represents the average day condition of the existing system and the MDD condition represents the maximum demand day condition, such as a summer hot day condition.

Figure 6-3 shows the simulated pressure distributions of the system under the ADD condition. The simulated results under ADD conditions show that 33 model nodes have pressures less than 35 psi and no model nodes have pressures greater than 120 psi throughout the City's water distribution system. Figure 6-4 shows the simulated pressure distributions of the system under MDD conditions. The simulated results under MDD conditions show that 33 model nodes have pressures less than 35 psi and no model nodes have pressures greater than 120 psi throughout the City's water distribution system. All low pressure nodes are located near the reservoirs at the upstream side of the booster pump stations. These nodes are not considered as system deficiencies because they are not associated with a water service connection and their low pressures are expected due to their locations.

Examination of the modeling results for pipe velocities and head loss found that no pipe has a velocity greater than 7 feet per second under MDD conditions. Six (6) pipes have head loss greater than 10 feet per 1,000 feet under MDD conditions, but the head loss of each single pipe is less than 1 foot because of the short length of the pipes. These pipes were not considered system deficiencies.

In summary, the existing system is adequate to meet the criteria shown in Table 6-1 for pressure, pipe velocity, and head loss.

FIGURE 6-3



SYSTEM PRESSURE DISTRIBUTION UNDER NORMAL OPERATIONS BASED ON AVERAGE ANNUAL DEMAND (EXISTING AVERAGE ANNUAL DEMAND OF 7,100 AF)

Legend

Pressure at Each Node (psi)

- < 35
- 35 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- 75 - 80
- > 80

System pipe

0 800 1,600 Feet

Note:
 Normal Operations assume the following wells/boosters are turned on based on examination of the operating wells/boosters during the 2016 fire flow tests:

- Wells: #2A, #4, #17, #18
- Plant 4 Boosters: #2, #3, #5, #7
- Plant 13 Booster: #1
- Plant 22 Boosters: #1, #3

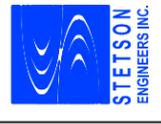


CITY OF LAKEWOOD

SYSTEM PRESSURE DISTRIBUTION (ADD)

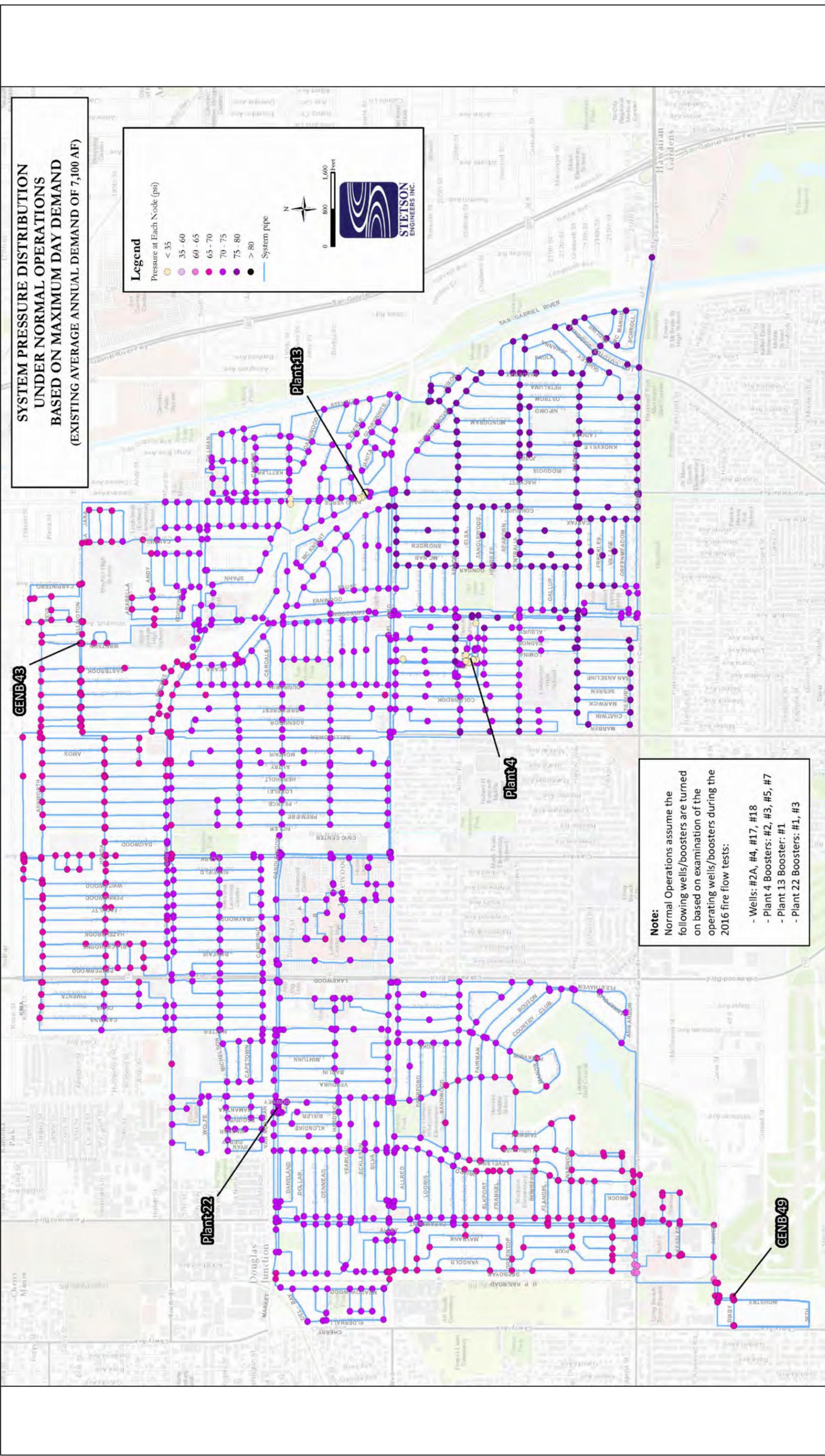
861 VILLAGE OAKS DRIVE, SUITE 100
 COVINA, CALIFORNIA 91724
 TEL: (626) 967-6202
 FAX: (626) 331-7095

2171 E. Francisco Blvd., Suite K
 San Rafael, California 94901
 2851 W. Guadalupe Rd., Suite A209
 Mesa, Arizona 85202



<Page Intentionally Left Blank>

FIGURE 6-4



SYSTEM PRESSURE DISTRIBUTION UNDER NORMAL OPERATIONS BASED ON MAXIMUM ANNUAL DEMAND (EXISTING AVERAGE ANNUAL DEMAND OF 7,100 AF)

Legend
 Pressure at Each Node (psi)
 < 35
 35 - 60
 60 - 65
 65 - 70
 70 - 75
 75 - 80
 System pipe

0 800 1,000 feet

STETSON ENGINEERS INC.

Note:
 Normal Operations assume the following wells/boosters are turned on based on examination of the operating wells/boosters during the 2016 fire flow tests:

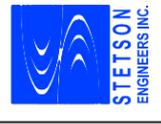
- Wells: #2A, #4, #17, #18
- Plant 4 Boosters: #2, #3, #5, #7
- Plant 13 Booster: #1
- Plant 22 Boosters: #1, #3



CITY OF LAKEWOOD
 SYSTEM PRESSURE DISTRIBUTION (MDD)

861 VILLAGE OAKS DRIVE, SUITE 100
 COVINA, CALIFORNIA 91724
 TEL: (626) 967-6222
 FAX: (626) 331-7055

2171 E. Francisco Blvd., Suite K
 San Rafael, California 94901
 2851 W. Guadalupe Rd., Suite A209
 Mesa, Arizona 85202



<Page Intentionally Left Blank>



6.3.2 Modeling Analysis No. 2 - Fire Flow Deficiencies of the Existing System (MDD+FF)

In addition to supplying water for domestic, commercial, and industrial uses, a municipal distribution system should be capable of supplying an adequate and dependable flow for fire fighting. The purpose of this analysis is to calculate the available fire flow at 20 psi residual pressure during the maximum day demand condition and to determine the existing system capability to provide the required fire flows for different types of building structures. The selected fire flow requirements are shown in Table 6-1 and Figure 6-1.

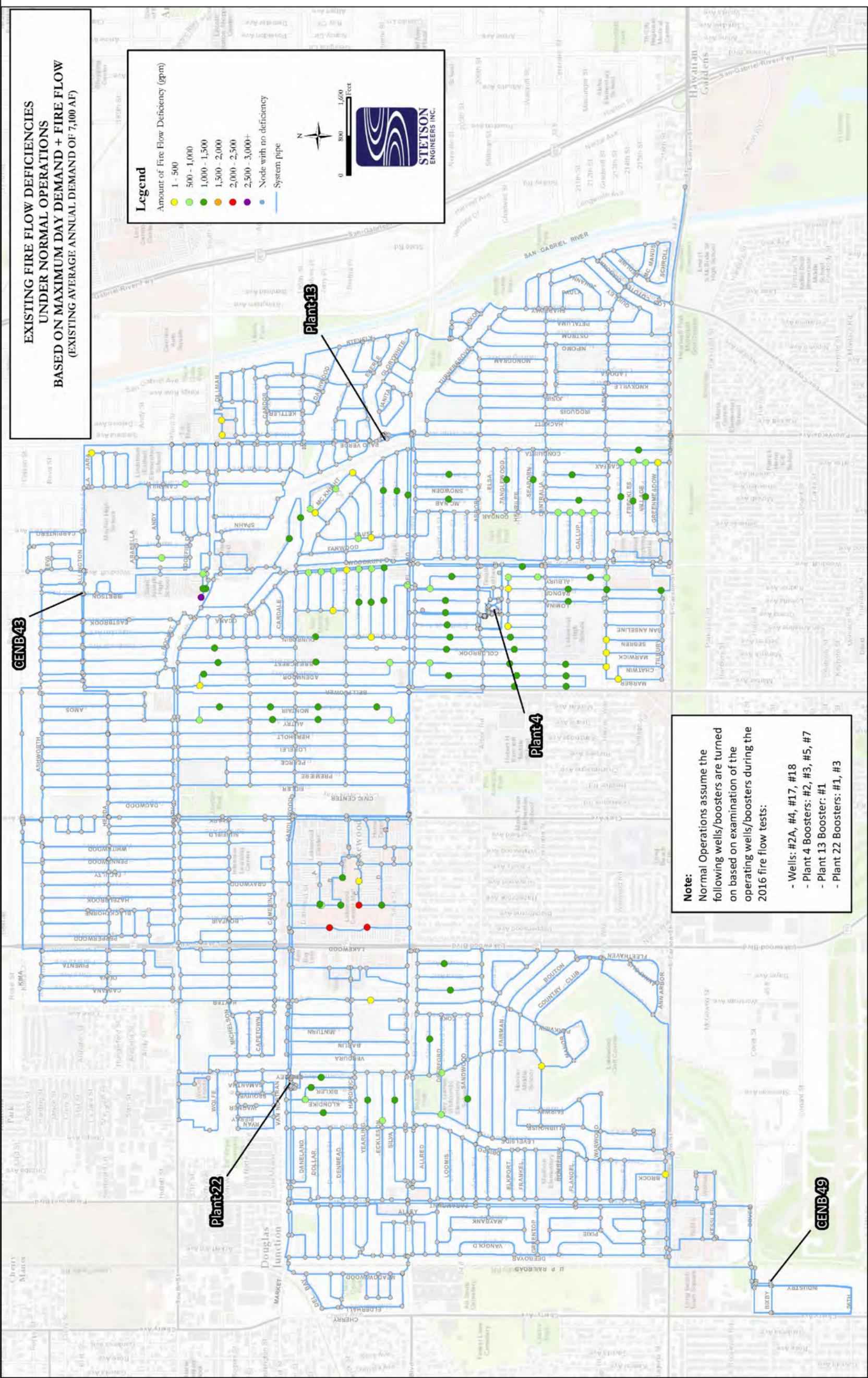
For modeling purposes, all model nodes were considered as fire hydrants. Fire hydrants are typically located somewhere between model nodes. The computer model was configured to calculate available fire flows at a residual pressure of 20 psi for all nodes in the distribution system.

Figure 6-5 shows the identified nodes with fire flow deficiencies. The simulated results show that 125 model nodes fail to meet the fire flow requirements under current MDD conditions.



<Page Intentionally Left Blank>

FIGURE 6-5

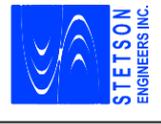


CITY OF LAKEWOOD

FIRE FLOW DEFICIENCIES (MDD+FF)

861 VILLAGE OAKS DRIVE, SUITE 100
 COVINA, CALIFORNIA 91724
 TEL: (626) 967-6202
 FAX: (626) 331-7055

2171 E. Francisco Blvd., Suite K
 San Rafael, California 94901
 2851 W. Guadalupe Rd., Suite A209
 Mesa, Arizona 85202



<Page Intentionally Left Blank>



6.3.3 Modeling Analysis No. 3 - Fire Flow Deficiencies of the Existing System without Reservoir 22 (MDD+FF)

As discussed in Section 5.4.1, it is recommended the City remove Reservoir 22 from service. Reservoir 22 is a concrete storage facility which was installed in 1954. This reservoir has significant cracking in the interior roof and walls and floors and requires repair of the cracking or replacement of the reservoir. This analysis is intended to evaluate the fire flow capabilities of the existing system with Reservoir 22 taken out of service under the MDD conditions.

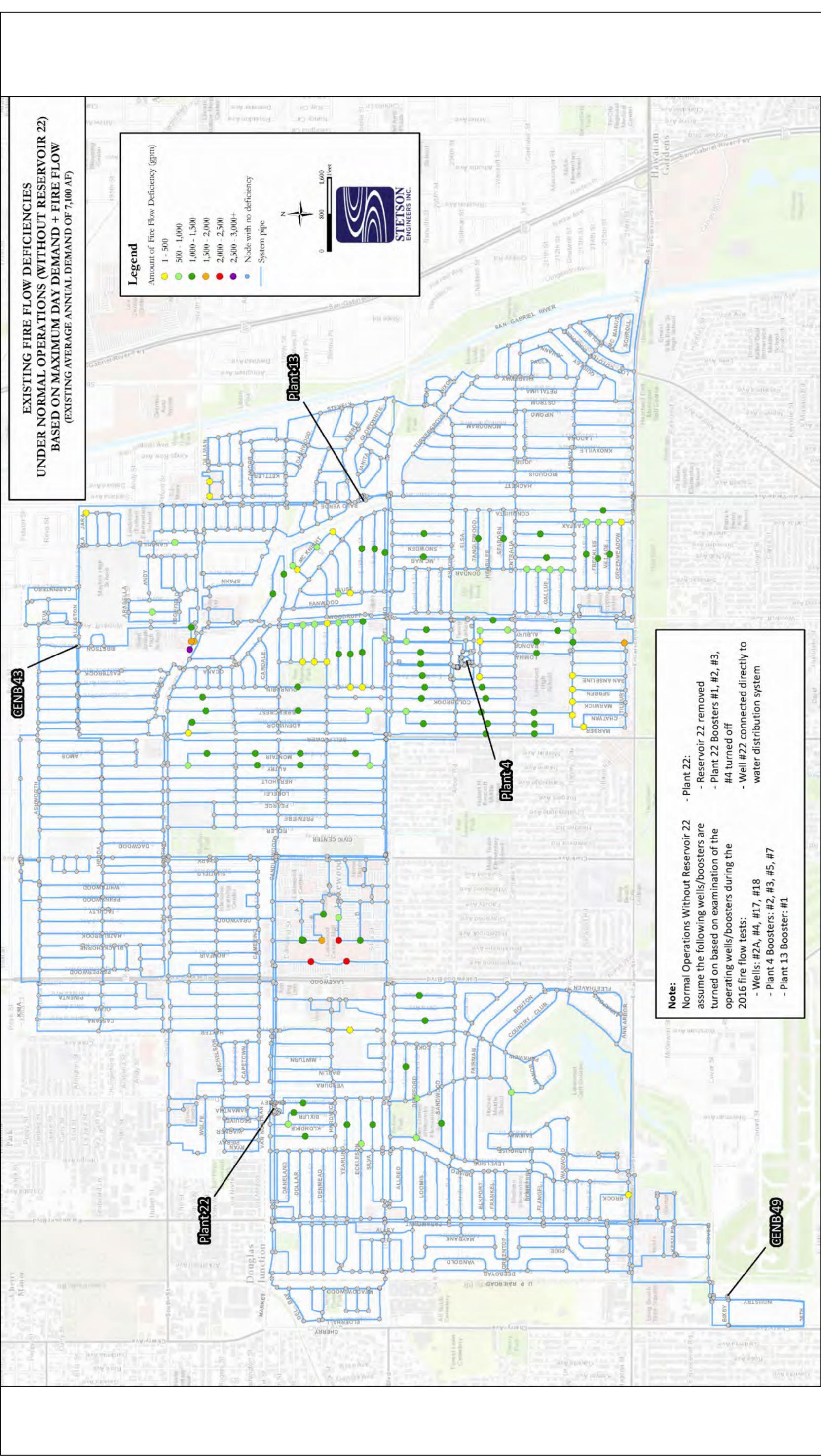
Removal of Reservoir 22 also includes the removal of the Plant 22 boosters (#1, #2, #3, and #4) that currently lift water from the reservoir into the system. The water from Well #22 that currently discharges to the reservoir will be directly pumped into the water distribution system. For this analysis, the model was modified accordingly to reflect these changes.

Figure 6-6 shows the identified nodes with fire flow deficiencies. The simulated results show that 128 model nodes have fire flow deficiencies under MDD conditions. Compared to that existing system that has 125 nodes identified with fire flow deficiencies under MDD condition (see Section 6.3.2), an additional 3 nodes fail to meet the fire flow requirements under MDD conditions, if Reservoir 22 is taken out of service.



<Page Intentionally Left Blank>

FIGURE 6-6



**EXISTING FIRE FLOW DEFICIENCIES
UNDER NORMAL OPERATIONS (WITHOUT RESERVOIR 22)
BASED ON MAXIMUM DAY DEMAND + FIRE FLOW
(EXISTING AVERAGE ANNUAL DEMAND OF 7,100 AF)**

Legend

Amount of Fire Flow Deficiency (gpm)

- 1 - 500
- 500 - 1,000
- 1,000 - 1,500
- 1,500 - 2,000
- 2,000 - 2,500
- 2,500 - 3,000+
- Node with no deficiency
- System pipe

0 800 1,600 Feet

Note:
Normal Operations Without Reservoir 22
assume the following wells/boosters are
turned on based on examination of the
operating wells/boosters during the
2016 fire flow tests:

- Wells: #2A, #4, #17, #18
- Plant 4 Boosters: #2, #3, #5, #7
- Plant 13 Booster: #1

Plant 22:

- Reservoir 22 removed
- Plant 22 Boosters #1, #2, #3, #4 turned off
- Well #22 connected directly to water distribution system



CITY OF LAKEWOOD

FIRE FLOW DEFICIENCIES WITHOUT RESERVOIR 22 (MDD+FF)

861 VILLAGE OAKS DRIVE, SUITE 100
Covina, California 91724
TEL: (626) 967-6222
FAX: (626) 331-7055

2171 E. Francisco Blvd., Suite K
San Rafael, California 94901
2851 W. Guadalupe Rd., Suite A209
Mesa, Arizona 85202

<Page Intentionally Left Blank>



6.3.4 Modeling Analysis No. 4 – Proposed Solutions to Address Fire Flow Deficiencies of the Existing System

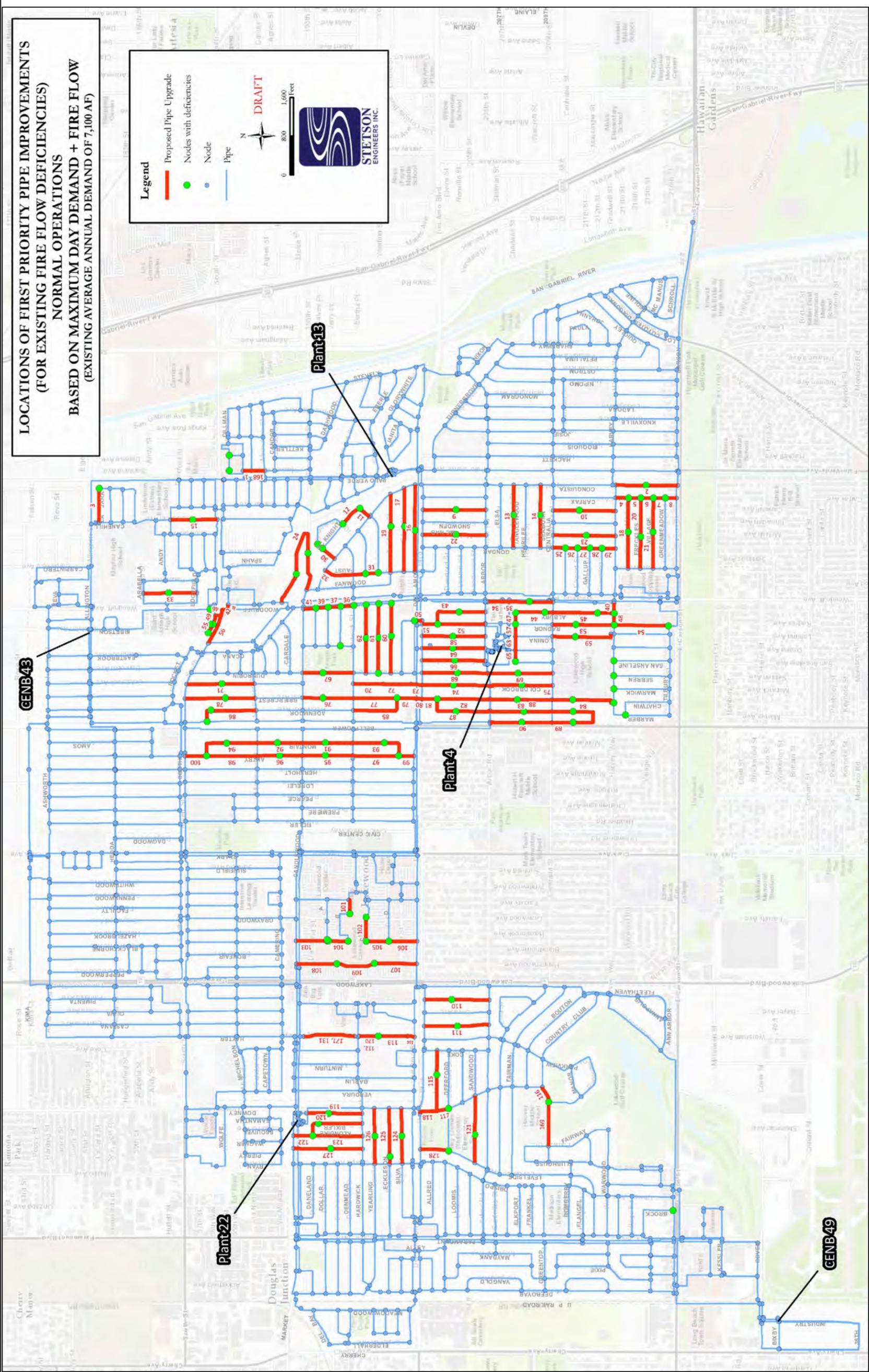
The simulated results in Section 6.3.2 show that various areas in the existing water system have inadequate fire flows, as previously shown in Figure 6-5. The purpose of this section is to develop complete and cost-effective solutions to resolve these deficiencies. To do this, the pipe hydraulic modeling data and information (roughness and material) were modified to the proposed new pipe upgrades and the model was run iteratively, until the fire flow deficiencies were eliminated for all fire flow-deficient nodes. The upgrades to the water distribution system developed in this section will be incorporated into the CIP schedule (See Chapter 7).

Appendix G provides a summary of the identified “first priority” pipes to be upgraded to provide adequate fire flows, with their locations shown on Figure 6-7. A total of 133 existing pipes, approximately 20.7 miles, are recommended as “first priority” pipes and should be upgraded to PVC (C900) pipes in diameter of 8 to 12 inches. The locations of these pipelines are provided in Figure 6-7a.

Examination of the simulated results for the proposed solutions found that all identified fire flow deficiencies would be addressed. The proposed solutions can greatly enhance fire flow capabilities at the deficient locations, and are able to provide required fire flows for their designated building structures at a residual pressure of 20 psi.



<Page Intentionally Left Blank>



**LOCATIONS OF FIRST PRIORITY PIPE IMPROVEMENTS
(FOR EXISTING FIRE FLOW DEFICIENCIES)
NORMAL OPERATIONS
BASED ON MAXIMUM DAY DEMAND + FIRE FLOW
(EXISTING AVERAGE ANNUAL DEMAND OF 7,100 AF)**

Legend

- Proposed Pipe Upgrade
- Nodes with deficiencies
- Node
- Pipe

N
DRAFT

0 800 1,600 Feet

861 VILLAGE OAKS DRIVE, SUITE 100
Covina, California 91724
TEL: (626) 967-6222
FAX: (626) 331-7055

2171 E. Francisco Blvd., Suite K
San Ramon, California 94501
2851 W. Guadalupe Rd., Suite A209
Mesa, Arizona 85202



CITY OF LAKEWOOD

PROPOSED PIPELINE IMPROVEMENTS ("FIRST PRIORITY") - FIRE FLOW DEFICIENCIES



<Page Intentionally Left Blank>



6.3.5 Modeling Analysis No. 5 – Proposed Solutions to Address Fire Flow Deficiencies of the Existing System without Reservoir 22

The simulated results in Section 6.3.3 show that there would be 3 more nodes having fire flow deficiencies with Reservoir 22 out of service, as previously shown in Figure 6-6.

Similar to the analysis of proposed solutions for the existing system in Section 6.3.4, an analysis of proposed solutions was conducted for the existing system without Reservoir 22. Compared to the proposed solutions for the deficiencies in the existing system with Reservoir 22 in service, no additional pipes need to be upgraded for meeting the fire flow requirements with Reservoir 22 out of service.

6.3.6 Modeling Analysis No. 6 – Fire Flow Sensitivity Analysis of Additional Water Supplies

A useful functionality of the hydraulic model is the ability to simulate system performance associated with various alternative facility operations. The hydraulic model was used to perform a “sensitivity analysis” to review and compare the relative benefits of various water supply operations, or scenarios, based on their impact on flow deficiencies.

As discussed in Section 6.3.2, the hydraulic model identified 125 model nodes with fire flow deficiencies under MDD conditions (or “baseline” conditions), with a maximum deficiency of approximately 2,650 gpm. For this sensitivity analysis, the hydraulic model was run to evaluate fire flow deficiencies for baseline conditions along with following additional operating scenarios:



- 1) CENB-43 connection operating
- 2) CENB-49 connection operating
- 3) A proposed 12-inch emergency interconnection operating
- 4) All Plant 4 boosters operating

Scenario 1 is based on the City operating its CENB-43 connection to receive imported water supplies from MWD. CENB-43 is located in the northeastern portion of the system and has a capacity of 6,700 gpm. Although pressure in the MWD system near CENB-43 is approximately 220 psi, it is assumed the City will receive MWD water at a pressure of 100 psi through a pressure reducing valve. In addition, although the City has not operated CENB-43 in over 20 years, it is assumed the connection is in working condition. However, it is noted the City is considering the removal of the CENB-43 connection. The hydraulic model identified 92 model nodes with fire flow deficiencies under Scenario 1, with a maximum deficiency of approximately 1,230 gpm.

Scenario 2 is based on the City operating its CENB-49 connection to receive imported water supplies from MWD. CEN-49 is located in the southwestern portion of the system and has a capacity of 6,700 gpm. Although pressure in the MWD system near CENB-49 is approximately 220 psi, it is assumed the City will receive MWD water at a pressure of 100 psi through a pressure reducing valve. In addition, although the City has not operated CENB-49 in over 20 years, it is assumed the connection is in working condition. The hydraulic model identified 103 model nodes with fire flow deficiencies under Scenario 2, with a maximum deficiency of approximately 2,030 gpm.

Scenario 3 is based on the City operating a proposed 12-inch emergency interconnection to receive water from the City of Long Beach. The proposed interconnection is located in the northwestern portion of the system near the intersection of South Street and Obispo Avenue. The capacity of the proposed interconnection is 5,000 gpm. The design pressure of the proposed interconnection is approximately 60 psi. Although the proposed interconnection can be used for emergency water supply



purposes, the modeling results indicate operating the proposed interconnection at 60 psi will not provide a fire flow benefit to the City. For the purposes of this sensitivity analysis, the hydraulic model was run assuming the City will receive water at a pressure 100 psi through the proposed emergency interconnection to provide some fire flow benefit. Based on receiving water at a pressure of 100 psi, the hydraulic model identified 109 model nodes with fire flow deficiencies under Scenario 3, with a maximum deficiency of approximately 2,190 gpm.

Scenario 4 is based on all seven (7) of the Plant 4 boosters operating simultaneously. Under the normal baseline conditions, only four (4) of the Plant 4 boosters are operating simultaneously. The hydraulic model identified 113 model nodes with fire flow deficiencies under Scenario 4, with a maximum deficiency of approximately 2,300 gpm.

Figures showing the modeling results and fire flow deficiencies for each of the four operating scenarios, including a “baseline only” scenario, are provided in Appendix H. Each figure includes selected nodes with the amount of deficiency labeled (in gpm).

Based on the results of this sensitivity analysis, all four operating scenarios appear to provide hydraulic benefit within the City’s distribution system. Scenario 1 (CENB-43) appears to provide the most relative hydraulic benefit to the system (especially in the Lakewood Mall area with the largest fire flow requirement), then followed by Scenario 2, Scenario 3, and Scenario 4. The quantity of deficient nodes, as well as the magnitudes of the deficiencies for similar nodes, decrease for the more beneficial scenarios. Based on discussion with City staff, the City is considering removing CENB-43 from service. It appears that retaining and operating CENB-49 (Scenario 2) will provide a hydraulic benefit to the system. The proposed Long Beach emergency interconnection will not provide a significant hydraulic benefit to the system compared to normal operations, however, it would provide an emergency source of water supply.



The four operating scenarios were evaluated only for comparison purposes regarding their ability to reduce deficiencies as a representation of their hydraulic benefit relative to one another. These scenarios were not evaluated for the purposes of identifying potential solutions to address fire flow deficiencies. As discussed in Section 6.3.4, replacement of existing pipelines with larger pipelines has been recommended for inclusion in the City's CIP schedule to address all fire flow deficiencies within the City under baseline conditions.

6.4 Water Main Replacement Program

Historical records show that all pipe materials are vulnerable to some kind of chemical or physical deterioration, and all water mains will eventually require rehabilitation and/or replacement. Aging pipe infrastructure and chronic water main breaks are a common problem for most water utilities.

Water main rehabilitation and replacement programs typically target “at-risk” segments of the distribution system, and the factors typically considered to affect prioritization of rehabilitation and replacement projects include pipe material, age, pressure, soil type, and previous maintenance history. There is a need for the City of Lakewood to begin the development of a Water Main Rehabilitation and Replacement Program. The purpose is to proactively, rather than reactively, identify and improve water main segments with characteristics indicating the greatest potential for future maintenance and failure problems. The highest priority for the Rehabilitation and Replacement Program will be to maintain the structural integrity of the water distribution system.



6.4.1 Water Main Condition Assessment

The foundation of any proactive rehabilitation and replacement program is accurate and sufficient information and data pertaining to the condition of the existing distribution system. The water distribution system contains approximately 180 miles of pipe in diameters ranging from 4 to 27 inches. Over one third of pipes in the entire piping system are cast iron (CI) pipes (see Appendix I). Approximately 89 percent of the City distribution system leaks over the past 17 years have been associated with 4-inch diameter cast iron pipelines (refer to Appendix I for detailed analysis of historical pipeline leak records). The pipeline leak records also include large size transmission mains. These leaking transmission mains are all greater than 60 years old.

6.4.2 Recommendations on Water Main Maintenance and Reliability Improvements

As discussed in Section 6.3.4, a total of 133 existing pipes, approximately 20.7 miles, are recommended as “first priority” pipes to provide adequate. The locations of these pipelines are provided in Figure 6-7a. Based on review of historical maintenance records and discussions with City operators, an additional 36 pipeline replacements are recommended as first priority pipes. These pipelines are primarily 4-inch lines which the City has identified as historically having numerous maintenance problems and leaks. The locations of these pipelines are provided in Figure 6-8 (and a listing is provided in Appendix G).

In addition to the first priority pipe upgrades identified based on hydraulic modeling for improvement of fire flow capabilities of the system, a “secondary priority” pipe list (see Appendix J) was also developed based on analysis of historical leak records. The criteria used includes the following:



- Replacement of 4-inch diameter CI pipes installed prior to 1950 due to age and leak records. As discussed in Section 6.4.1, approximately 89 percent of system leaks over the past 17 years have been associated with 4-inch diameter CI pipelines. It is recommended these pipes be upgraded to new 8-inch PVC (C900) pipe
- Replacement of large size transmission mains (10" to 27") installed prior to 1950 due to age. It is recommended these pipes be replaced with similar size PVC (C900) pipes in diameters of 10 to 12 inches, and to cement mortar lined and coated steel (CMLCS) pipes in diameter of 14 to 27 inches.

As shown in Appendix J, a total of 68 pipes, approximately 6.1 miles, are recommended to be upgraded to C900 pipes in diameters of 8 to 12 inches, and to CMLCS pipes in diameter of 14 to 27 inches. Appendix J provides a summary of the identified secondary priority CIP pipes to be upgraded to provide adequate fire flows, with their locations shown on Figure 6-9.

A CIP schedule for the first priority and second priority pipelines is provided in Chapter 7. A projected budget for these pipelines is also included. The CIP schedule also includes a "third priority" listing of recommended pipelines, which is based on the following criteria

- Replacement of remaining pipelines installed before 1950, due to age;
- Replacement of concrete cylinder pipe installed between 1970 and 1979 due to the higher rates of failure¹;
- Replacement of transmission pipelines installed between 1950 and 1959, due to age; and
- Replacement of pipelines installed between 1950 and 1959, including 4-inch and greater cast iron pipe, due to age.

¹ Pursuant to the American Water Works Association's "Failure of Prestressed Concrete Cylinder Pipe", 2008



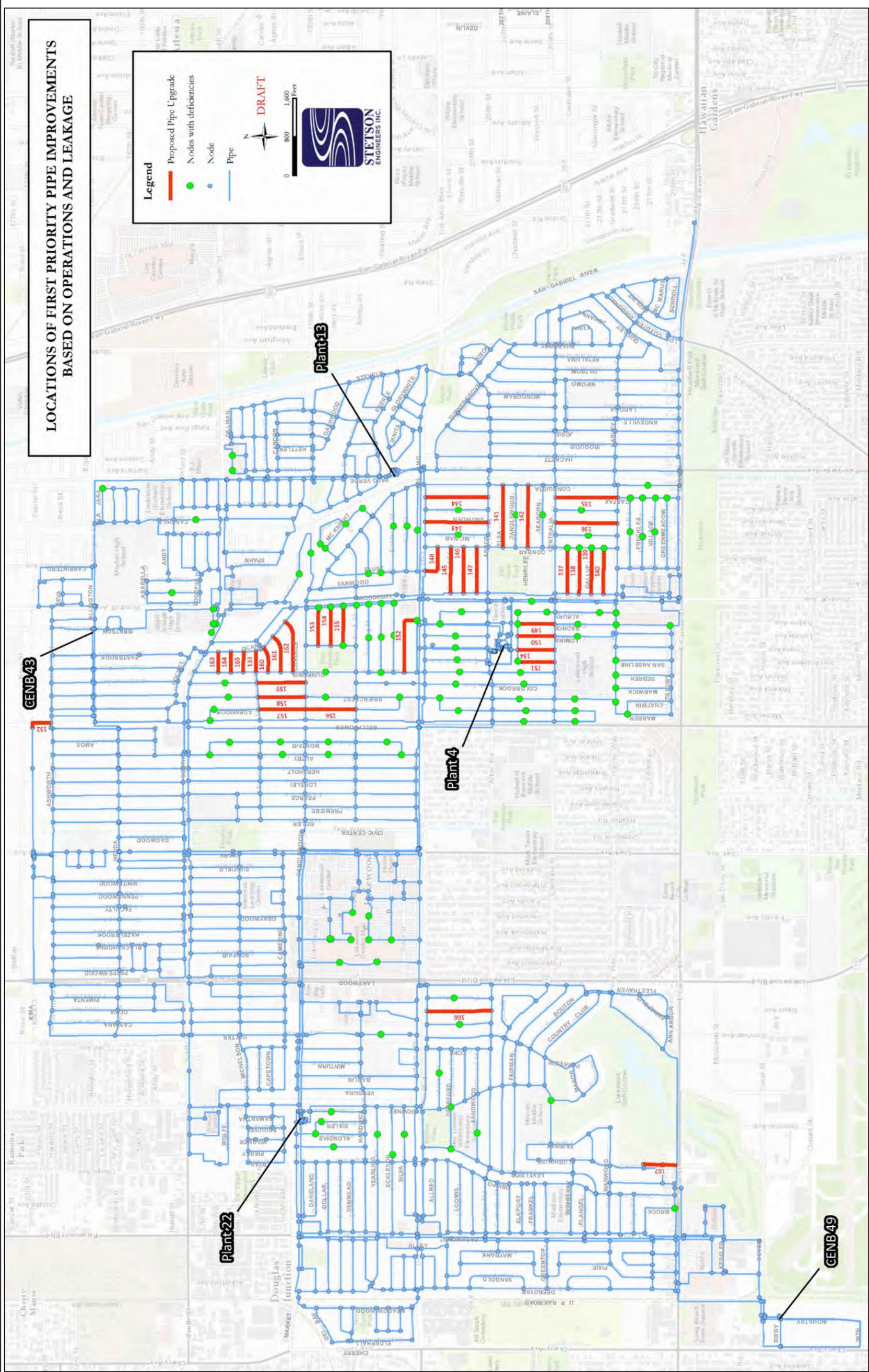
Although a projected budget for third priority pipelines has been included in the CIP schedule, specific locations for these pipelines have not been identified. Because these third priority pipelines are scheduled beyond the initial 10-year CIP schedule, it is recommended these pipeline recommendations be reevaluated over time based on an on-going methodical City data collection program. The potential elements of a data collection program are discussed below.

The City could perform expanded visual inspections (e.g. closed circuit television inspection of the interior of the pipelines) and non-destructive testing (e.g. acoustic leak detection, stray current studies, sonic/ultrasonic thickness testing, infrared testing, and electromagnetic testing) as appropriate for various pipelines. These testing methods can be used to determine various pipe characteristics (including internal corrosion, cracks, air holes, thickness, and porosity information.) The City could also perform soil surveys to determine if soils are corrosive and use “corrosion coupons” to measure and monitor exterior corrosion levels for its metal pipelines. (Corrosion coupons are machined thin bars of various metals which are installed externally to the piping system on a coupon rack.) Potential additional testing could also be recommended by a corrosion engineer. The City may also consider the use of leak detection and pipeline testing methods in assessing conditions for pipeline replacement projects (in addition to the prioritized pipeline replacement projects discussed above).



<Page Intentionally Left Blank>

FIGURE 6-8



**LOCATIONS OF FIRST PRIORITY PIPE IMPROVEMENTS
BASED ON OPERATIONS AND LEAKAGE**

Legend

- Proposed Pipe Upgrade
- Nodes with deficiencies
- Node
- Pipe

DRAFT

0 800 1,600 Feet



CITY OF LAKEWOOD

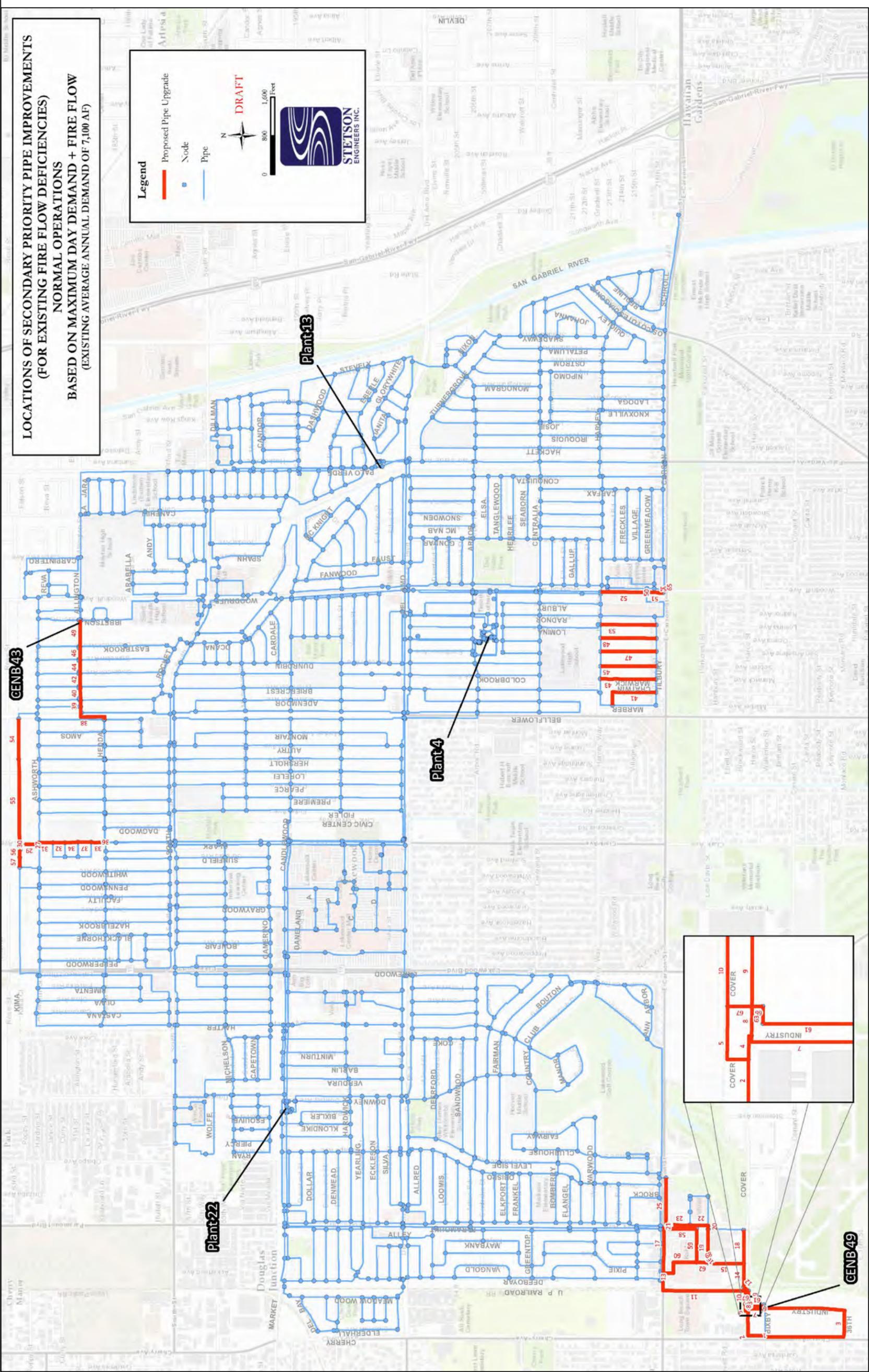
PROPOSED PIPELINE IMPROVEMENTS ("FIRST PRIORITY") - OTHER

861 VILLAGE OAKS DRIVE, SUITE 100
Covina, California 91724
TEL: (626) 967-6222
FAX: (626) 331-7055

2171 E. Francisco Blvd., Suite K
San Ramon, California 94501
2851 W. Guadalupe Rd., Suite A209
Mesa, Arizona 85202



<Page Intentionally Left Blank>



**LOCATIONS OF SECONDARY PRIORITY PIPE IMPROVEMENTS
(FOR EXISTING FIRE FLOW DEFICIENCIES)
NORMAL OPERATIONS
BASED ON MAXIMUM DAY DEMAND + FIRE FLOW
(EXISTING AVERAGE ANNUAL DEMAND OF 7,100 AF)**

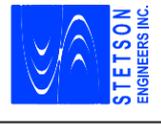


CITY OF LAKEWOOD

PROPOSED PIPELINE IMPROVEMENTS ("SECOND PRIORITY")

861 VILLAGE OAKS DRIVE, SUITE 100
Covina, California 91724
TEL: (626) 967-6232
FAX: (626) 331-7055

2171 E. Francisco Blvd., Suite K
San Rafael, California 94901
2851 W. Guadalupe Rd., Suite A209
Mesa, Arizona 85202



<Page Intentionally Left Blank>



CHAPTER 7

IMPLEMENTATION PLAN AND COST ESTIMATES

7.1 Introduction

This chapter sets forth a plan for implementing needed improvements identified in this 2017 Update. Certain projects, studies, or monitoring activities for the substantive components of the water system (i.e. water demand and supply, water production facilities, and water distribution) are important to maintain reliable water service. The implementation plan summarizes these actions, prioritizes the facility improvements, summarizes cost estimates, and provides implementation schedules.

The 2017 Update provides a “road map” for the City’s continued success in ensuring water services to its customers. It is based on the best-available knowledge of the future from the perspective of the present. Because regulatory requirements, regional development, and customer demand will change over the next 20 years, the City will review and adjust elements of the 2017 Update periodically. The implementation plan includes monitoring of developing trends, customer demand, the performance of the water system, and regulatory requirements.

The cost estimates contained in this report are order-of-magnitude estimates. Final project costs and resulting feasibility will depend on actual labor and material costs, competitive market conditions, actual site conditions, final project scope, implementation schedule, continuity of personnel and engineering, and other variable factors. As a result, final project costs will vary from the estimates presented here.



7.2 CIP Project Scheduling and Summary

Table 7-1 summarizes the 20-year CIP project budget from FY 2017-18 through FY 2036-37. Additional improvements will be needed after FY 2036-37 to replace aging facilities and address other water system needs. The annual CIP budget is based on approximately \$2.5 million per year.

Table 7-2 summarizes the 20-year CIP project schedule from FY 2017-18 through FY 2036-37. The City's projected CIP schedule for the next 20 years includes projects recommended by the 2017 Update from review of the City's facilities and from the hydraulic modeling. The schedule also includes replacement and rehabilitation projects from the draft Asset Management Plan. The cost estimates for the new water system facilities are based on vendor cost information, unit cost data published by R.S. Means, and Stetson experience on similar projects. Where appropriate, costs were escalated to the current 2017 dollars based on Engineering News Record (ENR) construction cost indexes. All capital costs were initially estimated in terms of 2017 dollars and adjusted to future dollars based on the 20-year project schedule using an annual inflationary rate of 3 percent. In addition to the costs for each component of the proposed water system improvements, cost for contingencies, planning, engineering and design as well as project management and administration were factored into the total project cost. Costs for land acquisition, energy, operation and maintenance were not included in the cost estimates.

A water system generally includes three substantive components: water demand and supply, water treatment, and water distribution system. The City's water system mainly relies on groundwater wells as its source of water supply. In addition to the identified immediate projects listed in Table 7-1 and the recommended CIP projects listed in Table 7-2, the following actions and monitoring activities are also important to the City's continued success in ensuring water services to its customers and are recommended for the water demand/supply, groundwater treatment, and water distribution components:



Water Demand and Supply:

- Monitor water production from each source.
- Monitor actual water uses in the water system, and compare to the Master Plan projections.
- Revise Master Plan projections of water demand based on water use monitoring.
- Revise Capital Improvement Program based on revised water demand projection.
- Pursue water conservation program to reduce water demands and seasonal water use to achieve the water conservation goal as set forth in SBX7_7.
- Develop and employ methods for tracking water conservation savings.

Groundwater Treatment:

- Monitor source water quality.
- Monitor performance of groundwater treatment facilities.
- Monitor development of groundwater treatment regulatory requirements.
- Monitor best treatment alternatives for meeting proposed regulatory requirements for groundwater treatment.

Water Distribution System:

- Monitor development of regulatory requirements.
- Monitor distribution system water quality to ensure compliance with regulatory standards, and to ensure customer satisfaction with aesthetic quality.
- Collect pipe attribute data on new installations and replacement.



Table 7-1 Capital Improvement Plan (CIP) Budget Summary

Fiscal Year	Annual Total
2017-18	\$2,450,400
2018-19	\$2,500,300
2019-20	\$2,497,900
2020-21	\$2,509,000
2021-22	\$2,474,200
2022-23	\$2,488,800
2023-24	\$2,464,600
2024-25	\$2,449,800
2025-26	\$2,532,800
2026-27	\$2,457,900
2027-28	\$2,488,650
2028-29	\$2,496,950
2029-30	\$2,493,000
2030-31	\$2,506,200
2031-32	\$2,522,600
2032-33	\$2,522,800
2033-34	\$2,406,700
2034-35	\$2,494,700
2035-36	\$2,412,800
2036-37	\$2,548,000



Table 7-2 Capital Improvement Plan (CIP) Schedule

Description	Recommended Year of Implementation (Fiscal Year)	Implementation Year Costs
<p>Water Supply Facility Improvements</p> <p>Plant 4 Replacements (See App. E) (Includes installation of a new Well #28, first year of funding)</p> <p>Plant 13 Replacements (See App. E)</p> <p>Plant 22 Replacements (See App. E)</p> <p>System and Other Replacements and Rehabilitation (See App. E)</p> <p>AMR / AMI / Billing system (Fathom)</p> <p>SCADA Improvements (Radio, Software, Hardware)</p> <p>Pipeline Upgrades (First Priority) 0 feet of pipe (See App. G)</p>	<p>2017-18</p> <p>2017-18</p> <p>2017-18</p> <p>2017-18</p> <p>2017-18</p> <p>2017-18</p> <p>2017-18</p>	<p>\$ 1,105,600</p> <p>\$ 36,500</p> <p>\$ 74,300</p> <p>\$ 32,000</p> <p>\$ 980,500</p> <p>\$ 221,500</p> <p>\$ -</p>
<p>Water Supply Facility Improvements</p> <p>Plant 4 Replacements (See App. E) (Includes installation of a new Well #28, second year of funding)</p> <p>Plant 13 Replacements (See App. E)</p> <p>Plant 22 Replacements (See App. E)</p> <p>System and Other Replacements and Rehabilitation (See App. E)</p> <p>AMR / AMI / Billing system (Fathom)</p> <p>Remove Reservoir 22 (Demolition)</p> <p>Pipeline Upgrades (First Priority) 0 feet of pipe (See App. G)</p>	<p>2018-19</p> <p>2018-19</p> <p>2018-19</p> <p>2018-19</p> <p>2018-19</p> <p>2018-19</p> <p>2018-19</p>	<p>\$ 1,069,800</p> <p>\$ -</p> <p>\$ -</p> <p>\$ -</p> <p>\$ 980,500</p> <p>\$ 450,000</p> <p>\$ -</p>
<p>Water Supply Facility Improvements</p> <p>Plant 4 Replacements (See App. E)</p> <p>Plant 13 Replacements (See App. E)</p> <p>Plant 22 Replacements (See App. E)</p> <p>System and Other Replacements and Rehabilitation (See App. E)</p> <p>AMR / AMI / Billing system (Fathom)</p>	<p>2019-20</p> <p>2019-20</p> <p>2019-20</p> <p>2019-20</p> <p>2019-20</p>	<p>\$ 521,400</p> <p>\$ -</p> <p>\$ -</p> <p>\$ 355,400</p> <p>\$ 980,500</p>



Pipeline Upgrades (First Priority) 4,693 feet of pipe (See App. G)	2019-20	\$	640,600
Water Supply Facility Improvements Plant 4 Replacements (See App. E) Plant 13 Replacements (See App. E) Plant 22 Replacements (See App. E) System and Other Replacements and Rehabilitation (See App. E)	2020-21	\$	150,600
	2020-21	\$	-
	2020-21	\$	-
	2020-21	\$	218,600
AMR / AMI / Billing system (Fathom)	2020-21	\$	980,500
Pipeline Upgrades (First Priority) 8,336 feet of pipe (See App. G)	2020-21	\$	1,159,300
Water Supply Facility Improvements Plant 4 Replacements (See App. E) Plant 13 Replacements (See App. E) Plant 22 Replacements (See App. E) System and Other Replacements and Rehabilitation (See App. E)	2021-22	\$	-
	2021-22	\$	19,200
	2021-22	\$	84,100
	2021-22	\$	-
AMR / AMI / Billing system (Fathom)	2021-22	\$	980,500
Recoat Plant 13, Tanks #1 and #2	2021-22	\$	400,000
Pipeline Upgrades (First Priority) 6,979 feet of pipe (See App. G)	2021-22	\$	990,400
Water Supply Facility Improvements Plant 4 Replacements (See App. E) Plant 13 Replacements (See App. E) Plant 22 Replacements (See App. E) System and Other Replacements and Rehabilitation (See App. E)	2022-23	\$	351,900
	2022-23	\$	73,100
	2022-23	\$	74,200
	2022-23	\$	-
AMR / AMI / Billing system (Fathom)	2022-23	\$	980,500
Pipeline Upgrades (First Priority) 6,969 feet of pipe (See App. G)	2022-23	\$	1,009,100
Water Supply Facility Improvements Plant 4 Replacements (See App. E) Plant 13 Replacements (See App. E)	2023-24	\$	1,400
	2023-24	\$	28,300



Plant 22 Replacements (See App. E)	2023-24	\$	-
System and Other Replacements and Rehabilitation (See App. E)	2023-24	\$	600
AMR / AMI / Billing system (Fathom)	2023-24	\$	980,500
Recoat Plant 13, Tanks #3 and #5	2023-24	\$	400,000
Pipeline Upgrades (First Priority) 7,085 feet of pipe (See App. G)	2023-24	\$	1,053,800
Water Supply Facility Improvements			
Plant 4 Replacements (See App. E)	2024-25	\$	522,400
Plant 13 Replacements (See App. E)	2024-25	\$	-
Plant 22 Replacements (See App. E)	2024-25	\$	61,500
System and Other Replacements and Rehabilitation (See App. E)	2024-25	\$	159,100
AMR / AMI / Billing system (Fathom)	2024-25	\$	980,500
Pipeline Upgrades (First Priority) 4,708 feet of pipe (See App. G)	2024-25	\$	726,300
Water Supply Facility Improvements			
Plant 4 Replacements (See App. E)	2025-26	\$	172,800
Plant 13 Replacements (See App. E)	2025-26	\$	19,300
Plant 22 Replacements (See App. E)	2025-26	\$	210,600
System and Other Replacements and Rehabilitation (See App. E)	2025-26	\$	40,600
AMR / AMI / Billing system (Fathom)	2025-26	\$	980,500
Recoat Plant 13, Tank #4	2025-26	\$	200,000
Pipeline Upgrades (First Priority) 5,758 feet of pipe (See App. G)	2025-26	\$	909,000
Water Supply Facility Improvements			
Plant 4 Replacements (See App. E)	2026-27	\$	16,200
Plant 13 Replacements (See App. E)	2026-27	\$	2,200
Plant 22 Replacements (See App. E)	2026-27	\$	-
System and Other Replacements and Rehabilitation (See App. E)	2026-27	\$	22,900
AMR / AMI / Billing system (Fathom)	2026-27	\$	980,500
Pipeline Upgrades (First Priority)	2026-27	\$	1,436,100



9,168 feet of pipe (See App. G)		
Routine Water Supply Facility Improvements (Replacements) (Includes installation of a new well, first year of funding) Pipeline Upgrades (First Priority) 4,405 feet of pipe (See App. J)	2027-28 2027-28	\$ 1,784,650 \$ 704,000
Routine Water Supply Facility Improvements (Replacements) (Includes installation of a new well, second year of funding) Pipeline Upgrades (First Priority) 4,125 feet of pipe (See App. J)	2028-29 2028-29	\$ 1,824,450 \$ 672,500
Routine Water Supply Facility Improvements (Replacements) Pipeline Upgrades (First Priority) 10,525 feet of pipe (See App. J)	2029-30 2029-30	\$ 743,300 \$ 1,749,700
Routine Water Supply Facility Improvements (Replacements) Pipeline Upgrades (First Priority) 10,853 feet of pipe (See App. J)	2030-31 2030-31	\$ 666,100 \$ 1,840,100
Routine Water Supply Facility Improvements (Replacements) Pipeline Upgrades (First Priority) 9,497 feet of pipe (See App. J)	2031-32 2031-32	\$ 709,100 \$ 1,813,500
Routine Water Supply Facility Improvements (Replacements) Pipeline Upgrades (First Priority) 10,269 feet of pipe (See App. J)	2032-33 2032-33	\$ 686,400 \$ 1,836,400
Routine Water Supply Facility Improvements (Replacements / Rehabilitation) Pipeline Upgrades (First Priority) 12,803 feet of pipe (See App. J)	2033-34 2033-34	\$ 60,400 \$ 2,346,300



Routine Water Supply Facility Improvements (Replacements) (Includes installation of a new reservoir, first year of funding) Pipeline Upgrades (First Priority) 5,156 feet of pipe (See App. J)	2034-35	\$ 1,548,500
Routine Water Supply Facility Improvements (Replacements) (Includes installation of a new reservoir, second year of funding) Pipeline Upgrades (First Priority) 0 feet of pipe (See App. J)	2035-36	\$ 2,412,800 \$ -
Routine Water Supply Facility Improvements (Replacements) (Includes installation of a new reservoir, third year of funding) Pipeline Upgrades (First Priority) 2,844 feet of pipe (See App. J)	2036-37	\$ 2,004,800 \$ 543,200



<Page Intentionally Left Blank>

Appendix A
City Facility Photographs

<Page Intentionally Left Blank>

Appendix A Photos of Lakewood Water Supply Facilities



Figure A-1 Plant 4, Tank 1



Figure A-4 Plant 4, Boosters #2, #3, #4, #5, #6, & #7



Figure A-2 Plant 4, Tank 2



Figure A-5 Plant 4, Booster #8



Figure A-3 Plant 4, Tank 3



Figure A-6 Plant 4, Well #4



Figure A-7 Plant 4, Well #4 Hydropneumatic Tank



Figure A-10 Plant 4, Well #27 Chlorination



Figure A-8 Plant 4, Well #4 Chlorination



Figure A-11 Plant 4, Arsenic Treatment



Figure A-9 Plant 4, Well #27



Figure A-12 Plant 4, Arsenic Backwash Tank



Figure A-13 Plant 4, Portable Generators



Figure A-16 Plant 13, Tank 2



Figure A-14 Plant 4, Emergency Generator



Figure A-17 Plant 13, Tank 3



Figure A-15 Plant 13, Tank 1



Figure A-18 Plant 13, Tanks 4 and 5



Figure A-19 Plant 13, Booster Pumps #1, #2, #3, and #4



Figure A-22 Plant 22, Reservoir 22



Figure A-20 Plant 13, Altitude Valve



Figure A-23 Plant 22, Well #22



Figure A-21 Plant 13, Emergency Generator



Figure A-24 Plant 22, Boosters #1, #2, #3, and #4



Figure A-25 Plant 22, Well Building



Figure A-28 Plant 22, Altitude Valve



Figure A-26 Plant 22, Chlorination



Figure A-29 Well #2A



Figure A-27 Plant 22, Emergency Generator



Figure A-30 Well #2A Chlorination



Figure A-31 Well #8 (Underground Vault)



Figure A-34 Well #10 Chlorination



Figure A-32 Well #8 Chlorination



Figure A-35 Well #13A



Figure A-33 Well #10



Figure A-36 Well #15A



Figure A-37 Well #15A Chlorination



Figure A-38 Well #17



Figure A-39 Well #17 Chlorination



Figure A-40 Well #18



Figure A-41 Well #18 Hydropneumatic Tank



Figure A-42 Well #6 and Hydropneumatic Tank

<Page Intentionally Left Blank>

Appendix B
Summary of Pipeline Materials, Sizes, and Ages

<Page Intentionally Left Blank>

Summary of City of Lakewood Pipelines

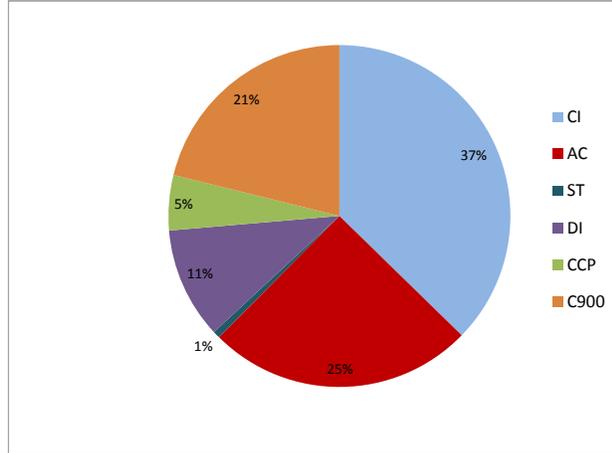
Total 948,080

Pipe Length (ft)	Size (in) / Type	Size (in) / Type											Total	%	
		4	6	8	10	12	14	16	18	20	24	27			
Before 1950															
CI	5,782	5,325	8,258	844	2,122	0	1,286	0	0	0	0	0	0	23,617	2.49%
AC	0	3,710	1,729	0	1,827	0	0	0	0	0	0	0	0	7,267	0.77%
ST	0	0	1,001	480	80	0	0	0	0	0	0	0	0	1,561	0.16%
DI	0	0	398	0	0	0	0	0	0	0	0	0	0	398	0.04%
CCP	0	0	0	0	0	0	0	0	0	0	0	2,605	2,605	0.27%	
C900	0	0	11	0	105	0	0	0	0	0	0	0	0	116	0.01%
Total	5,782	9,035	11,397	1,324	4,133	0	1,286	0	0	0	0	2,605	35,563		
%	0.61%	0.95%	1.20%	0.14%	0.44%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.27%		3.75%	
1951 - 1960															
CI	133,499	44,732	68,596	34,732	31,128	3,551	4,066	2,896	0	0	0	0	323,198	34.09%	
AC	12,559	70,477	58,470	948	7,346	0	0	0	0	0	0	0	149,800	15.80%	
ST	0	0	295	337	406	0	18	0	15	0	0	0	1,071	0.11%	
DI	64	2,628	11,414	0	3,198	0	1,493	0	1,490	21	0	0	20,308	2.14%	
CCP	0	0	0	0	95	0	10,873	0	17,343	145	10,772	0	39,228	4.14%	
C900	0	25	4,915	407	1,495	0	0	0	0	0	0	0	6,843	0.72%	
Total	146,122	117,862	143,689	36,426	43,667	3,551	16,450	2,896	17,358	1,634	10,792	0	540,448		
%	15.41%	12.43%	15.16%	3.84%	4.61%	0.37%	1.74%	0.31%	1.83%	0.17%	1.14%	0		57.01%	
1961 - 1970															
CI	0	0	0	166	0	0	0	0	0	0	0	0	166	0.02%	
AC	0	4,939	2,999	0	582	0	0	0	0	0	0	0	8,520	0.90%	
ST	0	488	0	0	501	0	0	0	0	0	0	0	989	0.10%	
DI	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	
CCP	0	0	0	0	120	0	0	0	0	0	0	0	120	0.01%	
C900	0	0	37	0	0	0	0	0	0	0	0	0	37	0.00%	
Total	0	5,427	3,037	166	1,202	0	0	0	0	0	0	0	9,831		
%	0.00%	0.57%	0.32%	0.02%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		1.04%	
1971 - 1980															
CI	1,286	539	522	679	1,596	0	546	0	0	0	0	0	5,168	0.55%	
AC	0	37,476	4,617	0	1,749	46	0	0	0	0	0	0	43,888	4.63%	
ST	0	0	75	0	51	0	0	0	0	0	0	0	126	0.01%	
DI	0	0	865	0	0	0	0	0	0	0	0	0	865	0.09%	
CCP	0	0	0	0	130	0	3,974	0	427	215	0	0	4,746	0.50%	
C900	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	
Total	1,286	38,015	6,079	679	3,525	46	4,520	0	427	215	0	0	54,793		
%	0.14%	4.01%	0.64%	0.07%	0.37%	0.00%	0.48%	0.00%	0.05%	0.02%	0.00%	0		5.78%	
1981 - 1990															
CI	0	49	467	0	0	0	0	0	0	0	0	0	516	0.05%	
AC	0	1,713	1,798	0	0	0	0	0	0	0	0	0	3,511	0.37%	
ST	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	
DI	0	10,826	0	0	0	0	0	0	0	0	0	0	10,826	1.14%	
CCP	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	
C900	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	
Total	0	12,588	2,265	0	0	0	0	0	0	0	0	0	14,854		
%	0.00%	1.33%	0.24%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		1.57%	
1991 - 2000															
CI	0	0	1,009	83	0	0	0	0	0	0	0	0	1,092	0.12%	
AC	0	4,297	3,150	0	0	0	0	0	0	0	0	0	7,447	0.79%	
ST	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	
DI	0	17,567	38,883	1,432	5,588	0	0	0	0	0	0	0	63,470	6.69%	
CCP	0	0	0	0	0	0	0	0	0	0	2,559	0	2,559	0.27%	
C900	0	0	19,511	0	5,618	0	0	0	0	0	0	0	25,129	2.65%	
Total	0	21,864	62,553	1,515	11,206	0	0	0	0	0	2,559	0	99,697		
%	0.00%	2.31%	6.60%	0.16%	1.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.03%	0.00%		10.52%	
2001 - 2010															
CI	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	
AC	0	0	318	0	0	0	0	0	0	0	0	0	318	0.03%	
ST	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	
DI	0	0	285	0	1,842	0	0	0	0	0	0	0	2,127	0.22%	
CCP	0	0	0	0	0	0	0	0	316	0	0	0	316	0.03%	
C900	0	0	126,096	0	0	0	0	0	0	0	0	0	126,096	13.30%	
Total	0	0	126,699	0	1,842	0	0	0	316	0	0	0	128,857		
%	0.00%	0.00%	13.36%	0.00%	0.19%	0.00%	0.00%	0.00%	0.03%	0.00%	0.00%	0.00%		13.59%	
After 2011															
CI	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	
AC	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	
ST	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	
DI	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	
CCP	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	
C900	0	0	42,158	0	0	0	0	0	0	0	0	0	42,158	4.45%	
Total	0	0	42,158	0	0	0	0	0	0	0	0	0	42,158		
%	0.00%	0.00%	4.45%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		4.45%	
Unknown															
CI	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	
AC	0	54	5,091	0	12,054	0	287	86	0	0	0	0	17,571	1.85%	
ST	0	0	0	0	126	0	1,914	338	0	0	0	0	2,377	0.25%	
DI	0	0	0	0	1,895	0	0	35	0	0	0	0	1,930	0.20%	
CCP	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	
C900	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	
Total	0	54	5,091	0	14,075	0	2,201	458	0	0	0	0	21,879		
%	0.00%	0.01%	0.54%	0.00%	1.48%	0.00%	0.23%	0.05%	0.00%	0.00%	0.00%	0.00%		2.31%	

Note: Pipes with unknown installation year are considered older than 1950 in CIP development

Transmission and Distribution Mains in the Water Mains

Type	Pipe Length (ft)	%
CI	353,758	37.31%
AC	238,322	25.14%
ST	6,124	0.65%
DI	99,924	10.54%
CCP	49,574	5.23%
C900	200,379	21.14%



Transmission and Distribution Mains in the Water Mains

Pipe Diameter (inches)	Length (ft)	% of Total Length
4	153,190	16.2%
6	204,846	21.6%
8	402,968	42.5%
10	40,110	4.2%
12	79,650	8.4%
14	3,597	0.4%
16	24,457	2.6%
18	3,354	0.4%
20	18,102	1.9%
24	1,850	0.2%
27	15,956	1.7%
Total	948,080	100.0%

Summary of Pipe Age by Pipe Size in Length (Feet)

Pipe Diameter (inches)	Before 1950	1950's	1960's	1970's	1980's	1990's	2000's	2010's	Unknown	Total
4	5,782	146,122	0	1,286	0	0	0	0	0	153,190
6	9,035	117,862	5,427	38,015	12,588	21,864	0	0	54	204,846
8	11,397	143,689	3,037	6,079	2,265	62,553	126,699	42,158	5,091	402,968
10	1,324	36,426	166	679	0	1,515	0	0	0	40,110
12	4,133	43,667	1,202	3,525	0	11,206	1,842	0	14,075	79,650
14	0	3,551	0	46	0	0	0	0	0	3,597
16	1,286	16,450	0	4,520	0	0	0	0	2,201	24,457
18	0	2,896	0	0	0	0	0	0	458	3,354
20	0	17,358	0	427	0	0	316	0	0	18,102
24	0	1,634	0	215	0	0	0	0	0	1,850
27	2,605	10,792	0	0	0	2,559	0	0	0	15,956
Total	35,563	540,448	9,831	54,793	14,854	99,697	128,857	42,158	21,879	948,080
%	3.8%	57.0%	1.0%	5.8%	1.6%	10.5%	13.6%	4.4%	2.3%	100.0%

Summary of Pipe Material by Pipe Age (Feet)

Pipe Age	CI	AC	ST	DI	CCP	C900	Total
Before 1950	23,617	7,267	1,561	398	2,605	116	35,563
1950's	323,198	149,800	1,071	20,308	39,228	6,843	540,448
1960's	166	8,520	989	0	120	37	9,831
1970's	5,168	43,888	126	865	4,746	0	54,793
1980's	516	3,511	0	10,826	0	0	14,854
1990's	1,092	7,447	0	63,470	2,559	25,129	99,697
2000's	0	318	0	2,127	316	126,096	128,857
2010's	0	0	0	0	0	42,158	42,158
Unknown	0	17,571	2,377	1,930	0	0	21,879
Total	353,758	238,322	6,124	99,924	49,574	200,379	948,080
%	37.3%	25.1%	0.6%	10.5%	5.2%	21.1%	100.0%

Summary of Pipe Materials by Pipe Size in Length (Feet)

Pipe Size (inches)	CI	AC	ST	DI	CCP	C900	Total	%
4	140,567	12,559	0	64	0	0	153,190	16.2%
6	50,644	122,666	488	31,022	0	25	204,846	21.6%
8	78,852	78,172	1,371	51,845	0	192,728	402,968	42.5%
10	36,505	948	818	1,432	0	407	40,110	4.2%
12	34,845	23,557	1,163	12,523	344	7,218	79,650	8.4%
14	3,551	46	0	0	0	0	3,597	0.4%
16	5,898	287	1,932	1,493	14,847	0	24,457	2.6%
18	2,896	86	338	35	0	0	3,354	0.4%
20	0	0	15	0	18,087	0	18,102	1.9%
24	0	0	0	1,490	360	0	1,850	0.2%
27	0	0	0	21	15,935	0	15,956	1.7%
Total	353,758	238,322	6,124	99,924	49,574	200,379	948,080	100.0%
%	37.3%	25.1%	0.6%	10.5%	5.2%	21.1%	100.0%	

Appendix C

City of Lakewood's SCADA Master Plan 2017

<Page Intentionally Left Blank>

SCADA Improvement Projects

1. RADIO NETWORK UPGRADE

The Radio Network Upgrade shall replace all the existing MDS 9810 radios with new Ethernet Radios. The existing hardwired modems shall also be replaced with new Ethernet Radios.

A Radio Survey shall be conducted to ascertain the received signal strength indicator. This shall determine the feasibility of the new radios, along with any radio repeaters which may or may not be required.

Costs for antennas and coaxial cables are listed below; however, if the new radios are also on the 900MHz frequency, the existing antennas can be re-used. The coaxial cables can also be re-used. In this case, the cost of installation will be much lower.

DESCRIPTION	QTY	COST	EXTENDED
Radio Survey	1	\$9,600.00	\$9,600.00
Radio	17	\$2,575.00	\$43,775.00
Antenna	17	\$270.00	\$4,590.00
Coaxial Cable	1	\$1,200.00	\$1,200.00
Installation	1	\$18,000.00	\$18,000.00
TOTAL			\$77,165.00

2. SCADA SOFTWARE UPGRADE

The SCADA Software Upgrade shall replace the existing Wonderware Intouch software.

DESCRIPTION	QTY	COST	EXTENDED
SCADA Computer	2	\$4,000.00	\$8,000.00
SCADA Software	1	\$22,000.00	\$22,000.00
Printer	1	\$800.00	\$800.00
Programming	1	\$32,000.00	\$32,000.00
Testing	1		\$8,400.00
TOTAL			\$71,200.00

3. PLC UPGRADE

The PLC Upgrade shall only apply to Well 6 and Well 27. Well 6 shall be furnished with a new Control Panel.

Well 27 does not require a new Control Panel, but some modification will have to be made to accommodate the new PLC. If only the PLC is replaced, the cost will be much lower.

DESCRIPTION	QTY	COST	EXTENDED
PLC Control Panel (with Modicon M340)*	2	\$18,950.00	\$37,900.00
Engineering	2	\$4,800.00	\$9,600.00
Programming	2	\$4,800.00	\$9,600.00
Testing	2	\$3,200.00	\$6,400.00
Installation	2	\$4,800.00	\$9,600.00
TOTAL			\$73,100.00

*To replace the PLC only at Well 27, instead of \$18,950; the cost will be \$9000.00. Installation will also be lower, instead of \$4800; the cost will be \$2000.

1. INTRODUCTION

The Supervisory Control and Data Acquisition (SCADA) is an industrial automation control system used in various industries; including water and wastewater.

The SCADA System consists of (3) main parts – the SCADA Software, the Programmable Logic Controller (PLC) at the remote sites, and the communications network.

The City of Lakewood currently has (14) remote sites; including City Yard. The SCADA computers are located at City Yard. The SCADA computers communicates to (6) of the remote sites with hardwired modems; and to the remaining (8) remote sites with a radio network. Each remote site is equipped with a PLC to monitor and control the site's reservoirs, boosters, wells, or treatment plant.

2. OBJECTIVE

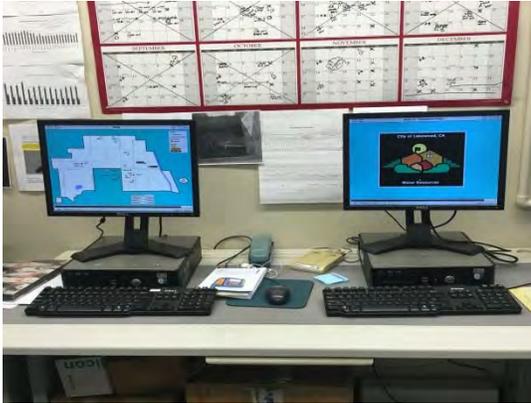
The objective of the Master Plan is to identify the components of the SCADA System, determine the reliability of the components; and where applicable, make a recommendation to either replace or upgrade the component.

3. CITY OF LAKEWOOD SCADA SYSTEM

Each of the remote sites and City Yard was evaluated. The SCADA components found at each site is documented below. The condition of the components is listed. The components which are obsolete, or deemed as a "legacy" product by its manufacturer, or products that are no longer supported is noted as such; along with a recommendation on replacing or upgrading the product.

A. CITY YARD

The SCADA computers, radio, and a PLC for the Reclaim System are all located inside the building at City Yard.



SCADA Computers



Master Telemetry Panel

The SCADA computers are setup as a redundant system and are installed with the following software:

	SCADA COMPUTER 1	SCADA COMPUTER 2
Operating System	Windows XP PRO, SP 2	Windows XP PRO, SP 2
SCADA Software	Wonderware Intouch, V9.5	Wonderware Intouch, V9.5
Alarm Call-Out	SCADAlarm, V6.0	SCADAlarm, V6.0
Driver	Kepware, V	Kepware, V

The Master Telemetry Panel contains the unlicensed, spread-spectrum, 900MHz radio (MDS 9810) used to communicate with some of the remote sites. The Omni antenna is located on an antenna tower in the parking lot at City Yard.

The Panel also contains the Modbus Gateway (MOXA MGate MB3270) used to communicate with the sites that are located within City Yard through a hardwired modem. The wires for the modem are owned by the City, not the telephone company.

The Master Telemetry Panel also contains a Modicon M340 PLC to control the Reclaim System.

RECOMMENDATION

SCADA Computers and Software

The SCADA computers and software should be replaced and/or upgraded.

The hardware Dell Optiplex computers are old and the operating system, Windows XP PRO, is no longer supported by Microsoft. Support for this operating system ended in 2014.

The SCADA Software should also be replaced and/or upgraded. The existing Alarm Call-Out software will only run on Windows XP PRO; therefore, it will have to be replaced.

EQUIPMENT	MANUFACTURER/MODEL NO.	CONDITION	RECOMMENDATION
SCADA Computer 1	DELL Optiplex	Obsolete	Replace
SCADA Computer 2	DELL Optiplex	Obsolete	Replace
Operating System	Microsoft, Windows XP PRO	Obsolete	Replace
SCADA Software	Wonderware Intouch	Old Version	Replace/Upgrade
Alarm Call-Out	SCADAAlarm	Old Version	Replace

Master Telemetry Panel

The Master Telemetry Panel is in good condition. The existing M340 is up-to-date; however, the MDS 9810 radio has been a legacy product for many years and should be replaced. The sites that are currently hardwired can also be replaced with radios.

The MDS 9810 is no longer being manufactured; thus, parts and spares will be hard to obtain. Further, the MDS 9810 does not offer encryption while many of the newer radios do.

The hardwired sites should be converted to radios for ease of use and maintenance. The location of the conduits for the existing copper lines cannot be easily traced or identify. Hence, moving these sites to radios will eliminate this problem.

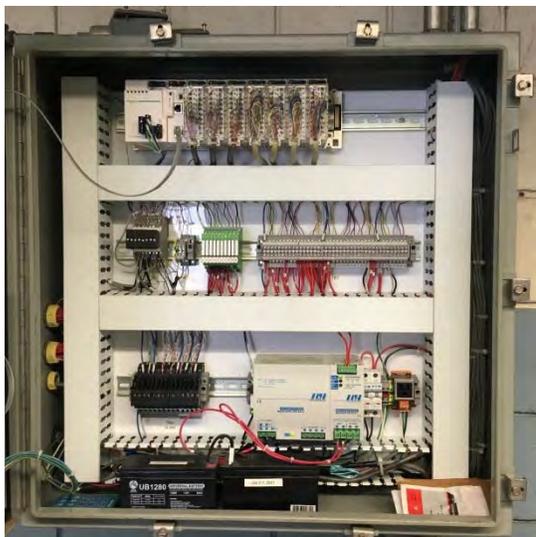
Many of the remote sites communicate with the computers using the MDS 9810. Unfortunately, the radios will all have to be replaced at the same time. Like other radio systems, these radios cannot work by replacing them one at a time. All the radios must be the same within the radio network; therefore, a new radio system will have to be implemented.

A Radio Survey can be done before installing the new radio system to ensure that the radio signals are adequate.

EQUIPMENT	MANUFACTURER/MODEL NO.	CONDITION	RECOMMENDATION
PLC	Modicon M340	Up-To-Date	
Radio	MDS 9810	Legacy/Obsolete	Replace
Copper Lines	City Owned	Not Known	Replace

B. PLANT 4 AND BOOSTERS

Located at City Yard, the site includes (3) Reservoirs and (8) Boosters. One of the boosters has been permanently removed. Boosters 1 thru 6 pump out of Reservoirs 1 and 2 and discharges into the System. Booster 8 pumps out of Reservoir 3 and discharges into the System.



Plant 4



Plant 4 Modem

Plant 4 communicates to the SCADA computers through a hardwired modem.

RECOMMENDATION

The Plant 4 Panel is in good condition. The existing M340 is up-to-date; however, the Motorola UDS modem is a legacy product and should be replaced.

The Motorola modem can be replaced with a radio. Since the master radio is already at the City Yard, the signal should be more than adequate.

EQUIPMENT	MANUFACTURER/MODEL NO.	CONDITION	COMMENTS
PLC	Modicon M340	Up-To-Date	
Modem	Motorola UDS	Obsolete	Replace With Radio

C. PLANT 13

The site includes a Reservoir and (4) Boosters. Boosters 1 thru 4 pump out of the reservoir and discharges into the System.

The site is currently under re-construction; therefore, the panel could not be inspected. Hence, no pictures are available.

Plant 13 communicates to the SCADA computers through a radio and Yagi antenna mounted on top of the Reservoir.

RECOMMENDATION

The Plant 13 Panel condition is not known. The existing M340 is up-to-date; however, the MDS 9810 radio is a legacy product and should be replaced.

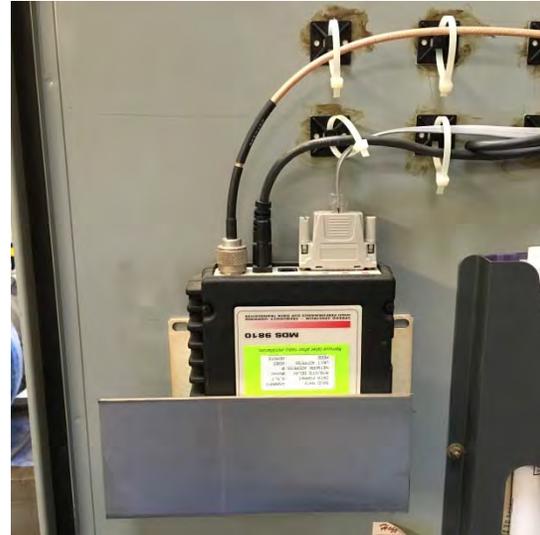
EQUIPMENT	MANUFACTURER/MODEL NO.	CONDITION	RECOMMENDATION
PLC	Modicon M340	Up-To-Date	
Radio	MDS 9810	Obsolete	Replace

D. PLANT 22 AND WELL 22

The site includes a Reservoir, (4) Boosters and (1) Well. Booster 1 thru 4 pump out of the Reservoir and discharges into the System. Well 22 pumps into the Reservoir.



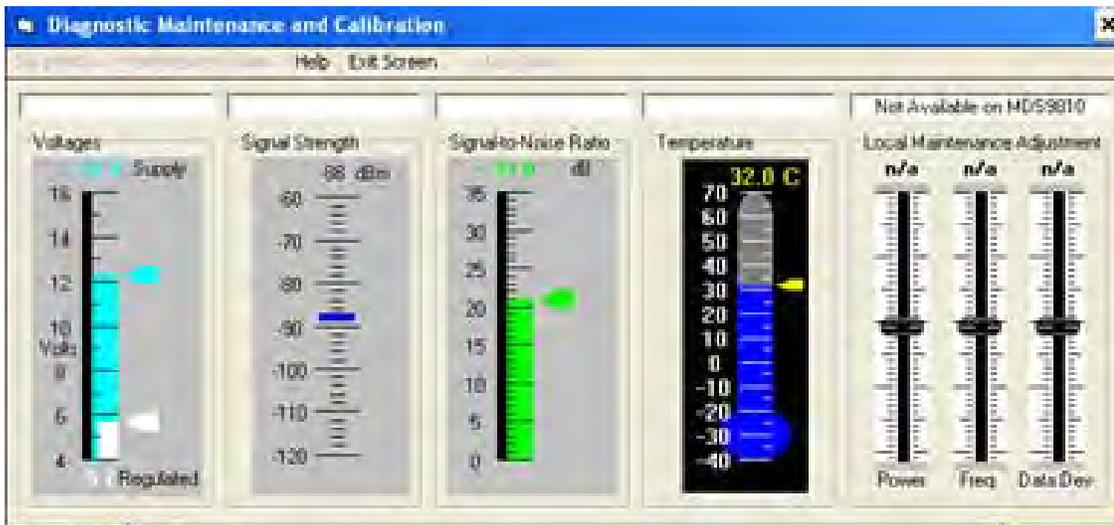
Plant 22



Plant 22 Radio

Plant 22 communicates to the SCADA computers through a radio and Yagi antenna mounted on top of the roof.

The radio strength measured at this site is -88 dBm; which is a poor signal.



RECOMMENDATION

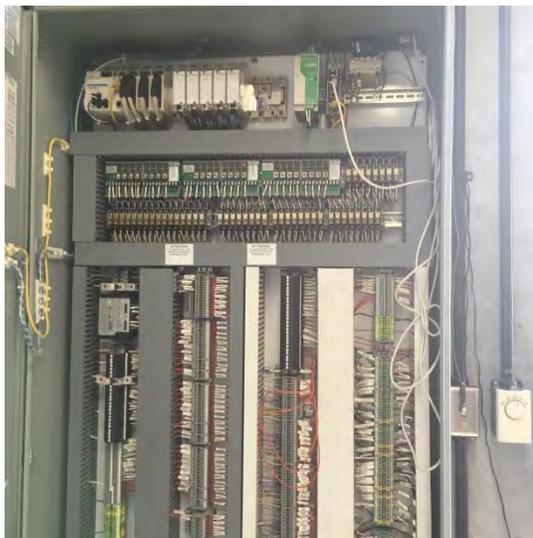
The Plant 22 Panel is in good condition. The existing M340 is up-to-date; however, the MDS 9810 radio is a legacy product and should be replaced.

EQUIPMENT	MANUFACTURER/MODEL NO.	CONDITION	COMMENTS
PLC	Modicon M340	Up-To-Date	
Radio	MDS 9810	Obsolete	Replace

E. PLANT 27 AND WELL 27

Located at City Yard, this site includes a Water Treatment Plant, (1) Well, and Reservoir 3. The Water Treatment Plant is controlled by a Modicon M340 PLC; while Well 27 is controlled by a Modicon TSX Premium.

Well 27 pumps into the Treatment Plant; and the Treatment Plant discharges into the Reservoir 3.



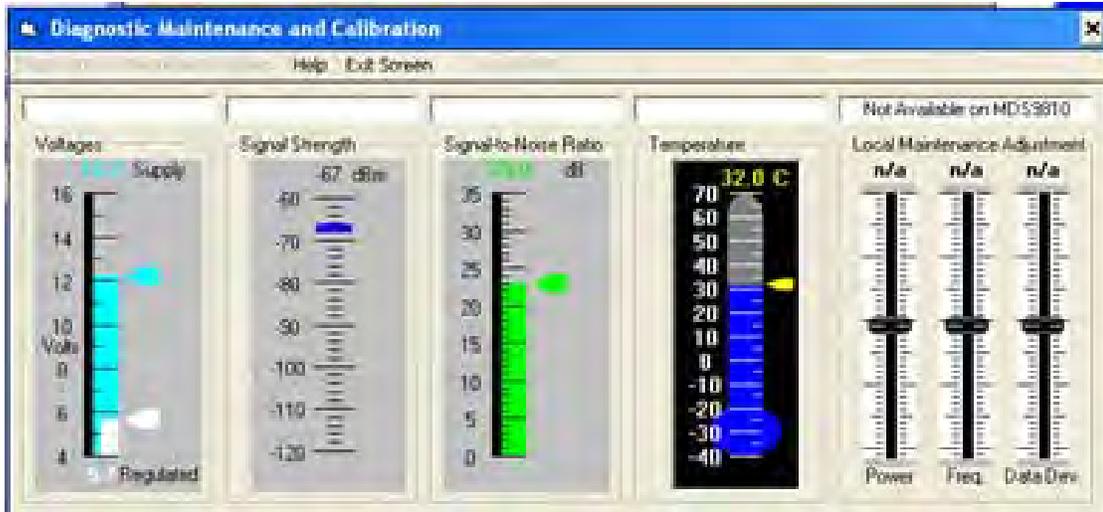
Plant 27 Water Treatment



Well 27

Plant 27 Water Treatment PLC is connected to the same network as Well 27 through an Ethernet Switch. The radio is located in the Well 27 Panel and communicates to the SCADA computers with a Yagi antenna mounted on the roof.

The radio strength measured at this site is -67 dBm; which is a strong signal.



RECOMMENDATION

The Plant 27 Water Treatment Panel is in good condition, and the existing M340 is up-to-date.

The Well 27 Panel is also in good condition; however, the MDS 9810 radio is a legacy product and should be replaced. The TSX Premium should be changed to a M340 to match the existing to make maintenance easier. The physical footprint of the M340 looks like it would fit where the TSX Premium is mounted. However, this will have to be field verified during installation.

EQUIPMENT	MANUFACTURER/MODEL NO.	CONDITION	COMMENTS
PLC (Water Treatm)	Modicon M340	Up-To-Date	
PLC (Well 27)	Modicon TSX Premium	Obsolete	Replace
Radio	MDS 9810	Obsolete	Replace

F. WELL 2A

Well 2A pumps into the System.



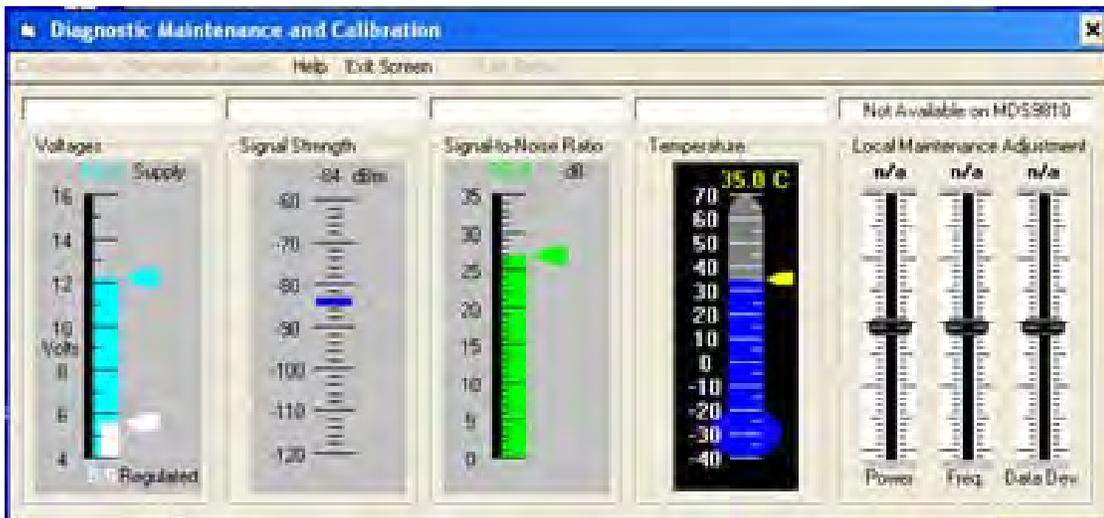
Well 2A



Well 2A Radio

Well 2A communicates to the SCADA computers through a radio and Yagi antenna mounted on top of the roof.

The radio signal measured at this site is – 84 dBm; which is a good signal.



RECOMMENDATION

The Well 2A Panel is in good condition, and the existing M340 is up-to-date; however, the MDS 9810 radio is a legacy product and should be replaced.

EQUIPMENT	MANUFACTURER/MODEL NO.	CONDITION	COMMENTS
PLC	Modicon M340	Up-To-Date	
Radio	MDS 9810	Obsolete	Should Be Upgraded

G. WELL 4

Well 4 pumps into the System.



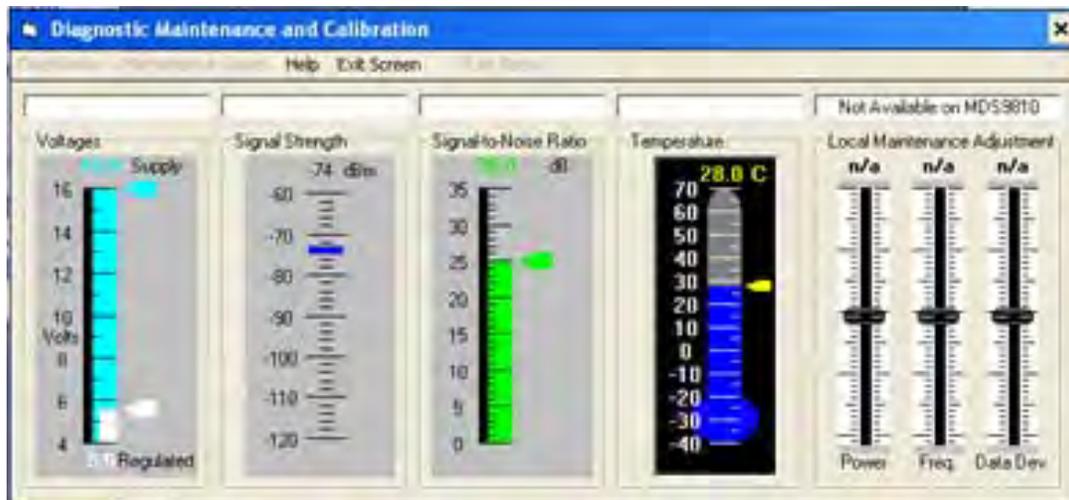
Well 4



Well 4 Antenna

Well 4 communicates to the SCADA computers through a radio and Omni antenna that is hanging from the panel.

The radio strength measured at this site is -74 dBm; which is a strong signal.



RECOMMENDATION

The Well 4 Panel is in relatively good condition. The wires can be cleaned up and organized. The existing M340 is up-to-date; however, the MDS 9810 radio is a legacy product and should be replaced. The OMNI antenna should also be mounted properly.

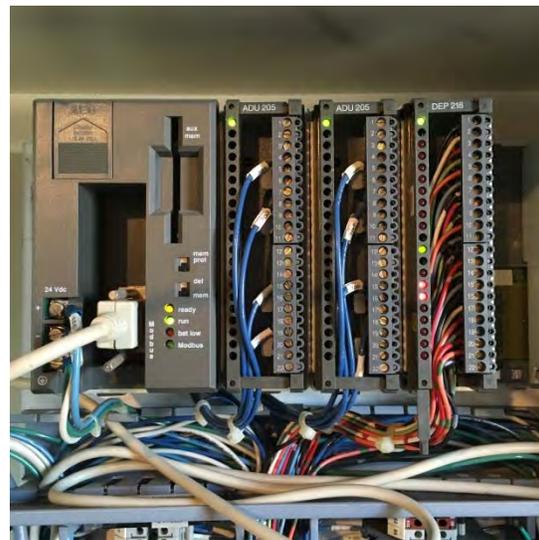
EQUIPMENT	MANUFACTURER/MODEL NO.	CONDITION	RECOMMENDATION
PLC	Modicon M340	Up-To-Date	
Radio	MDS 9810	Obsolete	Replace

H. WELL 6

Well 6 pumps out to the nearby Irrigation System.



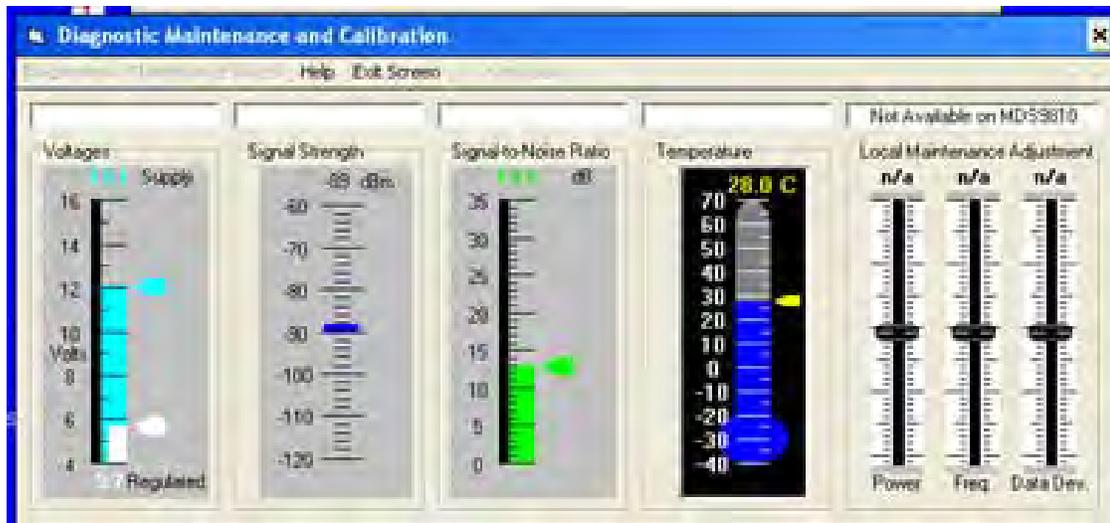
Well 6



Well 6 PLC

Well 6 communicates to the SCADA computers through a radio and Yagi antenna that is mounted on the roof.

The radio strength measured at this site is -89 dBm; which is a poor signal.



RECOMMENDATION

The Well 6 Panel is in poor condition. The existing Modicon Compact has been obsolete for many years. Obtaining parts and spares for the Compact is difficult. The MDS 9810 radio is a legacy product and should be replaced. The Yagi antenna is mounted on the roof.

With the panel being old, and the PLC and Radio needing to be replaced; it is advisable to build a new Panel for Well 6.

EQUIPMENT	MANUFACTURER/MODEL NO.	CONDITION	RECOMMENDATION
PLC	Modicon Compact	Obsolete	Replace
Radio	MDS 9810	Obsolete	Replace

I. WELL 8

Located at City Yard, Well 8 pumps into Reservoir 3.



Well 8



Well 8 Modem

Well 8 communicates to the SCADA computers through a hardwired modem.

RECOMMENDATION

The Well 8 Panel is in good condition. The existing M340 is up-to-date; however, the Motorola UDS modem is a legacy product and should be replaced.

The Motorola modem can be replaced with radios. Since the master radio is already at the City Yard, the signal should be more than adequate.

EQUIPMENT	MANUFACTURER/MODEL NO.	CONDITION	RECOMMENDATION
PLC	Modicon M340	Up-To-Date	
Modem	Motorola UDS	Obsolete	Replace With Radio

J. WELL 10

Located at City Yard, Well 10 pumps into Reservoir 3.



Well 10



Well 10 Modem

Well 10 communicates to the SCADA computers through a hardwired modem.

RECOMMENDATION

The Well 10 Panel is in good condition. The existing M340 is up-to-date; however, the Motorola UDS modem is a legacy product and should be replaced.

The Motorola modem can be replaced with radios. Since the master radio is already at the City Yard, the signal should be more than sufficient.

EQUIPMENT	MANUFACTURER/MODEL NO.	CONDITION	RECOMMENDATION
PLC	Modicon M340	Up-To-Date	
Modem	Motorola UDS	Obsolete	Replace With Radio

K. WELL 13A

Well 13A pumps into Reservoir 13, located at Plant 13.



Well 13A



Well 13A Radio

Well 13 communicates to the SCADA computers through a Radio Repeater located at Plant 13.

Plant 13 is currently under re-construction; therefore, the Radio Repeater has been powered down. Hence, communication at Well 13 is also down.

RECOMMENDATION

The Well 13 Panel is in good condition. The existing M340 is up-to-date; however, the MDS 9810 radio is a legacy product and should be replaced.

EQUIPMENT	MANUFACTURER/MODEL NO.	CONDITION	RECOMMENDATION
PLC	Modicon M340	Up-To-Date	
Radio	MDS 9810	Obsolete	Replace

L. WELL 15

Located at City Yard, Well 15 pumps into Reservoir 3.



Well 15



Well 15 Modem

Well 15 communicates to the SCADA computers through a hardwired modem.

RECOMMENDATION

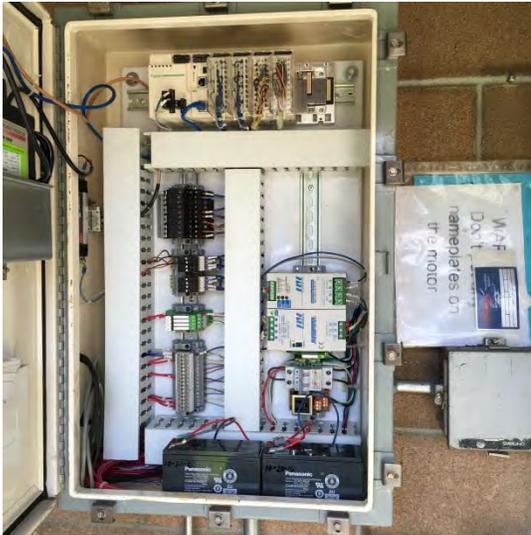
The Well 15 Panel is in good condition. The existing M340 is up-to-date; however, the Motorola UDS modem is a legacy product and should be replaced.

The Motorola modem can be replaced with radios. Since the master radio is already at the City Yard, the signal should be more than adequate.

EQUIPMENT	MANUFACTURER/MODEL NO.	CONDITION	RECOMMENDATION
PLC	Modicon M340	Up-To-Date	
Modem	Motorola UDS	Obsolete	Replace With Radio

M. WELL 17

Well 17 pumps into the System.



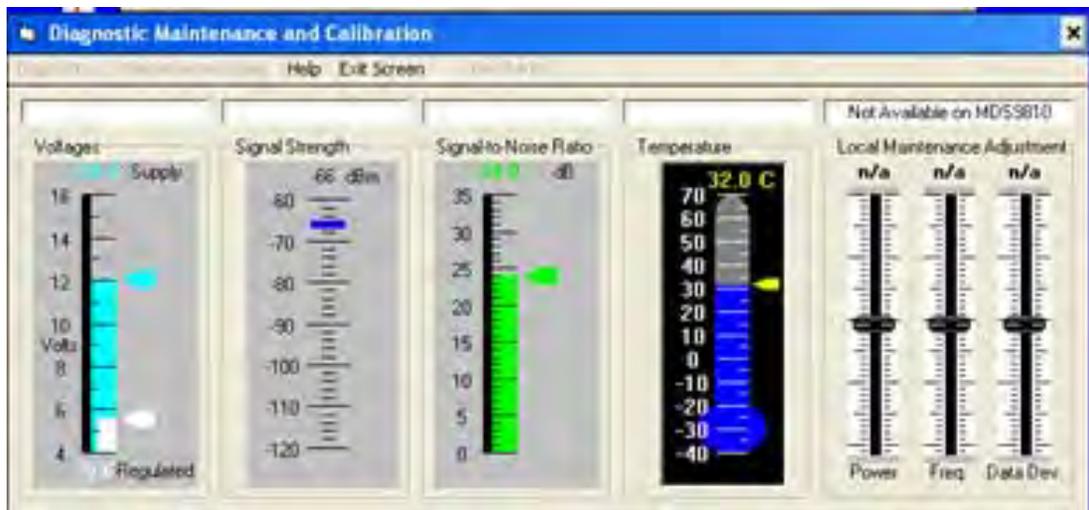
Well 17



Well 17 Radio

Well 17 communicates to the SCADA computers through a radio and Yagi antenna mounted on the roof.

The radio strength measured at this site is -66 dBm; which is a good signal.



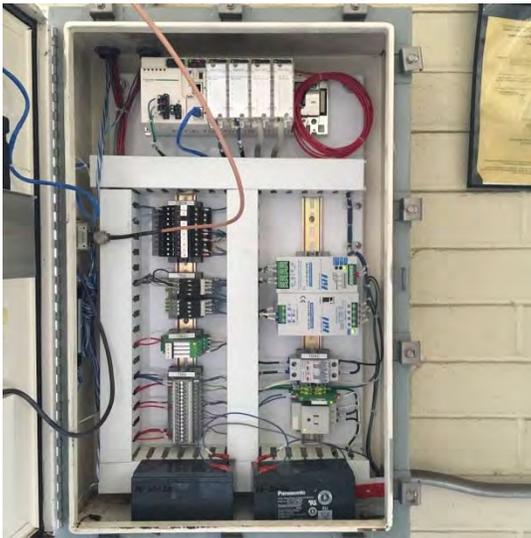
RECOMMENDATION

The Well 17 Panel is in good condition. The existing M340 is up-to-date; however, the MDS 9810 radio is a legacy product and should be replaced.

EQUIPMENT	MANUFACTURER/MODEL NO.	CONDITION	RECOMMENDATION
PLC	Modicon M340	Up-To-Date	
Radio	MDS 9810	Obsolete	Replace

N. WELL 18

Well 18 pumps into the System.



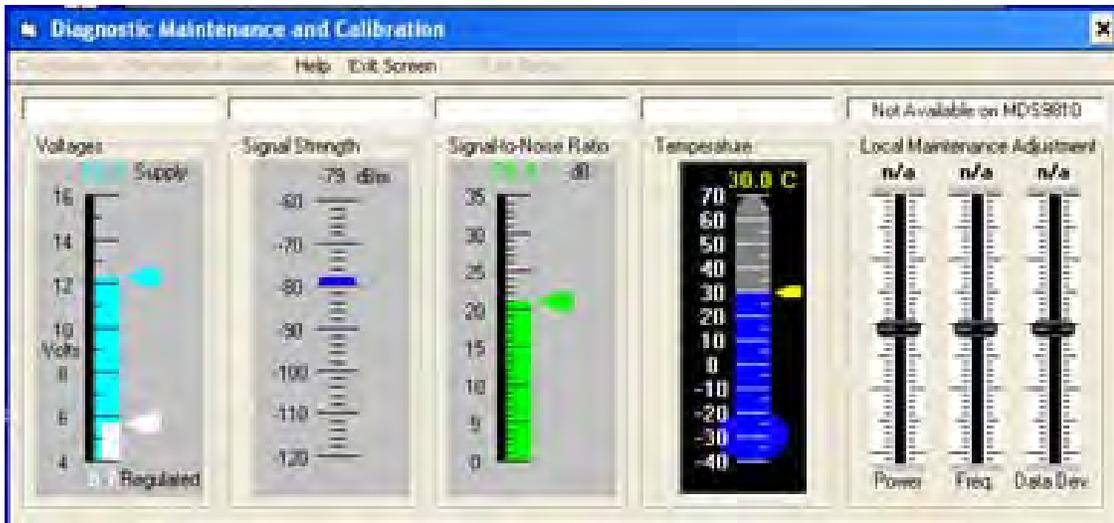
Well 18



Well 18 Radio

Well 18 communicates to the SCADA computers through a radio and Yagi antenna mounted to the roof.

The radio strength measured at this site is -79 dBm; which is a good signal.



RECOMMENDATION

The Well 18 Panel is in good condition. The existing M340 is up-to-date; however, the MDS 9810 radio is a legacy product and should be replaced.

EQUIPMENT	MANUFACTURER/MODEL NO.	CONDITION	RECOMMENDATION
PLC	Modicon M340	Up-To-Date	
Radio	MDS 9810	Obsolete	Replace

4. SUMMARY

The City of Lakewood employs a SCADA System to control and monitor the Water System. While the SCADA System is operational, there are some aspects of the system that can and should be upgraded.

There are three (3) main areas of the SCADA System that will need some improvements: the SCADA Software, the Radio Network, and a PLC upgrade at a couple of the sites.

A. SCADA Software Upgrade

The computers at City Yard should be replaced. The current computers are operating on Windows XP, which is no longer supported. The existing computers shall be replaced with new computers running the latest operating system.

The SCADA Software should also be upgraded and/or replaced since the current version will not be supported by the latest operating system.

The Alarm Call-Out Software also will not run on the latest operating system and shall be replaced.

B. Radio Network Upgrade

Some remote sites communicate back to the SCADA computers using a radio network. The existing radios are GE MDS 9810. Some remote sites communicate through telephone lines. The lines are City owned and connect to the Motorola UDS modem. Unfortunately, both the GE MDS 9810 and the Motorola UDS are both legacy products and no longer supported by its manufacturers.

The table below is a tabulation of the radio signal strengths taken at each site.

Site Name	RSSI (dBm)	SNR (dB)	Signal Quality
Plant 13*	None	None	None
Well 2A	-84	27	Good
Well 4	-74	25	Good
Well 6	-89	13	Poor
Well 13A*	None	None	None
Well 17	-66	24	Good
Well 18	-79	21	Good
Well 22	-88	21	Poor
Well 27	-67	23	Good

*Plant 13 was under re-construction. The radios were not available for measuring. Well 13A radio communicates to Plant 13; hence the radio signal was also not available.

Most of the sites had good radio signals. The Radio Network should be expanded to include the sites that are currently on the telephone lines.

The entire communication network shall be replaced with a new Radio Network. A Radio Survey shall be done to ascertain the radio signal strengths of all the sites prior to installing new radios. If applicable, new repeater sites shall be identified for any sites with a poor or marginal radio signal.

C. PLC Upgrade (Well 6 and Well 27 Only)

Well 6 and Well 27 both have older PLCs. To bring these sites up-to-date with the other sites, the PLCs should be upgraded to the Modicon 340.

The PLC Panel at Well 6 is in poor condition. The entire panel should be replaced. The new M340 will need to be programmed.

The PLC Panel at Well 27 is in good condition. The entire panel can be replaced or just the PLC and its input/output modules can be replaced. If the latter, verify that the new M340 will physically fit in the space of the existing PLC.

Appendix D
Summary of Reservoir Inspection Reports

<Page Intentionally Left Blank>

Summary of Reservoir Inspection Reports

Name	Inspection Date	Material	Exterior Walls	Exterior Roof	Interior Roof	Interior Walls	Floor	Cathodic System	Recommendations
Reservoir 22	2/16/2016	Concrete (Predominantly Buried)	Several Tight Cracks Observed	Gravel Covered (Not Inspected)	Cracking Present	Cracking Present Joints are in Poor Condition / Leakage is Evident	Cracking with Suspected Seepage (Patch Material Applied)	None	Replacement or repair (considerable leakage at wall to floor joint line, notable roof cracking. Overflow openings are clogged)
Plant 4, Tank 1	2/27/2014	Steel	Good	Good	Good	Good	Good	None	Reattach vent straps, Annual roof cleaning
Plant 4, Tank 2	6/12/2015	Steel	Good	Several Small Patches of Corrosion (East Side), Some Scale Formation Present	Good	Good	Good	None	Recoat rust zones on roof exterior
Plant 4, Tank 3	Inspected and cleaned 5/1/17	Concrete (Partially Buried)	Good (Exposed Portion)	Gravel / Solar Panel Covered (Not Inspected)	Good (Tight Cracks Present / Isolated Rust Staining)	Good	Good	None	Monitor cracking in roof underside, Monitor and remove interior deposits (possibly filter media)
Plant 13, Tank 1	6/12/2015	Steel	Good (Small Rust Points Present)	Good	Good	Good (Patches of Rust Points and Coat Blistering Present)	Small Patch of Coating Blisters Present / Sediment 0.5-2" Deep	Good	Monitor previous leak at the corner on the rectangular manway quarterly
Plant 13, Tank 2	6/12/2015	Steel	Good	Good	Good (Small Patches of Rust and Scale Formation Present)	Good (Rust Patches Present)	Good (Sediment 0.5-6" Deep Removed)	Good	Reinspect reservoir in 2 years
Plant 13, Tank 3	6/12/2015	Steel	Good	Fair (Rust Present)	Good (Rust Present at the Beam Ends)	Good (Some Scale Formation)	Good (Some Rust Points Present / Sediment up to 8" Deep Removed)	Good	Reinspect reservoir in 2 years
Plant 13, Tank 4	6/12/2015	Steel	Good	Poor (Corrosion and Scale Formation Present)	Good (Light Rust Observed)	Good	Good (Sediment up to 8" Deep Removed)	Good (Rust Observed in Hand Hole Covers)	Recoat roof exterior. Rectifier has been removed and sacrificial anodes have been added May 2017
Plant 13, Tank 5	6/12/2015	Steel	Good	Poor (Rust Patches Present)	Good (Minimal Rust)	Areas of Coating Delamination in Top 6" of Shell / Rust and Scale Formation Suspected	Good (Sediment 0.25-6" Deep)	Good (Hand Hole Covers have some Corrosion / Rectifier in poor condition)	Recoat roof exterior. Rectifier has been removed and sacrificial anodes have been added May 2017

<Page Intentionally Left Blank>

Appendix E
Replacement Projects (Based on Asset Management Plan)

<Page Intentionally Left Blank>

Appendix E Replacement and Rehabilitation Schedule and Cost Summary

Proposed Annual Totals			
Year	Replacement Cost	Rehabilitation Cost	Total Cost
2017	\$ 1,248,400	\$ 288,100	\$ 1,536,500
2018	\$ 1,069,800	\$ 92,300	\$ 1,162,100
2019	\$ 876,800	\$ 100,800	\$ 977,600
2020	\$ 369,200	\$ 10,900	\$ 380,100
2021	\$ 103,300	\$ 150,200	\$ 253,500
2022	\$ 499,200	\$ 81,500	\$ 580,700
2023	\$ 30,300	\$ 191,000	\$ 221,300
2024	\$ 743,000	\$ 63,700	\$ 806,700
2025	\$ 443,300	\$ 228,600	\$ 671,900
2026	\$ 41,300	\$ 62,700	\$ 104,000
2027	\$ 3,569,300	\$ 99,900	\$ 3,669,200
2028	\$ 39,800	\$ 58,900	\$ 98,700
2029	\$ 743,300	\$ 113,600	\$ 856,900
2030	\$ 666,100	\$ 113,600	\$ 779,700
2031	\$ 709,100	\$ 58,700	\$ 767,800
2032	\$ 686,400	\$ 84,600	\$ 771,000
2033	\$ 60,400	\$ 140,400	\$ 200,800
2034	\$ 4,645,500	\$ 115,600	\$ 4,761,100
2035	\$ 864,300	\$ 123,300	\$ 987,600
2036	\$ 456,300	\$ 82,900	\$ 539,200

Source: Based on GHD's Working Draft Asset Management Plan, January 13, 2017

Replacement and Rehabilitation Schedule and Cost Summary

Proposed Implementation Year	Plant	Asset Category	Replacement Cost	Rehabilitation Cost	Total Cost (Adjusted to Year of Implementation)
2017	Plant 13	Booster Pump Station	\$ -	\$ 26,304	\$ 26,304
2017	Plant 13	General	\$ -	\$ -	\$ -
2017	Plant 13	Reservoir	\$ -	\$ 224,000	\$ 224,000
2017	Plant 13	Treatment Plant	\$ -	\$ 48	\$ 48
2017	Plant 13	Well	\$ -	\$ -	\$ -
2017	Plant 22	General	\$ -	\$ -	\$ -
2017	Plant 22	Reservoir	\$ -	\$ -	\$ -
2017	Plant 22	Well	\$ 74,220	\$ 6,400	\$ 80,620
2019	Plant 4	Booster Pump Station	\$ 440,517	\$ -	\$ 440,517
2017	Plant 4	General	\$ -	\$ -	\$ -
2017	Plant 4	Reservoir	\$ 105,593	\$ 10,000	\$ 115,593
2017	Plant 4	Treatment Plant	\$ -	\$ 3,000	\$ 3,000
2017	Plant 4	Well	\$ 1,000,000	\$ 18,304	\$ 1,018,304
2019	System	Well	\$ 321,930	\$ 467	\$ 322,397
2018	City-Wide	General	\$ -	\$ 20,600	\$ 20,600
2018	Plant 13	Booster Pump Station	\$ -	\$ 6,180	\$ 6,180
2018	Plant 13	General	\$ -	\$ -	\$ -
2018	Plant 13	Reservoir	\$ -	\$ -	\$ -
2018	Plant 13	Treatment Plant	\$ -	\$ 20,600	\$ 20,600
2017	Plant 13	Well	\$ 36,500	\$ -	\$ 36,500
2018	Plant 22	General	\$ -	\$ -	\$ -
2018	Plant 22	Reservoir	\$ -	\$ -	\$ -
2018	Plant 22	Well	\$ -	\$ 20,600	\$ 20,600
2018	Plant 4	Booster Pump Station	\$ -	\$ -	\$ -
2018	Plant 4	General	\$ -	\$ -	\$ -
2018	Plant 4	Reservoir	\$ -	\$ -	\$ -
2018	Plant 4	Treatment Plant	\$ -	\$ 3,676	\$ 3,676
2018	Plant 4	Well	\$ 1,069,784	\$ -	\$ 1,069,784
2017	System	Well	\$ 32,000	\$ -	\$ 32,000
2018	City-Wide	General	\$ -	\$ 20,600	\$ 20,600
2019	Plant 13	Booster Pump Station	\$ -	\$ 25,462	\$ 25,462
2019	Plant 13	General	\$ -	\$ -	\$ -
2019	Plant 13	Reservoir	\$ -	\$ 6,790	\$ 6,790
2019	Plant 13	Treatment Plant	\$ -	\$ -	\$ -
2019	Plant 13	Well	\$ -	\$ 8,487	\$ 8,487
2019	Plant 22	General	\$ -	\$ -	\$ -
2019	Plant 22	Reservoir	\$ -	\$ -	\$ -
2019	Plant 22	Well	\$ -	\$ -	\$ -
2019	Plant 4	Booster Pump Station	\$ -	\$ 40,115	\$ 40,115
2019	Plant 4	General	\$ -	\$ -	\$ -
2019	Plant 4	Reservoir	\$ -	\$ 13,155	\$ 13,155
2019	Plant 4	Treatment Plant	\$ 60,800	\$ 5,614	\$ 66,414
2019	Plant 4	Well	\$ 20,051	\$ 594	\$ 20,645
2019	System	Well	\$ 33,418	\$ -	\$ 33,418
2020	City-Wide	General	\$ 218,545	\$ -	\$ 218,545
2021	Plant 13	Booster Pump Station	\$ 7,316	\$ 7,653	\$ 14,969
2021	Plant 13	General	\$ -	\$ -	\$ -
2021	Plant 13	Reservoir	\$ -	\$ 675	\$ 675
2021	Plant 13	Treatment Plant	\$ 11,818	\$ 1,044	\$ 12,862
2021	Plant 13	Well	\$ -	\$ -	\$ -
2021	Plant 22	General	\$ -	\$ -	\$ -
2021	Plant 22	Reservoir	\$ -	\$ -	\$ -
2021	Plant 22	Well	\$ 84,076	\$ 810	\$ 84,886

Proposed Implementation Year	Plant	Asset Category	Replacement Cost	Rehabilitation Cost	Total Cost (Adjusted to Year of Implementation)
2020	Plant 4	Booster Pump Station	\$ 17,210	\$ 7	\$ 17,217
2020	Plant 4	General	\$ -	\$ -	\$ -
2020	Plant 4	Reservoir	\$ 81,955	\$ 10,927	\$ 92,882
2020	Plant 4	Treatment Plant	\$ -	\$ -	\$ -
2020	Plant 4	Well	\$ 51,358	\$ -	\$ 51,358
2021	System	Well	\$ -	\$ -	\$ -
2021	City-Wide	General	\$ -	\$ 22,510	\$ 22,510
2021	Plant 13	Booster Pump Station	\$ -	\$ 27,012	\$ 27,012
2021	Plant 13	General	\$ -	\$ -	\$ -
2021	Plant 13	Reservoir	\$ -	\$ -	\$ -
2021	Plant 13	Treatment Plant	\$ -	\$ 6,490	\$ 6,490
2021	Plant 13	Well	\$ -	\$ -	\$ -
2021	Plant 22	General	\$ -	\$ -	\$ -
2021	Plant 22	Reservoir	\$ -	\$ -	\$ -
2021	Plant 22	Well	\$ -	\$ 6,753	\$ 6,753
2021	Plant 4	Booster Pump Station	\$ -	\$ 42,558	\$ 42,558
2021	Plant 4	General	\$ -	\$ -	\$ -
2022	Plant 4	Reservoir	\$ 33,387	\$ 9,854	\$ 43,241
2021	Plant 4	Treatment Plant	\$ -	\$ 4,638	\$ 4,638
2021	Plant 4	Well	\$ -	\$ 7,284	\$ 7,284
2021	System	Well	\$ -	\$ 90	\$ 90
2021	City-Wide	General	\$ -	\$ 22,510	\$ 22,510
2022	Plant 13	Booster Pump Station	\$ 73,034	\$ 7,178	\$ 80,212
2022	Plant 13	General	\$ -	\$ -	\$ -
2022	Plant 13	Reservoir	\$ -	\$ 7,419	\$ 7,419
2022	Plant 13	Treatment Plant	\$ -	\$ -	\$ -
2022	Plant 13	Well	\$ -	\$ -	\$ -
2022	Plant 22	General	\$ -	\$ -	\$ -
2022	Plant 22	Reservoir	\$ -	\$ -	\$ -
2022	Plant 22	Well	\$ 74,194	\$ 23,185	\$ 97,379
2022	Plant 4	Booster Pump Station	\$ 210,408	\$ 46	\$ 210,455
2022	Plant 4	General	\$ -	\$ -	\$ -
2022	Plant 4	Reservoir	\$ 2,666	\$ 7,748	\$ 10,414
2022	Plant 4	Treatment Plant	\$ -	\$ -	\$ -
2022	Plant 4	Well	\$ 105,378	\$ 2,838	\$ 108,216
2022	System	Well	\$ -	\$ -	\$ -
2022	City-Wide	General	\$ -	\$ 23,185	\$ 23,185
2023	Plant 13	Booster Pump Station	\$ 28,209	\$ 32,937	\$ 61,146
2023	Plant 13	General	\$ -	\$ -	\$ -
2023	Plant 13	Reservoir	\$ -	\$ 11,463	\$ 11,463
2023	Plant 13	Treatment Plant	\$ -	\$ 9,610	\$ 9,610
2023	Plant 13	Well	\$ -	\$ -	\$ -
2023	Plant 22	General	\$ -	\$ -	\$ -
2023	Plant 22	Reservoir	\$ -	\$ -	\$ -
2023	Plant 22	Well	\$ -	\$ 9,392	\$ 9,392
2023	Plant 4	Booster Pump Station	\$ 1,313	\$ 58,339	\$ 59,653
2023	Plant 4	General	\$ -	\$ -	\$ -
2023	Plant 4	Reservoir	\$ -	\$ 19,105	\$ 19,105
2023	Plant 4	Treatment Plant	\$ -	\$ -	\$ -
2023	Plant 4	Well	\$ -	\$ 24,836	\$ 24,836
2023	System	Well	\$ 597	\$ 1,433	\$ 2,030
2023	City-Wide	General	\$ -	\$ 23,881	\$ 23,881
2024	Plant 13	Booster Pump Station	\$ -	\$ 7,379	\$ 7,379
2024	Plant 13	General	\$ -	\$ -	\$ -

Proposed Implementation Year	Plant	Asset Category	Replacement Cost	Rehabilitation Cost	Total Cost (Adjusted to Year of Implementation)
2024	Plant 13	Reservoir	\$ -	\$ -	\$ -
2024	Plant 13	Treatment Plant	\$ -	\$ -	\$ -
2024	Plant 13	Well	\$ -	\$ -	\$ -
2024	Plant 22	General	\$ -	\$ -	\$ -
2024	Plant 22	Reservoir	\$ -	\$ -	\$ -
2024	Plant 22	Well	\$ 61,494	\$ -	\$ 61,494
2024	Plant 4	Booster Pump Station	\$ 100,727	\$ 1,008	\$ 101,735
2024	Plant 4	General	\$ -	\$ -	\$ -
2024	Plant 4	Reservoir	\$ 58,112	\$ -	\$ 58,112
2024	Plant 4	Treatment Plant	\$ 61,002	\$ 29,746	\$ 90,747
2024	Plant 4	Well	\$ 302,549	\$ 344	\$ 302,893
2024	System	Well	\$ 159,084	\$ 600	\$ 159,684
2024	City-Wide	General	\$ -	\$ 24,597	\$ 24,597
2025	Plant 13	Booster Pump Station	\$ 18,241	\$ 30,402	\$ 48,644
2025	Plant 13	General	\$ -	\$ -	\$ -
2025	Plant 13	Reservoir	\$ -	\$ 8,867	\$ 8,867
2025	Plant 13	Treatment Plant	\$ 1,013	\$ 25,335	\$ 26,349
2025	Plant 13	Well	\$ -	\$ -	\$ -
2025	Plant 22	General	\$ -	\$ -	\$ -
2025	Plant 22	Reservoir	\$ -	\$ -	\$ -
2025	Plant 22	Well	\$ 210,537	\$ 25,335	\$ 235,873
2025	Plant 4	Booster Pump Station	\$ 2,787	\$ 47,899	\$ 50,686
2025	Plant 4	General	\$ -	\$ -	\$ -
2025	Plant 4	Reservoir	\$ -	\$ 15,708	\$ 15,708
2025	Plant 4	Treatment Plant	\$ -	\$ 3,800	\$ 3,800
2025	Plant 4	Well	\$ 170,001	\$ 45,847	\$ 215,848
2025	System	Well	\$ 40,537	\$ -	\$ 40,537
2025	City-Wide	General	\$ -	\$ 25,335	\$ 25,335
2026	Plant 13	Booster Pump Station	\$ 2,153	\$ 7,829	\$ 9,982
2026	Plant 13	General	\$ -	\$ -	\$ -
2026	Plant 13	Reservoir	\$ -	\$ 12,526	\$ 12,526
2026	Plant 13	Treatment Plant	\$ -	\$ 1,211	\$ 1,211
2026	Plant 13	Well	\$ -	\$ -	\$ -
2026	Plant 22	General	\$ -	\$ -	\$ -
2026	Plant 22	Reservoir	\$ -	\$ -	\$ -
2026	Plant 22	Well	\$ -	\$ 1,540	\$ 1,540
2026	Plant 4	Booster Pump Station	\$ -	\$ 8	\$ 8
2026	Plant 4	General	\$ -	\$ -	\$ -
2026	Plant 4	Reservoir	\$ -	\$ 13,382	\$ 13,382
2026	Plant 4	Treatment Plant	\$ -	\$ -	\$ -
2026	Plant 4	Well	\$ 16,179	\$ -	\$ 16,179
2026	System	Well	\$ 22,834	\$ -	\$ 22,834
2026	City-Wide	General	\$ -	\$ 26,095	\$ 26,095
2027	Plant 13	Booster Pump Station	\$ -	\$ 31,315	\$ 31,315
2027	Plant 13	General	\$ -	\$ -	\$ -
2027	Plant 13	Reservoir	\$ -	\$ -	\$ -
2027	Plant 13	Treatment Plant	\$ -	\$ 8,620	\$ 8,620
2027	Plant 13	Well	\$ -	\$ 10,438	\$ 10,438
2027	Plant 22	General	\$ -	\$ -	\$ -
2027	Plant 22	Reservoir	\$ -	\$ -	\$ -
2027	Plant 22	Well	\$ 5,913	\$ 3,622	\$ 9,535
2027	Plant 4	Booster Pump Station	\$ 59,297	\$ 8	\$ 59,305
2027	Plant 4	General	\$ -	\$ -	\$ -
2027	Plant 4	Reservoir	\$ 397,523	\$ 11,111	\$ 408,634
2027	Plant 4	Treatment Plant	\$ -	\$ 5,377	\$ 5,377

Proposed Implementation Year	Plant	Asset Category	Replacement Cost	Rehabilitation Cost	Total Cost (Adjusted to Year of Implementation)
2027	Plant 4	Well	\$ 3,042,855	\$ 1,106	\$ 3,043,962
2027	System	Well	\$ 63,500	\$ 2,244	\$ 65,744
2027	City-Wide	General	\$ -	\$ 26,095	\$ 26,095
2028	Plant 13	Booster Pump Station	\$ -	\$ 8,079	\$ 8,079
2028	Plant 13	General	\$ -	\$ -	\$ -
2028	Plant 13	Reservoir	\$ -	\$ 8,351	\$ 8,351
2028	Plant 13	Treatment Plant	\$ -	\$ -	\$ -
2028	Plant 13	Well	\$ 6,921	\$ -	\$ 6,921
2028	Plant 22	General	\$ -	\$ -	\$ -
2028	Plant 22	Reservoir	\$ -	\$ -	\$ -
2028	Plant 22	Well	\$ -	\$ -	\$ -
2028	Plant 4	Booster Pump Station	\$ -	\$ -	\$ -
2028	Plant 4	General	\$ -	\$ -	\$ -
2028	Plant 4	Reservoir	\$ -	\$ 8,351	\$ 8,351
2028	Plant 4	Treatment Plant	\$ -	\$ -	\$ -
2028	Plant 4	Well	\$ 32,703	\$ 8,090	\$ 40,792
2028	System	Well	\$ -	\$ -	\$ -
2028	City-Wide	General	\$ -	\$ 26,095	\$ 26,095
2029	Plant 13	Booster Pump Station	\$ 89,823	\$ -	\$ 89,823
2029	Plant 13	General	\$ -	\$ -	\$ -
2029	Plant 13	Reservoir	\$ -	\$ 12,526	\$ 12,526
2029	Plant 13	Treatment Plant	\$ 18,535	\$ 63	\$ 18,598
2029	Plant 13	Well	\$ -	\$ -	\$ -
2029	Plant 22	General	\$ -	\$ -	\$ -
2029	Plant 22	Reservoir	\$ -	\$ -	\$ -
2029	Plant 22	Well	\$ 91,249	\$ 9,741	\$ 100,990
2029	Plant 4	Booster Pump Station	\$ 44,911	\$ 63,749	\$ 108,661
2029	Plant 4	General	\$ -	\$ -	\$ -
2029	Plant 4	Reservoir	\$ -	\$ 20,876	\$ 20,876
2029	Plant 4	Treatment Plant	\$ 120,206	\$ 4,530	\$ 124,736
2029	Plant 4	Well	\$ 26,947	\$ 1,044	\$ 27,991
2029	System	Well	\$ 66,298	\$ 1,096	\$ 67,394
2029	City-Wide	General	\$ 285,152	\$ -	\$ 285,152
2030	Plant 13	Booster Pump Station	\$ 206,219	\$ -	\$ 206,219
2030	Plant 13	General	\$ -	\$ -	\$ -
2030	Plant 13	Reservoir	\$ -	\$ 12,526	\$ 12,526
2030	Plant 13	Treatment Plant	\$ -	\$ 63	\$ 63
2030	Plant 13	Well	\$ -	\$ -	\$ -
2030	Plant 22	General	\$ -	\$ -	\$ -
2030	Plant 22	Reservoir	\$ -	\$ -	\$ -
2030	Plant 22	Well	\$ 349,511	\$ 9,741	\$ 359,252
2030	Plant 4	Booster Pump Station	\$ -	\$ 63,749	\$ 63,749
2030	Plant 4	General	\$ -	\$ -	\$ -
2030	Plant 4	Reservoir	\$ 110,140	\$ 20,876	\$ 131,016
2030	Plant 4	Treatment Plant	\$ -	\$ 4,530	\$ 4,530
2030	Plant 4	Well	\$ -	\$ 1,044	\$ 1,044
2030	System	Well	\$ -	\$ 1,096	\$ 1,096
2030	City-Wide	General	\$ -	\$ -	\$ -
2031	Plant 13	Booster Pump Station	\$ 36,302	\$ 1,044	\$ 37,346
2031	Plant 13	General	\$ -	\$ -	\$ -
2031	Plant 13	Reservoir	\$ -	\$ 783	\$ 783
2031	Plant 13	Treatment Plant	\$ -	\$ -	\$ -
2031	Plant 13	Well	\$ -	\$ -	\$ -
2031	Plant 22	General	\$ -	\$ -	\$ -

Proposed Implementation Year	Plant	Asset Category	Replacement Cost	Rehabilitation Cost	Total Cost (Adjusted to Year of Implementation)
2031	Plant 22	Reservoir	\$ -	\$ -	\$ -
2031	Plant 22	Well	\$ 75,629	\$ 26,095	\$ 101,725
2031	Plant 4	Booster Pump Station	\$ 123,881	\$ -	\$ 123,881
2031	Plant 4	General	\$ -	\$ -	\$ -
2031	Plant 4	Reservoir	\$ 71,470	\$ -	\$ 71,470
2031	Plant 4	Treatment Plant	\$ -	\$ 4,657	\$ 4,657
2031	Plant 4	Well	\$ 207,905	\$ -	\$ 207,905
2031	System	Well	\$ 193,611	\$ -	\$ 193,611
2031	City-Wide	General	\$ -	\$ 26,095	\$ 26,095
2032	Plant 13	Booster Pump Station	\$ -	\$ -	\$ -
2032	Plant 13	General	\$ -	\$ -	\$ -
2032	Plant 13	Reservoir	\$ -	\$ 8,351	\$ 8,351
2032	Plant 13	Treatment Plant	\$ -	\$ 10,438	\$ 10,438
2032	Plant 13	Well	\$ -	\$ -	\$ -
2032	Plant 22	General	\$ -	\$ -	\$ -
2032	Plant 22	Reservoir	\$ -	\$ -	\$ -
2032	Plant 22	Well	\$ 3,895	\$ -	\$ 3,895
2032	Plant 4	Booster Pump Station	\$ 228,254	\$ 3,434	\$ 231,688
2032	Plant 4	General	\$ -	\$ -	\$ -
2032	Plant 4	Reservoir	\$ 77,898	\$ 8,685	\$ 86,583
2032	Plant 4	Treatment Plant	\$ -	\$ -	\$ -
2032	Plant 4	Well	\$ 278,097	\$ 26,816	\$ 304,913
2032	System	Well	\$ 98,152	\$ 778	\$ 98,930
2032	City-Wide	General	\$ -	\$ 26,095	\$ 26,095
2033	Plant 13	Booster Pump Station	\$ -	\$ 31,315	\$ 31,315
2033	Plant 13	General	\$ -	\$ -	\$ -
2033	Plant 13	Reservoir	\$ -	\$ 12,526	\$ 12,526
2033	Plant 13	Treatment Plant	\$ -	\$ 27,306	\$ 27,306
2033	Plant 13	Well	\$ 58,572	\$ -	\$ 58,572
2033	Plant 22	General	\$ -	\$ -	\$ -
2033	Plant 22	Reservoir	\$ -	\$ -	\$ -
2033	Plant 22	Well	\$ -	\$ 26,095	\$ 26,095
2033	Plant 4	Booster Pump Station	\$ 1,765	\$ 52	\$ 1,817
2033	Plant 4	General	\$ -	\$ -	\$ -
2033	Plant 4	Reservoir	\$ -	\$ 13,658	\$ 13,658
2033	Plant 4	Treatment Plant	\$ -	\$ -	\$ -
2033	Plant 4	Well	\$ -	\$ 3,241	\$ 3,241
2033	System	Well	\$ -	\$ -	\$ -
2033	City-Wide	General	\$ -	\$ 26,095	\$ 26,095
2034	Plant 13	Booster Pump Station	\$ -	\$ 7,829	\$ 7,829
2034	Plant 13	General	\$ -	\$ -	\$ -
2034	Plant 13	Reservoir	\$ -	\$ -	\$ -
2034	Plant 13	Treatment Plant	\$ -	\$ 7,607	\$ 7,607
2034	Plant 13	Well	\$ -	\$ -	\$ -
2034	Plant 22	General	\$ -	\$ -	\$ -
2034	Plant 22	Reservoir	\$ -	\$ -	\$ -
2034	Plant 22	Well	\$ -	\$ 10,772	\$ 10,772
2034	Plant 4	Booster Pump Station	\$ 26,032	\$ 2,364	\$ 28,397
2034	Plant 4	General	\$ -	\$ -	\$ -
2034	Plant 4	Reservoir	\$ 4,338,725	\$ 2,672	\$ 4,341,397
2034	Plant 4	Treatment Plant	\$ 203,036	\$ 8,571	\$ 211,607
2034	Plant 4	Well	\$ 77,684	\$ 49,581	\$ 127,265
2034	System	Well	\$ -	\$ -	\$ -
2034	City-Wide	General	\$ -	\$ 26,095	\$ 26,095

Proposed Implementation Year	Plant	Asset Category	Replacement Cost	Rehabilitation Cost	Total Cost (Adjusted to Year of Implementation)
2035	Plant 13	Booster Pump Station	\$ 18,557	\$ 31,565	\$ 50,122
2035	Plant 13	General	\$ -	\$ -	\$ -
2035	Plant 13	Reservoir	\$ 655,437	\$ 4,175	\$ 659,612
2035	Plant 13	Treatment Plant	\$ -	\$ 1,096	\$ 1,096
2035	Plant 13	Well	\$ -	\$ -	\$ -
2035	Plant 22	General	\$ -	\$ -	\$ -
2035	Plant 22	Reservoir	\$ -	\$ -	\$ -
2035	Plant 22	Well	\$ 186,416	\$ 3,622	\$ 190,039
2035	Plant 4	Booster Pump Station	\$ 3,745	\$ 46,972	\$ 50,717
2035	Plant 4	General	\$ -	\$ -	\$ -
2035	Plant 4	Reservoir	\$ -	\$ 7,829	\$ 7,829
2035	Plant 4	Treatment Plant	\$ -	\$ 1,936	\$ 1,936
2035	Plant 4	Well	\$ -	\$ -	\$ -
2035	System	Well	\$ -	\$ -	\$ -
2035	City-Wide	General	\$ -	\$ 26,095	\$ 26,095
2036	Plant 13	Booster Pump Station	\$ 113,364	\$ 8,872	\$ 122,237
2036	Plant 13	General	\$ -	\$ -	\$ -
2036	Plant 13	Reservoir	\$ -	\$ 13,309	\$ 13,309
2036	Plant 13	Treatment Plant	\$ -	\$ 63	\$ 63
2036	Plant 13	Well	\$ -	\$ -	\$ -
2036	Plant 22	General	\$ -	\$ -	\$ -
2036	Plant 22	Reservoir	\$ -	\$ -	\$ -
2036	Plant 22	Well	\$ 112,224	\$ 1,912	\$ 114,137
2036	Plant 4	Booster Pump Station	\$ 55,235	\$ 16,777	\$ 72,013
2036	Plant 4	General	\$ -	\$ -	\$ -
2036	Plant 4	Reservoir	\$ -	\$ 13,048	\$ 13,048
2036	Plant 4	Treatment Plant	\$ -	\$ -	\$ -
2036	Plant 4	Well	\$ 175,351	\$ 1,044	\$ 176,394
2036	System	Well	\$ -	\$ 1,618	\$ 1,618
2036	City-Wide	General	\$ -	\$ 26,095	\$ 26,095

Proposed Replacement Schedule

Proposed Implementation Year	Facility	Asset Type	Asset	Asset Description
2017	PLANT 22	WELL	WELL 22A	I&C_SURFACE_FLOWMETER
2017	PLANT 22	WELL	WELL 22A	MECHANICAL_SURFACE_VAULT
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_EXTERIOR_CONTROL_PANEL
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_STARTER_MAGNETIC
2017	PLANT 22	WELL	WELL 22A	MECHANICAL_INTERIOR_PUMP_ASSEMBLY_WELL
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_EXTERIOR_LIGHT_FIXTURE
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_CONTROL_PANEL
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_CONTROL_PANEL
2017	PLANT 4	RESERVOIR	TANK 3	ARCHITECTURAL_EXTERIOR_LADDER_STEEL
2017	PLANT 4	RESERVOIR	TANK 3	ARCHITECTURAL_INTERIOR_LADDER_STAINLESS STEEL
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_PUMP_BOOSTER 8
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_MOTOR_BOOSTER 8
2017	PLANT 4	RESERVOIR	TANK 3	ELECTRICAL_EXTERIOR_STARTER_BOOSTER 8 MAGNETIC
2017	PLANT 4	RESERVOIR	TANK 3	I&C_EXTERIOR_PRESSURE_INDICATOR
2017	PLANT 4	WELL	WELL 27	I&C_EXTERIOR_TRANSMITTER_FLOW
2017	PLANT 4	WELL	WELL 27	ELECTRICAL_EXTERIOR_STARTER_SOFT
2017	PLANT 4	WELL	WELL 27	MECHANICAL_EXTERIOR_CHLORINE_INJECTION_SYSTEM_AND_CONTROL_PANELS
2017	PLANT 4	WELL	WELL 27	MECHANICAL_INTERIOR_PUMP_CHEMICAL_METERING
2017	PLANT 4	WELL	WELL 27	ELECTRICAL_EXTERIOR_SWITCHBOARD_GENERATOR
2017	PLANT 4	WELL	WELL 27	ELECTRICAL_INTERIOR_SECURITY_DETECTOR
2017	PLANT 4	WELL	WELL 27	MECHANICAL_EXTERIOR_VALVE_PLUG
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_PUMP_BOOSTER 7
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_PUMP_BOOSTER 2
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_PUMP_BOOSTER 3
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_PUMP_BOOSTER 6
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_PUMP_BOOSTER 4
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_PUMP_BOOSTER 5
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_MOTOR_BOOSTER 7
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_MOTOR_BOOSTER 6
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_MOTOR_BOOSTER 4
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_BOOSTER 7 MAGNETIC
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_BOOSTER 2 MAGNETIC
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_BOOSTER 6 MAGNETIC
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_BOOSTER 4 MAGNETIC
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_VALVE_GATE
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_VALVE_GATE
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_VALVE_GATE
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_VALVE_CHECK
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_VALVE_CHECK
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_PUMP_SUMP
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_PLUG
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ARCHITECTURAL_EXTERIOR_ROOF_COVERING_BUR ASPHALT
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	HVAC_EXTERIOR_ROOF_VENTILATOR
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	HVAC_EXTERIOR_LOUVER
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	HVAC_EXTERIOR_EXHAUST FAN
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ARCHITECTURAL_INTERIOR_LADDER_RUNG_GALVANIZED STEEL
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_INTERIOR_CONTROL_PANEL_BOOSTER PUMP STATION
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_INTERIOR_LIGHT_FIXTURE
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_INTERIOR_LIGHT_FIXTURE
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_INTERIOR_LIGHTING/DISTRIBUTION PANEL
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_PUMP_ASSEMBLY_WELL
2018	SYSTEM	WELL	WELL 18	MECHANICAL_EXTERIOR_PUMP_WELL
2018	SYSTEM	WELL	WELL 17	MECHANICAL_EXTERIOR_PUMP_WELL

Proposed Implementation Year	Facility	Asset Type	Asset	Asset Description
2018	SYSTEM	WELL	WELL 17	MECHANICAL_EXTERIOR_MOTOR_WELL
2018	SYSTEM	WELL	WELL 17	MECHANICAL_EXTERIOR_PUMP_ASSEMBLY_WELL
2018	SYSTEM	WELL	WELL 18	ELECTRICAL_EXTERIOR_GENERATOR_CONNECTION_BOX
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_MOTOR_STARTER
2018	SYSTEM	WELL	WELL 17	MECHANICAL_SUBSURFACE_TANK_PNEUMATIC
2018	SYSTEM	WELL	WELL 17	MECHANICAL_EXTERIOR_TANK_PNEUMATIC
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_DISTRIBUTION_PANEL
2018	SYSTEM	WELL	WELL 17	MECHANICAL_EXTERIOR_VALVE_CLA
2018	SYSTEM	WELL	WELL 18	ELECTRICAL_INTERIOR_CONTROL_PANEL
2018	SYSTEM	WELL	WELL 18	ELECTRICAL_INTERIOR_DISTRIBUTION_PANEL
2018	SYSTEM	WELL	WELL 18	PLUMBING_EXTERIOR_EMERGENCY_EYEWASH
2018	SYSTEM	WELL	WELL 17	MECHANICAL_INTERIOR_PUMP_CHLORINE
2018	SYSTEM	WELL	WELL 18	MECHANICAL_INTERIOR_PUMP_CHLORINE
2018	SYSTEM	WELL	WELL 18	MECHANICAL_EXTERIOR_VALVE
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_DISCONNECT_SWITCH
2018	SYSTEM	WELL	WELL 17	MECHANICAL_INTERIOR_PUMP_PHOSPHATE
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_DISCONNECT_SWITCH
2018	SYSTEM	WELL	WELL 18	MECHANICAL_INTERIOR_PUMP_PHOSPHATE
2018	SYSTEM	WELL	WELL 17	I&C_EXTERIOR_FLOW_METER
2018	SYSTEM	WELL	WELL 18	I&C_INTERIOR_FLOW_METER
2018	SYSTEM	WELL	WELL 18	MECHANICAL_INTERIOR_VALVE
2018	SYSTEM	WELL	WELL 18	I&C_EXTERIOR_FLOW_METER
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_METER_PANEL
2018	SYSTEM	WELL	WELL 18	ELECTRICAL_INTERIOR_METER_PANEL
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_JUNCTION_BOX
2018	SYSTEM	WELL	WELL 18	ELECTRICAL_INTERIOR_JUNCTION_BOX
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_LIGHT_FIXTURE
2018	SYSTEM	WELL	WELL 2A	PLUMBING_EXTERIOR_EMERGENCY_EYEWASH
2018	SYSTEM	WELL	WELL 2A	ARCHITECTURAL_EXTERIOR_ROOF_COVERING_CERAMICTILE
2018	SYSTEM	WELL	WELL 2A	ELECTRICAL_INTERIOR_CONTROL_PANEL
2018	SYSTEM	WELL	WELL 2A	ELECTRICAL_INTERIOR_DISCONNECT_SWITCH
2018	SYSTEM	WELL	WELL 2A	ELECTRICAL_INTERIOR_DISTRIBUTION_PANEL
2018	SYSTEM	WELL	WELL 2A	ELECTRICAL_INTERIOR_JUNCTION_BOX
2018	SYSTEM	WELL	WELL 2A	ELECTRICAL_INTERIOR_LIGHT_FIXTURE
2018	SYSTEM	WELL	WELL 2A	ELECTRICAL_INTERIOR_METER_PANEL
2018	SYSTEM	WELL	WELL 2A	ELECTRICAL_INTERIOR_MOTOR_STARTER
2018	SYSTEM	WELL	WELL 2A	I&C_EXTERIOR_FLOW_METER
2018	SYSTEM	WELL	WELL 2A	MECHANICAL_EXTERIOR_MOTOR_WELL
2018	SYSTEM	WELL	WELL 2A	MECHANICAL_EXTERIOR_PUMP_WELL
2018	SYSTEM	WELL	WELL 2A	MECHANICAL_EXTERIOR_PUMP_ASSEMBLY_WELL
2018	SYSTEM	WELL	WELL 2A	MECHANICAL_INTERIOR_VALVE_CLA
2018	SYSTEM	WELL	WELL 2A	MECHANICAL_SUBSURFACE_TANK_PNEUMATIC
2018	PLANT 13	WELL	WELL 13A	ELECTRICAL_EXTERIOR_PLCCABINET
2018	PLANT 13	WELL	WELL 13A	I&C_EXTERIOR_FLOW_METER
2018	PLANT 13	WELL	WELL 13A	MECHANICAL_INTERIOR_PUMP_CHLORINE
2018	PLANT 13	WELL	WELL 13A	MECHANICAL_INTERIOR_PUMP_PHOSPHATE
2018	PLANT 4	WELL	WELL 4	MECHANICAL_EXTERIOR_MOTOR_WELL
2018	PLANT 4	WELL	WELL 10	MECHANICAL_EXTERIOR_PUMP_WELL
2018	PLANT 4	WELL	WELL 18	MECHANICAL_EXTERIOR_PUMP_ASSEMBLY_WELL
2018	SYSTEM	WELL	WELL 18	MECHANICAL_INTERIOR_PUMP_WELL
2019	CITY-WIDE	GENERAL	GENERAL	ELECTRICAL_INTERIOR_SCADA_OPERATIONS_CENTER_AND_SYSTEMS
2019	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_CHEMICAL_FEED_SYSTEM_PANEL
2019	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_STATIC MIXER AND INJECTION ASSEMBLY
2019	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_INTERIOR_MOTOR_BACKWASH

Proposed Implementation Year	Facility	Asset Type	Asset	Asset Description
2019	PLANT 4	TREATMENT PLANT	WELL 27	ELECTRICAL_EXTERIOR_STARTER_MAGNETIC
2019	PLANT 4	WELL	WELL 10	MECHANICAL_EXTERIOR_MOTOR_WELL
2019	SYSTEM	WELL	WELL 18	MECHANICAL_INTERIOR_MOTOR_WELL
2020	PLANT 4	WELL	WELL 4	STRUCTURAL_INTERIOR_WELL HEAD AND PUMPBASE
2020	PLANT 4	WELL	WELL 4	ELECTRICAL_EXTERIOR_SWITCHBOARD
2020	PLANT 4	WELL	WELL 4	STRUCTURAL_EXTERIOR_BUILDING_CHLORINE/ELECTRICAL_CONCRETE MASONARY
2020	PLANT 4	WELL	WELL 4	MECHANICAL_EXTERIOR_PUMP_WELL
2020	PLANT 4	WELL	WELL 4	MECHANICAL_EXTERIOR_CHLORINE INJECTION SYSTEM
2020	PLANT 4	WELL	WELL 10	MECHANICAL_EXTERIOR_CHLORINE INJECTION SYSTEM
2020	PLANT 4	WELL	WELL 4	MECHANICAL_EXTERIOR_PUMP ASSEMBLY_WELL
2020	PLANT 4	WELL	WELL 4	MECHANICAL_INTERIOR_PUMP_CHEMICAL METERING
2020	PLANT 4	WELL	WELL 10	MECHANICAL_EXTERIOR_PUMP_CHEMICAL METERING
2020	PLANT 4	WELL	WELL 4	MECHANICAL_EXTERIOR_VALVE_CLA
2020	PLANT 4	WELL	WELL 10	ELECTRICAL_EXTERIOR_GENERATOR CONNECTION BOX
2020	PLANT 4	WELL	WELL 4	MECHANICAL_INTERIOR_TANK_CHEMICAL
2020	PLANT 4	WELL	WELL 10	MECHANICAL_INTERIOR_TANK_CHEMICAL
2020	PLANT 4	WELL	WELL 10	ELECTRICAL_INTERIOR_CONTROL PANEL
2020	PLANT 4	WELL	WELL 4	ELECTRICAL_INTERIOR_DISTRIBUTION PANEL
2020	PLANT 4	WELL	WELL 4	MECHANICAL_EXTERIOR_VALVE_CLA
2020	PLANT 4	WELL	WELL 10	ELECTRICAL_INTERIOR_CONTROL PANEL
2020	PLANT 4	WELL	WELL 10	ELECTRICAL_INTERIOR_DISTRIBUTION PANEL
2020	PLANT 4	WELL	WELL 15A	ELECTRICAL_EXTERIOR_STARTER_SOFT
2020	PLANT 4	WELL	WELL 15A	MECHANICAL_INTERIOR_PUMP_CHLORINE
2020	PLANT 4	WELL	WELL 15A	MECHANICAL_EXTERIOR_CHLORINE INJECTION SYSTEM
2020	PLANT 4	WELL	WELL 15A	MECHANICAL_INTERIOR_TANK_CHEMICAL
2020	PLANT 4	WELL	WELL 15A	I&C_EXTERIOR_FLOW METER
2020	PLANT 4	WELL	WELL 4	ELECTRICAL_INTERIOR_DISCONNECT SWITCH
2020	PLANT 4	WELL	WELL 4	PLUMBING_EXTERIOR_EMERGENCY EYEWASH
2020	PLANT 4	WELL	WELL 10	ELECTRICAL_INTERIOR_DISCONNECT SWITCH
2020	PLANT 4	WELL	WELL 10	PLUMBING_EXTERIOR_EMERGENCY EYEWASH
2020	PLANT 4	WELL	WELL 4	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2020	PLANT 4	WELL	WELL 10	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2020	PLANT 4	WELL	WELL 4	ELECTRICAL_EXTERIOR_STARTER_MAGNETIC
2020	PLANT 4	WELL	WELL 4	I&C_EXTERIOR_FLOW METER
2020	PLANT 4	WELL	WELL 10	ELECTRICAL_EXTERIOR_STARTER_MAGNETIC
2020	PLANT 4	WELL	WELL 4	ELECTRICAL_INTERIOR_LIGHT FIXTURE
2020	PLANT 4	WELL	WELL 10	ELECTRICAL_INTERIOR_LIGHT FIXTURE
2020	PLANT 4	RESERVOIR	TANK 3	ELECTRICAL_EXTERIOR_VARIABLE FREQUENCY DRIVE BOOSTER 8
2020	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_MOTOR_BOOSTER 3
2020	PLANT 4	WELL	WELL 15A	MECHANICAL_EXTERIOR_PUMP_WELL
2020	PLANT 4	WELL	WELL 15A	MECHANICAL_EXTERIOR_PUMP ASSEMBLY_WELL
2021	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	I&C_EXTERIOR_TRANSMITTER_PRESSURE
2021	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	I&C_EXTERIOR_TRANSMITTER
2021	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	I&C_EXTERIOR_TRANSMITTER
2021	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	I&C_EXTERIOR_TRANSMITTER_FLOW
2021	PLANT 13	TREATMENT PLANT	EAST SITE	MECHANICAL_EXTERIOR_TANK_SURGE
2021	PLANT 13	RESERVOIR	TANK 1	MECHANICAL_EXTERIOR_TANK_RESERVOIR_STEEL
2021	PLANT 13	RESERVOIR	TANK 2	MECHANICAL_EXTERIOR_TANK_RESERVOIR_STEEL
2021	PLANT 13	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_TANK_RESERVOIR_STEEL
2021	PLANT 13	TREATMENT PLANT	ELECTRICAL BUILDING	ELECTRICAL_INTERIOR_LIGHT FIXTURE
2021	PLANT 22	WELL	WELL 22A	I&C_EXTERIOR_TRANSMITTER
2021	PLANT 22	WELL	WELL 22A	I&C_EXTERIOR_TRANSMITTER
2021	PLANT 22	WELL	WELL 22A	I&C_EXTERIOR_TRANSMITTER
2021	PLANT 22	WELL	WELL 22A	ARCHITECTURAL_EXTERIOR_ROOF COVERING_CERAMIC TILE

Proposed Implementation Year	Facility	Asset Type	Asset	Asset Description
2025	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_MAGNETIC
2025	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_SPACE HEATER
2025	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_SPACE HEATER
2025	PLANT 13	TREATMENT PLANT	ELECTRICAL BUILDING	ELECTRICAL_INTERIOR_LIGHT FIXTURE_EMERGENCY
2025	PLANT 22	WELL	WELL 22A	MECHANICAL_INTERIOR_MOTOR_WELL
2025	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_LIGHT FIXTURE_EMERGENCY
2025	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_SWITCHBOARD
2025	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_BOOSTER_MAGNETIC
2025	PLANT 4	WELL	WELL 10	STRUCTURAL_EXTERIOR_BUILDING_CHLORINE/ELECTRICAL_CONCRETE MASONARY
2026	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_MAGNETIC
2026	PLANT 4	WELL	WELL 15A	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2026	PLANT 4	WELL	WELL 15A	MECHANICAL_EXTERIOR_VALVE_CLA
2026	PLANT 4	WELL	WELL 15A	ELECTRICAL_INTERIOR_CONTROL PANEL
2026	SYSTEM	WELL	WELL 18	STRUCTURAL_EXTERIOR_BUILDING_CONCRETE
2027	PLANT 4	RESERVOIR	TANK 3	ARCHITECTURAL_EXTERIOR_ROOF COVERING_BUR TANK 3_ASPHALT
2027	PLANT 4	WELL	WELL 27	MECHANICAL_EXTERIOR_MOTOR_WELL
2027	PLANT 4	WELL	WELL 27	HVAC_INTERIOR_EXHAUST FAN
2027	PLANT 4	WELL	WELL 4	STRUCTURAL_INTERIOR_WELL 4
2027	PLANT 4	WELL	WELL 4	STRUCTURAL_EXTERIOR_WELL 10
2027	PLANT 4	WELL	WELL 10	MECHANICAL_EXTERIOR_VALVE_CLA
2028	PLANT 13	WELL	WELL 13A	MECHANICAL_EXTERIOR_VALVE_CLA
2029	PLANT 13	TREATMENT PLANT	CHLORINE CONTAINER ENCLOSURE	I&C_EXTERIOR_ANALYZER_CHLORINE
2029	PLANT 13	TREATMENT PLANT	CHLORINE CONTAINER ENCLOSURE	MECHANICAL_INTERIOR_PUMP_CHLORINE
2029	PLANT 4	TREATMENT PLANT	WELL 27	STRUCTURAL_EXTERIOR_BUILDING_BACKWASH_FIBERGLASS
2029	SYSTEM	WELL	WELL 17	ELECTRICAL_EXTERIOR_GENERATOR CONNECTION BOX
2029	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_CONTROL PANEL
2030	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_CONTROL_STEEL
2030	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2030	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2030	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_PUMP_BOOSTER
2030	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_CONTROL_STEEL
2030	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2030	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2030	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_PUMP_BOOSTER
2030	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_CONTROL_STEEL
2030	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2030	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2030	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_PUMP_BOOSTER
2030	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY_STEEL
2030	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2030	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2030	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2030	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2030	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_TANK_PNEUMATIC
2030	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_AUTOMATIC TRANSFERS SWITCH
2030	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_MOTOR CONTROL CENTER
2030	PLANT 22	WELL	WELL 22A	I&C_INTERIOR_FLOW METER
2030	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_CONTROL PANEL
2030	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_CONTROL PANEL
2030	PLANT 4	WELL	WELL 10	STRUCTURAL_EXTERIOR_WELL HEAD AND PUMP BASE
2031	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_PUMP_BOOSTER
2031	PLANT 4	WELL	WELL 15A	ELECTRICAL_INTERIOR_DISCONNECT SWITCH
2031	PLANT 4	WELL	WELL 15A	ELECTRICAL_INTERIOR_DISTRIBUTION PANEL
2031	PLANT 4	WELL	WELL 15A	ELECTRICAL_INTERIOR_LIGHT FIXTURE
2031	PLANT 4	WELL	WELL 15A	ELECTRICAL_INTERIOR_JUNCTION BOX
2031	PLANT 4	WELL	WELL 15A	ELECTRICAL_INTERIOR_METER PANEL

Proposed Implementation Year	Facility	Asset Type	Asset	Asset Description
2031	SYSTEM	WELL	WELL 18	STRUCTURAL_INTERIOR_WELL 18
2031	SYSTEM	WELL	WELL 18	STRUCTURAL_INTERIOR_WELL HEAD AND PUMPBASE
2032	PLANT 4	WELL	WELL 27	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2032	PLANT 4	WELL	WELL 27	MECHANICAL_EXTERIOR_VALVE_CLA
2032	PLANT 4	WELL	WELL 27	MECHANICAL_INTERIOR_TANK_CHEMICAL_HDXLPE
2032	PLANT 4	WELL	WELL 27	ELECTRICAL_EXTERIOR_LIGHT FIXTURE_ALUMINIUM
2032	SYSTEM	WELL	WELL 18	ELECTRICAL_INTERIOR_DISCONNECTSWITCH
2032	SYSTEM	WELL	WELL 18	ELECTRICAL_INTERIOR_MOTORSTARTER
2034	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_CLA
2034	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2034	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2034	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_MIXER
2034	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_BALL
2034	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_GATE
2034	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2034	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_TANK_CHEMICAL_POLYETHYLENE
2034	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_TANK_CHEMICAL_POLYETHYLENE
2034	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_TANK_CHEMICAL_POLYETHYLENE
2034	PLANT 4	TREATMENT PLANT	WELL 27	ARCHITECTURAL_EXTERIOR_ROOF COVERING_STANDING SEAM METAL
2034	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_GATE
2034	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2034	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_MIXER
2034	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_CONTROL
2034	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2034	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_INTERIOR_VALVE_CHECK
2034	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_INTERIOR_VALVE_GATE
2034	PLANT 4	TREATMENT PLANT	WELL 27	ELECTRICAL_EXTERIOR_LIGHT FIXTURE
2034	PLANT 4	RESERVOIR	TANK 1	MECHANICAL_EXTERIOR_TANK_RESERVOIR_STEEL
2034	PLANT 4	RESERVOIR	TANK 2	MECHANICAL_EXTERIOR_TANK_RESERVOIR_STEEL
2035	PLANT 13	RESERVOIR	TANK 5	MECHANICAL_EXTERIOR_TANK_RESERVOIR_STEEL
2035	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_TRANSFORMER
2036	PLANT 4	WELL	WELL 15A	ELECTRICAL_EXTERIOR_SWITCHBOARD

Proposed Rehabilitation Schedule (First Round)

Proposed Implementation Year	Facility	Asset Type	Asset	Asset Description
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_MOTOR
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_MAGNETIC
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_CONTROL_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_PUMP_BOOSTER
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_MOTOR
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_MAGNETIC
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_CONTROL_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_PUMP_BOOSTER
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_MOTOR
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_MAGNETIC
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_CONTROL_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_PUMP_BOOSTER
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_MOTOR
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_MAGNETIC
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	I&C_EXTERIOR_FLOW_METER_PROPPELLER
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	I&C_EXTERIOR_TRANSMITTER_PRESSURE
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	I&C_EXTERIOR_TRANSMITTER
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	I&C_EXTERIOR_TRANSMITTER
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	I&C_EXTERIOR_TRANSMITTER_FLOW
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_MOTOR
2017	PLANT 13	GENERAL	GENERAL	ELECTRICAL_EXTERIOR_PIPES AND FITTINGS_PLANT 13
2017	PLANT 13	GENERAL	GENERAL	ELECTRICAL_EXTERIOR_ELECTRICAL CONDUIT SYSTEM_PLANT 13
2017	PLANT 13	WELL 13A	WELL 13A	ELECTRICAL_EXTERIOR_MOTOR CONTROL CENTER
2017	PLANT 13	WELL 13A	WELL 13A	ELECTRICAL_EXTERIOR_PL_CABINET
2017	PLANT 13	WELL 13A	WELL 13A	I&C_EXTERIOR_FLOW_METER
2017	PLANT 13	TREATMENT PLANT	CHLORINE CONTAINER ENCLOSURE	I&C_EXTERIOR_ANALYZER_CHLORINE
2017	PLANT 13	TREATMENT PLANT	CHLORINE CONTAINER ENCLOSURE	MECHANICAL_INTERIOR_PUMP_CHLORINE
2017	PLANT 13	TREATMENT PLANT	EAST SITE	ELECTRICAL_EXTERIOR_CCTV
2017	PLANT 13	TREATMENT PLANT	ELECTRICAL BUILDING	ELECTRICAL_INTERIOR_MOTOR CONTROL CENTER
2017	PLANT 13	WELL 13A	ELECTRICAL BUILDING	STRUCTURAL_EXTERIOR_PAD_CONCRETE
2017	PLANT 13	WELL 13A	WELL 13A	MECHANICAL_EXTERIOR_MOTOR_WELL
2017	PLANT 13	WELL 13A	WELL 13A	MECHANICAL_EXTERIOR_PUMP_WELL
2017	PLANT 13	WELL 13A	WELL 13A	MECHANICAL_EXTERIOR_PUMP_ASSEMBLY_WELL
2017	PLANT 13	WELL 13A	WELL 13A	MECHANICAL_EXTERIOR_VALVE_CLA
2017	PLANT 13	WELL 13A	WELL 13A	MECHANICAL_INTERIOR_PUMP_CHLORINE
2017	PLANT 13	WELL 13A	WELL 13A	MECHANICAL_INTERIOR_PUMP_PHOSPHATE
2017	PLANT 13	WELL 13A	WELL 13A	STRUCTURAL_EXTERIOR_WELL 13A
2017	PLANT 13	WELL 13A	WELL 13A	STRUCTURAL_EXTERIOR_WELL HEAD AND PUMP BASE
2017	PLANT 22	RESERVOIR	TANK 22	MECHANICAL_EXTERIOR_MOTOR_RESERVOIR 22
2017	PLANT 22	RESERVOIR	TANK 22	MECHANICAL_EXTERIOR_MOTOR_RESERVOIR 22
2017	PLANT 22	RESERVOIR	TANK 22	MECHANICAL_EXTERIOR_MOTOR_RESERVOIR 22

Proposed Implementation Year	Facility	Asset Type	Asset	Asset Description
2017	PLANT 22	RESERVOIR	TANK 22	MECHANICAL_EXTERIOR_MOTOR_RESERVOIR22
2017	PLANT 22	WELL	WELL 22A	I&C_SUBSURFACE_FLOWMETER
2017	PLANT 22	WELL	WELL 22A	I&C_EXTERIOR_TRANSMITTER
2017	PLANT 22	WELL	WELL 22A	I&C_EXTERIOR_TRANSMITTER
2017	PLANT 22	WELL	WELL 22A	I&C_EXTERIOR_TRANSMITTER
2017	PLANT 22	WELL	WELL 22A	STRUCTURAL_EXTERIOR_PAD_CONCRETE
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_AUTOMATIC TRANSFERSWITCH
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_MOTOR CONTROL CENTER
2017	PLANT 22	WELL	WELL 22A	I&C_INTERIOR_FLOWMETER
2017	PLANT 22	WELL	WELL 22A	STRUCTURAL_EXTERIOR_WELL HEAD AND PUMP BASE
2017	PLANT 22	WELL	WELL 22A	MECHANICAL_INTERIOR_MOTOR_WELL
2017	PLANT 22	WELL	WELL 22A	MECHANICAL_INTERIOR_PUMP_WELL
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_STARTER_MAGNETIC
2017	PLANT 22	WELL	WELL 22A	MECHANICAL_INTERIOR_PUMP ASSEMBLY_WELL
2017	PLANT 22	WELL	WELL 22A	STRUCTURAL_INTERIOR_WELL 22
2017	PLANT 22	WELL	WELL 22A	I&C_INTERIOR_FLOWMETER_PROPELLER
2017	PLANT 22	WELL	WELL 22A	MECHANICAL_INTERIOR_PUMP_CHLORINE
2017	PLANT 22	GENERAL	GENERAL	MECHANICAL_EXTERIOR_PIPES AND FITTINGS_PLANT 22
2017	PLANT 22	GENERAL	GENERAL	ELECTRICAL_EXTERIOR_ELECTRICAL CONDUIT SYSTEM_PLANT 22
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_CONTROL PANEL
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_PLCCABINET
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_TRANSFORMER
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_TANK_RESERVOIR_CONCRETE
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_TANK_UNDERDRAINAGE
2017	PLANT 4	RESERVOIR	TANK 3	ARCHITECTURAL_EXTERIOR_ROOF COVERING_BURTANK 3 ASPHALT
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_MOTOR_BOOSTER 8
2017	PLANT 4	RESERVOIR	TANK 3	ELECTRICAL_EXTERIOR_STARTER_BOOSTER 8 MAGNETIC
2017	PLANT 4	RESERVOIR	TANK 3	I&C_EXTERIOR_PRESSURE INDICATOR
2017	PLANT 4	RESERVOIR	TANK 3	I&C_EXTERIOR_TRANSMITTER_FLOW
2017	PLANT 4	RESERVOIR	TANK 3	STRUCTURAL_EXTERIOR_CONCRETE PAD_CONCRETE
2017	PLANT 4	RESERVOIR	TANK 3	ELECTRICAL_EXTERIOR_VARIABLE FREQUENCY DRIVE_BOOSTER 8
2017	PLANT 4	TREATMENT PLANT	WELL 27	I&C_INTERIOR_ANALYZER_CHLORINE
2017	PLANT 4	TREATMENT PLANT	WELL 27	I&C_INTERIOR_ANALYZER_TURBIDITY
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_CLA
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_CLA
2017	PLANT 4	TREATMENT PLANT	WELL 27	I&C_EXTERIOR_TRANSMITTER_FLOW
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_MIXER
2017	PLANT 4	TREATMENT PLANT	WELL 27	STRUCTURAL_EXTERIOR_FOUNDATION_FILTERVESSEL_CONCRETE
2017	PLANT 4	TREATMENT PLANT	WELL 27	STRUCTURAL_EXTERIOR_FOUNDATION_BACKWASH TANK_CONCRETE
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_TANK_CHEMICAL_POLYETHYLENE
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_TANK_CHEMICAL_POLYETHYLENE
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_TANK_CHEMICAL_POLYETHYLENE
2017	PLANT 4	TREATMENT PLANT	WELL 27	STRUCTURAL_EXTERIOR_BUILDING_CHEMICAL STORAGE ENCLOSURE_CONCRETE
2017	PLANT 4	TREATMENT PLANT	WELL 27	I&C_EXTERIOR_TRANSMITTER_FLOW
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_MIXER
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_INTERIOR_MOTOR_BACKWASH
2017	PLANT 4	TREATMENT PLANT	WELL 27	ELECTRICAL_EXTERIOR_STARTER_MAGNETIC
2017	PLANT 4	TREATMENT PLANT	WELL 27	I&C_INTERIOR_TRANSMITTER_PRESSURE
2017	PLANT 4	TREATMENT PLANT	WELL 27	I&C_INTERIOR_TRANSMITTER_PRESSURE
2017	PLANT 4	TREATMENT PLANT	WELL 27	ELECTRICAL_INTERIOR_DISCONNECT SWITCH
2017	PLANT 4	TREATMENT PLANT	WELL 27	I&C_EXTERIOR_TRANSMITTER_PRESSURE
2017	PLANT 4	TREATMENT PLANT	WELL 27	I&C_EXTERIOR_ANALYZER_PH

Proposed Implementation Year	Facility	Asset Type	Asset	Asset Description
2017	PLANT 4	TREATMENT PLANT	WELL 17	I&C EXTERIOR_TRANSMITTER_LEVEL
2017	PLANT 4	TREATMENT PLANT	WELL 17	I&C_EXTERIOR_TRANSMITTER_PRESSURE
2017	PLANT 4	TREATMENT PLANT	WELL 17	I&C_EXTERIOR_ANALYZER_PH
2017	PLANT 4	TREATMENT PLANT	WELL 17	ELECTRICAL_EXTERIOR_ELECTRICAL_CONDUIT_SYSTEM_TREATMENT PLANT
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_MOTOR_BOOSTER 7
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_MOTOR_BOOSTER 2
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_MOTOR_BOOSTER 3
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_MOTOR_BOOSTER 6
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_MOTOR_BOOSTER 4
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_MOTOR_BOOSTERS 5
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_BOOSTER 7 MAGNETIC
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_BOOSTER 2 MAGNETIC
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_BOOSTER 3 MAGNETIC
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_BOOSTER 6 MAGNETIC
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_BOOSTER 4 MAGNETIC
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_BOOSTERS MAGNETIC
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	HVAC_EXTERIOR_ROOF_VENTILATOR
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	HVAC_EXTERIOR_LOUVER
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ARCHITECTURAL_INTERIOR_LADDER_RUNG_GALVANIZED STEEL
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_INTERIOR_MOTOR CONTROL CENTER
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_ELECTRICAL_CONDUIT_SYSTEM_PLANT 4
2017	PLANT 4	GENERAL	GENERAL	MECHANICAL_EXTERIOR_PIPES AND FITTINGS_PLANT 4
2017	PLANT 4	GENERAL	GENERAL	ELECTRICAL_INTERIOR_SCADA_OPERATIONS CENTER AND SYSTEMS
2018	CITY-WIDE	GENERAL	GENERAL	ELECTRICAL_INTERIOR_PUMP_ASSEMBLY_WELL
2018	SYSTEM	WELL	WELL 18	MECHANICAL_EXTERIOR_PUMP_ASSEMBLY_WELL
2018	SYSTEM	WELL	WELL 17	MECHANICAL_EXTERIOR_MOTOR_WELL
2018	SYSTEM	WELL	WELL 17	MECHANICAL_EXTERIOR_MOTOR_WELL
2018	SYSTEM	WELL	WELL 17	MECHANICAL_EXTERIOR_PUMP_ASSEMBLY_WELL
2018	SYSTEM	WELL	WELL 18	MECHANICAL_EXTERIOR_PUMP_ASSEMBLY_WELL
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_EXTERIOR_GENERATOR CONNECTION BOX
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_MOTOR STARTER
2018	SYSTEM	WELL	WELL 17	MECHANICAL_EXTERIOR_VALVE_CLA
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_EXTERIOR_GENERATOR CONNECTION BOX
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_EXTERIOR_LIGHT FIXTURE
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_CONTROL PANEL
2018	SYSTEM	WELL	WELL 17	MECHANICAL_INTERIOR_PUMP_CHLORINE
2018	SYSTEM	WELL	WELL 18	MECHANICAL_INTERIOR_PUMP_CHLORINE
2018	SYSTEM	WELL	WELL 17	STRUCTURAL_EXTERIOR_BUILDING_CONCRETE
2018	SYSTEM	WELL	WELL 18	MECHANICAL_EXTERIOR_VALVE
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_DISCONNECT SWITCH
2018	SYSTEM	WELL	WELL 17	MECHANICAL_INTERIOR_PUMP_PHOSPHATE
2018	SYSTEM	WELL	WELL 18	ELECTRICAL_INTERIOR_DISCONNECT SWITCH
2018	SYSTEM	WELL	WELL 17	STRUCTURAL_EXTERIOR_WELL 17
2018	SYSTEM	WELL	WELL 17	STRUCTURAL_EXTERIOR_WELL HEAD AND PUMP BASE
2018	SYSTEM	WELL	WELL 18	MECHANICAL_INTERIOR_PUMP_PHOSPHATE
2018	SYSTEM	WELL	WELL 18	ELECTRICAL_INTERIOR_DISCONNECT SWITCH
2018	SYSTEM	WELL	WELL 17	I&C_EXTERIOR_FLOW METER
2018	SYSTEM	WELL	WELL 18	I&C_INTERIOR_FLOW METER
2018	SYSTEM	WELL	WELL 18	MECHANICAL_INTERIOR_VALVE
2018	SYSTEM	WELL	WELL 18	ELECTRICAL_INTERIOR_MOTOR STARTER
2018	SYSTEM	WELL	WELL 18	I&C_EXTERIOR_FLOW METER
2018	SYSTEM	WELL	WELL 18	MECHANICAL_INTERIOR_MOTOR_WELL
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_METER PANEL
2018	SYSTEM	WELL	WELL 18	MECHANICAL_INTERIOR_PUMP_WELL
2018	SYSTEM	WELL	WELL 18	ELECTRICAL_INTERIOR_METER PANEL

Proposed Implementation Year	Facility	Asset Type	Asset	Asset Description
2020	PLANT 4	WELL	WELL 27	MECHANICAL_EXTERIOR_PUMP_WELL
2020	PLANT 4	WELL	WELL 27	MECHANICAL_EXTERIOR_MOTOR_WELL
2020	PLANT 4	WELL	WELL 27	ELECTRICAL_EXTERIOR_STARTER_SOFT
2020	PLANT 4	WELL	WELL 27	MECHANICAL_EXTERIOR_PUMP_ASSEMBLY_WELL
2020	PLANT 4	WELL	WELL 27	STRUCTURAL_EXTERIOR_WELL 27
2020	PLANT 4	WELL	WELL 27	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2020	PLANT 4	WELL	WELL 27	MECHANICAL_EXTERIOR_VALVE_CLA
2020	PLANT 4	WELL	WELL 27	I&C_EXTERIOR_FLOWMETER_PROPELLER
2020	PLANT 4	WELL	WELL 27	MECHANICAL_INTERIOR_PUMP_CHEMICAL_METERING
2020	PLANT 4	WELL	WELL 27	MECHANICAL_INTERIOR_TANK_CHEMICAL_HDXLPE
2020	PLANT 4	WELL	WELL 27	PLUMBING_INTERIOR_EMERGENCY_EYEWASH_SHOWER
2020	PLANT 4	WELL	WELL 27	I&C_INTERIOR_ANALYZER_CHLORINE
2020	PLANT 4	WELL	WELL 27	ELECTRICAL_EXTERIOR_SWITCHBOARD_GENERATOR
2020	PLANT 4	WELL	WELL 27	ELECTRICAL_EXTERIOR_GENERATOR_EMERGENCY_WELL 27
2020	PLANT 4	WELL	WELL 27	ELECTRICAL_INTERIOR_MOTOR_CONTROL_CENTER
2020	PLANT 4	WELL	WELL 27	ELECTRICAL_INTERIOR_PLCCABINET
2020	PLANT 4	WELL	WELL 27	ELECTRICAL_INTERIOR_SECURITY_DETECTOR
2020	PLANT 4	WELL	WELL 27	ELECTRICAL_INTERIOR_MONITOR
2020	PLANT 4	WELL	WELL 27	HVAC_INTERIOR_EXHAUST_FAN
2020	PLANT 4	WELL	WELL 4	STRUCTURAL_INTERIOR_WELL HEAD AND PUMP BASE
2020	PLANT 4	WELL	WELL 4	MECHANICAL_EXTERIOR_MOTOR_WELL
2020	PLANT 4	WELL	WELL 4	STRUCTURAL_INTERIOR_WELL 4
2020	PLANT 4	WELL	WELL 4	MECHANICAL_EXTERIOR_PUMP_WELL
2020	PLANT 4	WELL	WELL 4	MECHANICAL_EXTERIOR_PUMP_ASSEMBLY_WELL
2020	PLANT 4	WELL	WELL 4	ELECTRICAL_INTERIOR_PLCCABINET
2020	PLANT 4	WELL	WELL 4	MECHANICAL_INTERIOR_PUMP_CHEMICAL_METERING
2020	PLANT 4	WELL	WELL 10	MECHANICAL_INTERIOR_PUMP_CHEMICAL_METERING
2020	PLANT 4	WELL	WELL 4	MECHANICAL_EXTERIOR_VALVE_CLA
2020	PLANT 4	WELL	WELL 4	ELECTRICAL_EXTERIOR_GENERATOR_CONNECTION_BOX
2020	PLANT 4	WELL	WELL 10	STRUCTURAL_SUBSURFACE_VAULT_WELL 8
2020	PLANT 4	WELL	WELL 8	STRUCTURAL_INTERIOR_WELL 8 HEAD AND PUMP BASE
2020	PLANT 4	WELL	WELL 8	MECHANICAL_INTERIOR_PUMP_WELL 8
2020	PLANT 4	WELL	WELL 8	MECHANICAL_INTERIOR_MOTOR_WELL 8
2020	PLANT 4	WELL	WELL 8	ELECTRICAL_INTERIOR_STARTER_MAGNETIC_WELL 8
2020	PLANT 4	WELL	WELL 8	MECHANICAL_INTERIOR_PUMP_ASSEMBLY_WELL 8
2020	PLANT 4	WELL	WELL 8	STRUCTURAL_INTERIOR_WELL 8
2020	PLANT 4	WELL	WELL 8	MECHANICAL_INTERIOR_PUMP_CHLORINE_WELL 8
2020	PLANT 4	WELL	WELL 8	ELECTRICAL_INTERIOR_DISCONNECT_SWITCH_WELL 8
2020	PLANT 4	WELL	WELL 8	ELECTRICAL_INTERIOR_PLCCABINET_WELL 8
2020	PLANT 4	WELL	WELL 8	MECHANICAL_INTERIOR_TANK_CHEMICAL_WELL 8
2020	PLANT 4	WELL	WELL 8	STRUCTURAL_EXTERIOR_WELL HEAD AND PUMP BASE
2020	PLANT 4	WELL	WELL 10	MECHANICAL_EXTERIOR_PUMP_WELL
2020	PLANT 4	WELL	WELL 10	MECHANICAL_EXTERIOR_MOTOR_WELL
2020	PLANT 4	WELL	WELL 10	MECHANICAL_EXTERIOR_PUMP_ASSEMBLY_WELL
2020	PLANT 4	WELL	WELL 10	STRUCTURAL_EXTERIOR_WELL 10
2020	PLANT 4	WELL	WELL 4	MECHANICAL_INTERIOR_TANK_CHEMICAL
2020	PLANT 4	WELL	WELL 10	MECHANICAL_INTERIOR_TANK_CHEMICAL
2020	PLANT 4	WELL	WELL 10	MECHANICAL_EXTERIOR_VALVE_CLA
2020	PLANT 4	WELL	WELL 15A	STRUCTURAL_EXTERIOR_WELL HEAD AND PUMP BASE
2020	PLANT 4	WELL	WELL 15A	MECHANICAL_EXTERIOR_PUMP_WELL
2020	PLANT 4	WELL	WELL 15A	MECHANICAL_EXTERIOR_MOTOR_WELL
2020	PLANT 4	WELL	WELL 15A	ELECTRICAL_EXTERIOR_STARTER_SOFT
2020	PLANT 4	WELL	WELL 15A	MECHANICAL_EXTERIOR_PUMP_ASSEMBLY_WELL

Proposed Implementation Year	Facility	Asset Type	Asset	Asset Description
2020	PLANT 4	WELL	WELL 15A	STRUCTURAL_EXTERIOR_WELL 15A
2020	PLANT 4	WELL	WELL 15A	MECHANICAL_EXTERIOR_VALVE_CLA
2020	PLANT 4	WELL	WELL 15A	MECHANICAL_INTERIOR_PUMP_CHLORINE
2020	PLANT 4	WELL	WELL 15A	ELECTRICAL_INTERIOR_DISCONNECT SWITCH
2020	PLANT 4	WELL	WELL 15A	ELECTRICAL_INTERIOR_PLCCABINET
2020	PLANT 4	WELL	WELL 15A	ELECTRICAL_EXTERIOR_SWITCHBOARD
2020	PLANT 4	WELL	WELL 15A	MECHANICAL_INTERIOR_TANK_CHEMICAL
2020	PLANT 4	WELL	WELL 15A	STRUCTURAL_EXTERIOR_BUILDING_CHLORINE/ELECTRICAL_CONCRETE MASONARY
2020	PLANT 4	WELL	WELL 15A	ELECTRICAL_INTERIOR_JUNCTION BOX
2020	PLANT 4	WELL	WELL 15A	ELECTRICAL_INTERIOR_METERPANEL
2020	PLANT 4	WELL	WELL 15A	I&C_EXTERIOR_FLOWMETER
2020	PLANT 4	WELL	WELL 27	I&C_EXTERIOR_FLOWMETER
2020	PLANT 4	WELL	WELL 8	MECHANICAL_INTERIOR_PUMP_PHOSPHATE-WELL 8
2020	PLANT 4	WELL	WELL 8	I&C_INTERIOR_FLOWMETER_WELL 8
2020	PLANT 4	WELL	WELL 4	ELECTRICAL_INTERIOR_DISCONNECT SWITCH
2020	PLANT 4	WELL	WELL 10	ELECTRICAL_INTERIOR_DISCONNECT SWITCH
2020	PLANT 4	WELL	WELL 4	ELECTRICAL_EXTERIOR_STARTER_MAGNETIC
2020	PLANT 4	WELL	WELL 4	I&C_EXTERIOR_FLOWMETER
2020	PLANT 4	WELL	WELL 10	ELECTRICAL_EXTERIOR_STARTER_MAGNETIC
2020	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_PUMP_SUMP
2020	PLANT 4	RESERVOIR	TANK 1	ARCHITECTURAL_EXTERIOR_LADDER STEEL
2020	PLANT 4	RESERVOIR	TANK 2	ARCHITECTURAL_EXTERIOR_LADDER STEEL
2021	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_SPACE HEATER
2021	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_SPACE HEATER
2021	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_SPACE HEATER
2021	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_SPACE HEATER
2021	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_SPACE HEATER
2021	PLANT 13	TREATMENT PLANT	CHLORINE CONTAINER ENCLOSURE	ARCHITECTURAL_EXTERIOR_ENCLOSURE_METAL
2021	PLANT 13	TREATMENT PLANT	EAST SITE	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2021	PLANT 13	RESERVOIR	TANK 1	ARCHITECTURAL_EXTERIOR_LADDER METAL
2021	PLANT 13	RESERVOIR	TANK 2	ARCHITECTURAL_EXTERIOR_LADDER METAL
2021	PLANT 13	RESERVOIR	TANK 3	ARCHITECTURAL_EXTERIOR_LADDER METAL
2021	PLANT 13	TREATMENT PLANT	EAST SITE	MECHANICAL_EXTERIOR_VALVE_BALL_STEEL
2021	PLANT 13	TREATMENT PLANT	ELECTRICAL BUILDING	ELECTRICAL_EXTERIOR_LIGHT FIXTURE
2021	PLANT 13	RESERVOIR	TANK 4	ARCHITECTURAL_EXTERIOR_LADDER METAL
2021	PLANT 13	RESERVOIR	TANK 5	ARCHITECTURAL_EXTERIOR_LADDER METAL
2021	PLANT 22	WELL	WELL 22A	MECHANICAL_SUBSURFACE_VAULT
2021	PLANT 22	WELL	WELL 22A	MECHANICAL_EXTERIOR_TANK_PNEUMATIC
2021	PLANT 13	TREATMENT PLANT	ELECTRICAL BUILDING	ELECTRICAL_INTERIOR_AUTOMATIC TRANSFER SWITCH
2021	PLANT 13	TREATMENT PLANT	ELECTRICAL BUILDING	ELECTRICAL_INTERIOR_CONTROL PANEL
2021	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_VARIABLE FREQUENCY DRIVE
2021	PLANT 4	RESERVOIR	TANK 3	ARCHITECTURAL_EXTERIOR_ENCLOSURE
2021	PLANT 4	WELL	WELL 27	ELECTRICAL_INTERIOR_LIGHT FIXTURE
2021	PLANT 4	WELL	WELL 27	ELECTRICAL_INTERIOR_LIGHT FIXTURE
2021	PLANT 4	WELL	WELL 27	ELECTRICAL_EXTERIOR_TRANSFORMER
2021	PLANT 4	WELL	WELL 27	ELECTRICAL_INTERIOR_CONTROL PANEL_FILTER
2021	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_GATE
2021	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_GATE
2021	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_CONTROL
2021	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_INTERIOR_VALVE_CHECK
2021	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_INTERIOR_VALVE_GATE
2021	PLANT 4	TREATMENT PLANT	WELL 27	ELECTRICAL_EXTERIOR_LIGHT FIXTURE
2021	PLANT 4	WELL	WELL 15A	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2021	PLANT 4	WELL	WELL 15A	PLUMBING_INTERIOR_EMERGENCY EYEWASH

Proposed Implementation Year	Facility	Asset Type	Asset	Asset Description
2024	PLANT 13	TREATMENT PLANT	EAST SITE	MECHANICAL_EXTERIOR_TANK_SURGE
2024	PLANT 13	TREATMENT PLANT	ELECTRICAL BUILDING	ELECTRICAL_INTERIOR_LIGHT_FIXTURE
2024	PLANT 22	WELL	WELL 22A	ARCHITECTURAL_EXTERIOR_ROOF_COVERING_CERAMICTILE
2024	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_LIGHT_FIXTURE
2024	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VESSEL_FILTER
2024	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_INTERIOR_LIGHT_FIXTURE
2024	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_INTERIOR_LIGHT_FIXTURE
2024	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_INTERIOR_LIGHTING/DISTRIBUTION PANEL
2024	PLANT 4	WELL	WELL 4	ELECTRICAL_INTERIOR_DISTRIBUTION PANEL
2024	PLANT 4	WELL	WELL 10	ELECTRICAL_INTERIOR_DISTRIBUTION PANEL
2024	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_DISTRIBUTION PANEL
2024	SYSTEM	WELL	WELL 18	ELECTRICAL_INTERIOR_DISTRIBUTION PANEL
2024	SYSTEM	WELL	WELL 4	ELECTRICAL_INTERIOR_DISTRIBUTION PANEL
2024	PLANT 4	WELL	WELL 10	ELECTRICAL_INTERIOR_LIGHT_FIXTURE
2024	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_LIGHT_FIXTURE
2024	SYSTEM	WELL	WELL 2A	ARCHITECTURAL_EXTERIOR_ROOF_COVERING_CERAMICTILE
2024	SYSTEM	WELL	WELL 2A	ELECTRICAL_INTERIOR_DISTRIBUTION PANEL
2024	SYSTEM	WELL	WELL 2A	ELECTRICAL_INTERIOR_LIGHT_FIXTURE
2025	PLANT 4	WELL	WELL 27	STRUCTURAL_INTERIOR_CURB_SECONDARY CONTAINMENT_CONCRETE
2025	PLANT 4	WELL	WELL 4	ELECTRICAL_EXTERIOR_SWITCHBOARD
2025	PLANT 4	WELL	WELL 4	STRUCTURAL_EXTERIOR_BUILDING_CHLORINE/ELECTRICAL_CONCRETE MASONRY
2026	PLANT 22	WELL	WELL 22A	STRUCTURAL_INTERIOR_CURB_SECONDARY CONTAINMENT_CONCRETE
2026	PLANT 22	WELL	WELL 22A	STRUCTURAL_INTERIOR_CURB_SECONDARY CONTAINMENT_CONCRETE
2026	PLANT 22	WELL	WELL 22A	STRUCTURAL_EXTERIOR_PARTITION_CONCRETE/MASONRY
2026	PLANT 22	WELL	WELL 22A	STRUCTURAL_INTERIOR_CURB_SECONDARY CONTAINMENT_CONCRETE
2027	SYSTEM	WELL	WELL 17	MECHANICAL_SUBSURFACE_TANK_PNEUMATIC
2027	SYSTEM	WELL	WELL 18	MECHANICAL_EXTERIOR_TANK_PNEUMATIC
2027	PLANT 4	WELL	WELL 4	PLUMBING_EXTERIOR_EMERGENCY EYEWASH
2027	PLANT 4	WELL	WELL 10	PLUMBING_EXTERIOR_EMERGENCY EYEWASH
2027	SYSTEM	WELL	WELL 18	PLUMBING_EXTERIOR_EMERGENCY EYEWASH
2027	SYSTEM	WELL	WELL 2A	PLUMBING_EXTERIOR_EMERGENCY EYEWASH
2027	SYSTEM	WELL	WELL 2A	MECHANICAL_SUBSURFACE_TANK_PNEUMATIC

Proposed Rehabilitation Schedule (Second Round)

Proposed Implementation Year	Facility	Asset Type	Asset	Asset Description
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_MOTOR
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_MAGNETIC
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_CONTROL_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_PUMP_BOOSTER
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_MOTOR
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_MAGNETIC
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_CONTROL_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_PUMP_BOOSTER
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_MOTOR
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_MAGNETIC
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_CONTROL_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_PUMP_BOOSTER
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_MOTOR
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_MAGNETIC
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	I&C_EXTERIOR_FLOWMETER_PROPELLER
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	I&C_EXTERIOR_TRANSMITTER_PRESSURE
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	I&C_EXTERIOR_TRANSMITTER
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	I&C_EXTERIOR_TRANSMITTER
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	I&C_EXTERIOR_TRANSMITTER_FLOW
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_PIPES AND FITTINGS_PLANT 13
2017	PLANT 13	GENERAL	GENERAL	ELECTRICAL_EXTERIOR_ELECTRICAL CONDUIT SYSTEM_PLANT 13
2017	PLANT 13	GENERAL	GENERAL	ELECTRICAL_EXTERIOR_MOTOR CONTROL CENTER
2017	PLANT 13	WELL 13A	WELL 13A	ELECTRICAL_EXTERIOR_PLCCABINET
2017	PLANT 13	WELL 13A	WELL 13A	I&C_EXTERIOR_FLOWMETER
2017	PLANT 13	WELL 13A	WELL 13A	I&C_EXTERIOR_ANALYZER_CHLORINE
2017	PLANT 13	TREATMENT PLANT	CHLORINE CONTAINER ENCLOSURE	MECHANICAL_INTERIOR_PUMP_CHLORINE
2017	PLANT 13	TREATMENT PLANT	EAST SITE	ELECTRICAL_EXTERIOR_CCTV
2017	PLANT 13	TREATMENT PLANT	ELECTRICAL BUILDING	ELECTRICAL_INTERIOR_MOTOR CONTROL CENTER
2017	PLANT 13	TREATMENT PLANT	ELECTRICAL BUILDING	STRUCTURAL_EXTERIOR_PAD_CONCRETE
2017	PLANT 13	WELL 13A	WELL 13A	MECHANICAL_EXTERIOR_MOTOR_WELL
2017	PLANT 13	WELL 13A	WELL 13A	MECHANICAL_EXTERIOR_PUMP_WELL
2017	PLANT 13	WELL 13A	WELL 13A	MECHANICAL_EXTERIOR_PUMP_ASSEMBLY_WELL
2017	PLANT 13	WELL 13A	WELL 13A	MECHANICAL_EXTERIOR_VALVE_CLA
2017	PLANT 13	WELL 13A	WELL 13A	MECHANICAL_INTERIOR_PUMP_CHLORINE
2017	PLANT 13	WELL 13A	WELL 13A	MECHANICAL_INTERIOR_PUMP_PHOSPHATE
2017	PLANT 13	WELL 13A	WELL 13A	STRUCTURAL_EXTERIOR_WELL 13A
2017	PLANT 13	WELL 13A	WELL 13A	STRUCTURAL_EXTERIOR_WELL HEAD AND PUMP BASE
2017	PLANT 22	RESERVOIR	TANK22	MECHANICAL_EXTERIOR_MOTOR_RESERVOIR 22
2017	PLANT 22	RESERVOIR	TANK22	MECHANICAL_EXTERIOR_MOTOR_RESERVOIR 22
2017	PLANT 22	RESERVOIR	TANK22	MECHANICAL_EXTERIOR_MOTOR_RESERVOIR 22
2017	PLANT 22	RESERVOIR	TANK22	MECHANICAL_EXTERIOR_MOTOR_RESERVOIR 22

Proposed Implementation Year	Facility	Asset Type	Asset	Asset Description
2017	PLANT 22	WELL	WELL 22A	I&C_SUBSURFACE_FLOWMETER
2017	PLANT 22	WELL	WELL 22A	I&C_EXTERIOR_TRANSMITTER
2017	PLANT 22	WELL	WELL 22A	I&C_EXTERIOR_TRANSMITTER
2017	PLANT 22	WELL	WELL 22A	I&C_EXTERIOR_TRANSMITTER
2017	PLANT 22	WELL	WELL 22A	STRUCTURAL_EXTERIOR_PAD_CONCRETE
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_AUTOMATICTRANSFERSWITCH
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_MOTORCONTROL CENTER
2017	PLANT 22	WELL	WELL 22A	I&C_INTERIOR_FLOWMETER
2017	PLANT 22	WELL	WELL 22A	STRUCTURAL_EXTERIOR_WELL HEAD AND PUMP BASE
2017	PLANT 22	WELL	WELL 22A	MECHANICAL_INTERIOR_MOTOR_WELL
2017	PLANT 22	WELL	WELL 22A	MECHANICAL_INTERIOR_PUMP_WELL
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_STARTER_MAGNETIC
2017	PLANT 22	WELL	WELL 22A	MECHANICAL_INTERIOR_PUMP ASSEMBLY_WELL
2017	PLANT 22	WELL	WELL 22A	STRUCTURAL_INTERIOR_WELL 22
2017	PLANT 22	WELL	WELL 22A	I&C_INTERIOR_FLOWMETER_PROPELLER
2017	PLANT 22	WELL	WELL 22A	MECHANICAL_INTERIOR_PUMP_CHLORINE
2017	PLANT 22	GENERAL	GENERAL	MECHANICAL_EXTERIOR_PIPES AND FITTINGS_PLANT 22
2017	PLANT 22	GENERAL	GENERAL	ELECTRICAL_EXTERIOR_ELECTRICAL CONDUIT SYSTEM_PLANT 22
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_CONTROL PANEL
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_CONTROL PANEL
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_PLCCABINET
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_TRANSFORMER
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_TANK_RESERVOIR_CONCRETE
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_TANK UNDERDRAINAGE
2017	PLANT 4	RESERVOIR	TANK 3	ARCHITECTURAL_EXTERIOR_ROOF COVERING_BUR TANK 3 ASPHALT
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_MOTOR_BOOSTER8
2017	PLANT 4	RESERVOIR	TANK 3	ELECTRICAL_EXTERIOR_STARTER_BOOSTER8 MAGNETIC
2017	PLANT 4	RESERVOIR	TANK 3	I&C_EXTERIOR_PRESSURE INDICATOR
2017	PLANT 4	RESERVOIR	TANK 3	I&C_EXTERIOR_TRANSMITTER_FLOW
2017	PLANT 4	RESERVOIR	TANK 3	STRUCTURAL_EXTERIOR_CONCRETE PAD_CONCRETE
2017	PLANT 4	RESERVOIR	TANK 3	ELECTRICAL_EXTERIOR_VARIABLE FREQUENCY DRIVE_BOOSTER8
2017	PLANT 4	RESERVOIR	TANK 3	I&C_INTERIOR_ANALYZER_CHLORINE
2017	PLANT 4	TREATMENT PLANT	WELL 27	I&C_INTERIOR_ANALYZER_TURBIDITY
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_CLA
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_CLA
2017	PLANT 4	TREATMENT PLANT	WELL 27	I&C_EXTERIOR_TRANSMITTER_FLOW
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_MIXER
2017	PLANT 4	TREATMENT PLANT	WELL 27	STRUCTURAL_EXTERIOR_FOUNDATION_FILTERVESSEL_CONCRETE
2017	PLANT 4	TREATMENT PLANT	WELL 27	STRUCTURAL_EXTERIOR_FOUNDATION_BACKWASH TANK_CONCRETE
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_TANK_CHEMICAL_POLYETHYLENE
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_TANK_CHEMICAL_POLYETHYLENE
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_TANK_CHEMICAL_POLYETHYLENE
2017	PLANT 4	TREATMENT PLANT	WELL 27	STRUCTURAL_EXTERIOR_BUILDING_CHEMICAL STORAGE ENCLOSURE_CONCRETE
2017	PLANT 4	TREATMENT PLANT	WELL 27	I&C_EXTERIOR_TRANSMITTER_FLOW
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_MIXER
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_INTERIOR_MOTOR_BACKWASH
2017	PLANT 4	TREATMENT PLANT	WELL 27	ELECTRICAL_EXTERIOR_STARTER_MAGNETIC
2017	PLANT 4	TREATMENT PLANT	WELL 27	I&C_INTERIOR_TRANSMITTER_PRESSURE
2017	PLANT 4	TREATMENT PLANT	WELL 27	I&C_INTERIOR_TRANSMITTER_PRESSURE
2017	PLANT 4	TREATMENT PLANT	WELL 27	ELECTRICAL_INTERIOR_DISCONNECT SWITCH
2017	PLANT 4	TREATMENT PLANT	WELL 27	I&C_EXTERIOR_TRANSMITTER_PRESSURE
2017	PLANT 4	TREATMENT PLANT	WELL 27	I&C_EXTERIOR_ANALYZER_PH
2017	PLANT 4	TREATMENT PLANT	WELL 27	I&C_EXTERIOR_TRANSMITTER_LEVEL
2017	PLANT 4	TREATMENT PLANT	WELL 27	I&C_EXTERIOR_TRANSMITTER_PRESSURE

Proposed Implementation Year	Facility	Asset Type	Asset	Asset Description
2017	PLANT 4	TREATMENT PLANT	WELL 27	I&C_EXTERIOR_ANALYZER_PH
2017	PLANT 4	TREATMENT PLANT	WELL 27	ELECTRICAL_EXTERIOR_ELECTRICAL_CONDUIT_SYSTEM_TREATMENT_PLANT
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_MOTOR_BOOSTER 7
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_MOTOR_BOOSTER 2
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_MOTOR_BOOSTER 3
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_MOTOR_BOOSTER 6
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_MOTOR_BOOSTER 4
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_MOTOR_BOOSTER 5
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_BOOSTER 7 MAGNETIC
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_BOOSTER 2 MAGNETIC
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_BOOSTER 3 MAGNETIC
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_BOOSTER 6 MAGNETIC
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_BOOSTER 4 MAGNETIC
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_STARTER_BOOSTER 5 MAGNETIC
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	HVAC_EXTERIOR_ROOF_VENTILATOR
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	HVAC_EXTERIOR_LOUVER
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ARCHITECTURAL_INTERIOR_LADDER_RUNG_GALVANIZED STEEL
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_INTERIOR_MOTOR_CONTROL_CENTER
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_ELECTRICAL_CONDUIT_SYSTEM_PLANT 4
2017	PLANT 4	GENERAL	GENERAL	MECHANICAL_EXTERIOR_PIPES_AND_FITTINGS_PLANT 4
2017	PLANT 4	GENERAL	GENERAL	MECHANICAL_EXTERIOR_PUMP_BOOSTER
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_EXTERIOR_GENERATOR_EMERGENCY
2017	PLANT 22	TREATMENT PLANT	WELL 22A	ELECTRICAL_EXTERIOR_GENERATOR_EMERGENCY
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_TANK_BACKWASH_STEEL
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_INTERIOR_PUMP_BACKWASH
2017	PLANT 13	WELL	WELL 13A	ELECTRICAL_EXTERIOR_SWITCHBOARD
2017	PLANT 13	RESERVOIR	TANK 4	MECHANICAL_EXTERIOR_TANK_RESERVOIR_STEEL
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_PUMP_BOOSTER 8
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_BALL
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2017	PLANT 4	TREATMENT PLANT	WELL 27	PLUMBING_INTERIOR_EMERGENCY_EYEWASH/SHOWER
2017	PLANT 4	TREATMENT PLANT	WELL 27	ARCHITECTURAL_EXTERIOR_ROOF_COVERING_STANDING SEAM METAL
2017	PLANT 4	TREATMENT PLANT	WELL 27	STRUCTURAL_EXTERIOR_BUILDING_BACKWASH_FIBERGLASS
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_VALVE_BUTTERFLY
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_PUMP_BOOSTER 7
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_PUMP_BOOSTER 2
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_PUMP_BOOSTER 3
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_PUMP_BOOSTER 6
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_PUMP_BOOSTER 4
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_PUMP_BOOSTER 5
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ARCHITECTURAL_EXTERIOR_ROOF_COVERING_BUR ASPHALT
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_SPACE HEATER
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_SPACE HEATER
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_SPACE HEATER
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_SPACE HEATER
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ARCHITECTURAL_EXTERIOR_ENCLOSURE_METAL
2017	PLANT 13	TREATMENT PLANT	CHLORINE CONTAINER ENCLOSURE	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2017	PLANT 13	TREATMENT PLANT	EAST SITE	ARCHITECTURAL_EXTERIOR_LADDER_METAL
2017	PLANT 13	RESERVOIR	TANK 1	ARCHITECTURAL_EXTERIOR_LADDER_METAL
2017	PLANT 13	RESERVOIR	TANK 2	ARCHITECTURAL_EXTERIOR_LADDER_METAL
2017	PLANT 13	RESERVOIR	TANK 3	ARCHITECTURAL_EXTERIOR_LADDER_METAL

Proposed Implementation Year	Facility	Asset Type	Asset	Asset Description
2017	PLANT 13	TREATMENT PLANT	EAST SITE	MECHANICAL_EXTERIOR_VALVE_BALL_STEEL
2017	PLANT 13	TREATMENT PLANT	ELECTRICAL BUILDING	ELECTRICAL_EXTERIOR_LIGHT_FIXTURE
2017	PLANT 13	RESERVOIR	TANK 4	ARCHITECTURAL_EXTERIOR_LADDER_METAL
2017	PLANT 13	RESERVOIR	TANK 5	ARCHITECTURAL_EXTERIOR_LADDER_METAL
2017	PLANT 22	WELL	WELL 22A	MECHANICAL_SUBSURFACE_VAULT
2017	PLANT 22	WELL	WELL 22A	MECHANICAL_EXTERIOR_TANK_PNEUMATIC
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_PUMP_SUMP
2017	PLANT 4	RESERVOIR	TANK 1	ARCHITECTURAL_EXTERIOR_LADDER_STEEL
2017	PLANT 4	RESERVOIR	TANK 2	ARCHITECTURAL_EXTERIOR_LADDER_STEEL
2017	PLANT 13	TREATMENT PLANT	ELECTRICAL BUILDING	ELECTRICAL_INTERIOR_AUTOMATIC TRANSFERSWITCH
2017	PLANT 13	TREATMENT PLANT	ELECTRICAL BUILDING	ELECTRICAL_INTERIOR_CONTROL_PANEL
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_VARIABLE FREQUENCY DRIVE
2017	PLANT 4	RESERVOIR	TANK 3	ARCHITECTURAL_EXTERIOR_ENCLOSURE
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_GATE
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_GATE
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VALVE_GATE
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_INTERIOR_VALVE_CHECK
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_INTERIOR_VALVE_GATE
2017	PLANT 4	TREATMENT PLANT	WELL 27	ELECTRICAL_EXTERIOR_LIGHT_FIXTURE
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_GATE_STEEL
2017	PLANT 13	TREATMENT PLANT	ELECTRICAL BUILDING	ELECTRICAL_INTERIOR_LIGHT_FIXTURE_EMERGENCY
2017	PLANT 22	WELL	WELL 22A	STRUCTURAL_EXTERIOR_BUILDING_WELL 22_CONCRETE MASONRY
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_LIGHT_FIXTURE_EMERGENCY
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_SWITCHBOARD
2017	PLANT 4	RESERVOIR	TANK 3	ARCHITECTURAL_EXTERIOR_LADDER_STEEL
2017	PLANT 4	RESERVOIR	TANK 3	ARCHITECTURAL_INTERIOR_LADDER_STAINLESS STEEL
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_CHEMICAL FEED SYSTEM PANEL
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_START MIXER AND INJECTION ASSEMBLY
2017	PLANT 4	TREATMENT PLANT	WELL 27	HVAC_EXTERIOR_EXHAUST FAN
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	STRUCTURAL_EXTERIOR_ENCLOSURE_CONCRETE
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	STRUCTURAL_EXTERIOR_ENCLOSURE_CONCRETE
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	STRUCTURAL_EXTERIOR_ENCLOSURE_CONCRETE
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	STRUCTURAL_EXTERIOR_ENCLOSURE_CONCRETE
2017	PLANT 13	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_INTERIOR_SWITCHBOARD
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_EXTERIOR_CONTROL_PANEL
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_EXTERIOR_LIGHT_FIXTURE
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_CONTROL_PANEL
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_CONTROL_PANEL
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_VALVE_GATE
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_VALVE_GATE
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_VALVE_GATE
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_VALVE_GATE
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_VALVE_GATE
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_VALVE_GATE
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_VALVE_CHECK
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_VALVE_GATE
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_VALVE_GATE
2017	PLANT 4	RESERVOIR	TANK 3	MECHANICAL_EXTERIOR_VALVE_CHECK
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_PLUG
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_VALVE_GATE
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_VALVE_GATE
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_VALVE_GATE
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_VALVE_GATE
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_VALVE_CHECK

Proposed Implementation Year	Facility	Asset Type	Asset	Asset Description
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_INTERIOR_VALVE_CHECK
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	MECHANICAL_EXTERIOR_VALVE_PLUG
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_INTERIOR_CONTROL_PANEL_BOOSTER PUMP STATION
2017	PLANT 13	TREATMENT PLANT	EAST SITE	MECHANICAL_EXTERIOR_TANK_SURGE
2017	PLANT 13	TREATMENT PLANT	ELECTRICAL BUILDING	ELECTRICAL_INTERIOR_LIGHT FIXTURE
2017	PLANT 22	WELL	WELL 22A	ARCHITECTURAL_EXTERIOR_ROOF COVERING_CERAMIC TILE
2017	PLANT 22	WELL	WELL 22A	ELECTRICAL_INTERIOR_LIGHT FIXTURE
2017	PLANT 4	TREATMENT PLANT	WELL 27	MECHANICAL_EXTERIOR_VESSEL_FILTER
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_INTERIOR_LIGHT FIXTURE
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_INTERIOR_LIGHT FIXTURE
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	ELECTRICAL_INTERIOR_LIGHT FIXTURE
2017	PLANT 22	WELL	WELL 22A	STRUCTURAL_INTERIOR_CURB_SECONDARY CONTAINMENT_CONCRETE
2017	PLANT 22	WELL	WELL 22A	STRUCTURAL_INTERIOR_CURB_SECONDARY CONTAINMENT_CONCRETE
2017	PLANT 22	WELL	WELL 22A	STRUCTURAL_EXTERIOR_PARTITION_CONCRETE MASONRY
2017	PLANT 4	BOOSTER PUMP STATION	BOOSTER PUMP STATION	STRUCTURAL_INTERIOR_CURB_SECONDARY CONTAINMENT_CONCRETE
2017	PLANT 22	RESERVOIR	TANK 22	STRUCTURAL_EXTERIOR_BUILDING_BOOSTER PUMP STATION_CONCRETE
2017	PLANT 22	RESERVOIR	TANK 22	MECHANICAL_EXTERIOR_VALVE_CONTROL-RESERVOIR 22_STEEL
2017	PLANT 22	RESERVOIR	TANK 22	MECHANICAL_EXTERIOR_PUMP_BOOSTER-RESERVOIR 22
2017	PLANT 22	RESERVOIR	TANK 22	MECHANICAL_EXTERIOR_PUMP_BOOSTER-RESERVOIR 22
2017	PLANT 22	RESERVOIR	TANK 22	MECHANICAL_EXTERIOR_VALVE_CONTROL-RESERVOIR 22_STEEL
2017	PLANT 22	RESERVOIR	TANK 22	MECHANICAL_EXTERIOR_PUMP_BOOSTER-RESERVOIR 22
2017	PLANT 22	RESERVOIR	TANK 22	MECHANICAL_EXTERIOR_VALVE_CONTROL-RESERVOIR 22_STEEL
2017	PLANT 22	RESERVOIR	TANK 22	MECHANICAL_EXTERIOR_PUMP_BOOSTER-RESERVOIR 22
2017	CITY-WIDE	GENERAL	TANK 22	MECHANICAL_SUBSURFACE_TANK_RESERVOIR 22_CONCRETE
2018	SYSTEM	WELL	WELL 18	ELECTRICAL_INTERIOR_SCADA_OPERATIONS CENTER AND SYSTEMS
2018	SYSTEM	WELL	WELL 17	MECHANICAL_INTERIOR_PUMP_ASSEMBLY_WELL
2018	SYSTEM	WELL	WELL 17	MECHANICAL_EXTERIOR_PUMP_WELL
2018	SYSTEM	WELL	WELL 17	MECHANICAL_EXTERIOR_PUMP_ASSEMBLY_WELL
2018	SYSTEM	WELL	WELL 18	ELECTRICAL_EXTERIOR_GENERATOR CONNECTION BOX
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_MOTOR STARTER
2018	SYSTEM	WELL	WELL 17	MECHANICAL_EXTERIOR_VALVE_CLA
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_EXTERIOR_GENERATOR CONNECTION BOX
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_EXTERIOR_LIGHT FIXTURE
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_CONTROL PANEL
2018	SYSTEM	WELL	WELL 18	MECHANICAL_INTERIOR_PUMP_CHLORINE
2018	SYSTEM	WELL	WELL 17	MECHANICAL_INTERIOR_PUMP_CHLORINE
2018	SYSTEM	WELL	WELL 17	STRUCTURAL_EXTERIOR_BUILDING_CONCRETE
2018	SYSTEM	WELL	WELL 18	MECHANICAL_EXTERIOR_VALVE
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_DISCONNECT SWITCH
2018	SYSTEM	WELL	WELL 17	MECHANICAL_INTERIOR_PUMP_PHOSPHATE
2018	SYSTEM	WELL	WELL 18	ELECTRICAL_INTERIOR_DISCONNECT SWITCH
2018	SYSTEM	WELL	WELL 17	STRUCTURAL_EXTERIOR_WELL 17
2018	SYSTEM	WELL	WELL 17	STRUCTURAL_EXTERIOR_WELL HEAD AND PUMP BASE
2018	SYSTEM	WELL	WELL 18	MECHANICAL_INTERIOR_PUMP_PHOSPHATE
2018	SYSTEM	WELL	WELL 18	ELECTRICAL_INTERIOR_DISCONNECT SWITCH
2018	SYSTEM	WELL	WELL 17	I&C_EXTERIOR_FLOW METER
2018	SYSTEM	WELL	WELL 18	I&C_INTERIOR_FLOW METER
2018	SYSTEM	WELL	WELL 18	MECHANICAL_INTERIOR_VALVE
2018	SYSTEM	WELL	WELL 18	ELECTRICAL_INTERIOR_MOTOR STARTER
2018	SYSTEM	WELL	WELL 18	I&C_EXTERIOR_FLOW METER
2018	SYSTEM	WELL	WELL 18	MECHANICAL_INTERIOR_MOTOR_WELL
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_METER PANEL

Proposed Implementation Year	Facility	Asset Type	Asset	Asset Description
2018	SYSTEM	WELL	WELL 18	MECHANICAL_INTERIOR_PUMP_WELL
2018	SYSTEM	WELL	WELL 18	ELECTRICAL_INTERIOR_METERPANEL
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_JUNCTION BOX
2018	SYSTEM	WELL	WELL 18	ELECTRICAL_INTERIOR_JUNCTION BOX
2018	SYSTEM	WELL	WELL 18	STRUCTURAL_EXTERIOR_BUILDING_CONCRETE
2018	SYSTEM	WELL	WELL 18	STRUCTURAL_INTERIOR_WELL 18
2018	SYSTEM	WELL	WELL 18	STRUCTURAL_INTERIOR_WELL HEAD AND PUMP BASE
2018	SYSTEM	WELL	WELL 2A	MECHANICAL_INTERIOR_PUMP_CHLORINE
2018	SYSTEM	WELL	WELL 2A	MECHANICAL_INTERIOR_PUMP_PHOSPHATE
2018	SYSTEM	WELL	WELL 2A	STRUCTURAL_EXTERIOR_BUILDING_CONCRETE
2018	SYSTEM	WELL	WELL 2A	ELECTRICAL_INTERIOR_DISCONNECT SWITCH
2018	SYSTEM	WELL	WELL 2A	ELECTRICAL_INTERIOR_JUNCTION BOX
2018	SYSTEM	WELL	WELL 2A	ELECTRICAL_INTERIOR_METERPANEL
2018	SYSTEM	WELL	WELL 2A	ELECTRICAL_INTERIOR_MOTORSTARTER
2018	SYSTEM	WELL	WELL 2A	I&C_EXTERIOR_FLOWMETER
2018	SYSTEM	WELL	WELL 2A	MECHANICAL_EXTERIOR_MOTOR_WELL
2018	SYSTEM	WELL	WELL 2A	MECHANICAL_EXTERIOR_PUMP_WELL
2018	SYSTEM	WELL	WELL 2A	MECHANICAL_EXTERIOR_PUMP ASSEMBLY_WELL
2018	SYSTEM	WELL	WELL 2A	MECHANICAL_INTERIOR_VALVE_CLA
2018	SYSTEM	WELL	WELL 2A	STRUCTURAL_EXTERIOR_BUILDING_CONCRETE
2018	SYSTEM	WELL	WELL 2A	STRUCTURAL_EXTERIOR_WELL 2A
2018	SYSTEM	WELL	WELL 2A	STRUCTURAL_EXTERIOR_WELL HEAD AND PUMP BASE
2018	SYSTEM	WELL	WELL 17	PLUMBING_INTERIOR_EMERGENCY EYEWASH
2018	SYSTEM	WELL	WELL 18	ARCHITECTURAL_EXTERIOR_ROOF COVERING_TIMBER
2018	SYSTEM	WELL	WELL 18	ELECTRICAL_INTERIOR_CONTROL PANEL
2018	SYSTEM	WELL	WELL 2A	ELECTRICAL_INTERIOR_DISTRIBUTION PANEL
2018	SYSTEM	WELL	WELL 18	ELECTRICAL_INTERIOR_DISTRIBUTION PANEL
2018	SYSTEM	WELL	WELL 17	ELECTRICAL_INTERIOR_LIGHT FIXTURE
2018	SYSTEM	WELL	WELL 2A	ARCHITECTURAL_EXTERIOR_ROOF COVERING_CERAMICTILE
2018	SYSTEM	WELL	WELL 2A	ELECTRICAL_INTERIOR_DISTRIBUTION PANEL
2018	SYSTEM	WELL	WELL 2A	ELECTRICAL_INTERIOR_LIGHT FIXTURE
2018	SYSTEM	WELL	WELL 17	MECHANICAL_SUBSURFACE_TANK_PNEUMATIC
2018	SYSTEM	WELL	WELL 18	MECHANICAL_EXTERIOR_TANK_PNEUMATIC
2018	SYSTEM	WELL	WELL 18	PLUMBING_EXTERIOR_EMERGENCY EYEWASH
2018	SYSTEM	WELL	WELL 2A	PLUMBING_EXTERIOR_EMERGENCY EYEWASH
2018	SYSTEM	WELL	WELL 2A	MECHANICAL_SUBSURFACE_TANK_PNEUMATIC
2020	PLANT 4	WELL	WELL 27	STRUCTURAL_EXTERIOR_WELL HEAD AND PUMP BASE
2020	PLANT 4	WELL	WELL 27	MECHANICAL_EXTERIOR_PUMP_WELL
2020	PLANT 4	WELL	WELL 27	MECHANICAL_EXTERIOR_MOTOR_WELL
2020	PLANT 4	WELL	WELL 27	ELECTRICAL_EXTERIOR_STARTER_SOFT
2020	PLANT 4	WELL	WELL 27	MECHANICAL_EXTERIOR_PUMP ASSEMBLY_WELL
2020	PLANT 4	WELL	WELL 27	STRUCTURAL_EXTERIOR_WELL 27
2020	PLANT 4	WELL	WELL 27	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2020	PLANT 4	WELL	WELL 27	MECHANICAL_EXTERIOR_VALVE_CLA
2020	PLANT 4	WELL	WELL 27	I&C_EXTERIOR_FLOWMETER_PROPELLER
2020	PLANT 4	WELL	WELL 27	MECHANICAL_INTERIOR_PUMP_CHEMICAL METERING
2020	PLANT 4	WELL	WELL 27	MECHANICAL_INTERIOR_TANK_CHEMICAL_HDXLPE
2020	PLANT 4	WELL	WELL 27	PLUMBING_INTERIOR_EMERGENCY EYEWASH/SHOWER
2020	PLANT 4	WELL	WELL 27	I&C_INTERIOR_ANALYZER_CHLORINE
2020	PLANT 4	WELL	WELL 27	ELECTRICAL_EXTERIOR_SWITCHBOARD_GENERATOR
2020	PLANT 4	WELL	WELL 27	ELECTRICAL_EXTERIOR_GENERATOR EMERGENCY WELL 27
2020	PLANT 4	WELL	WELL 27	ELECTRICAL_INTERIOR_MOTOR CONTROL CENTER
2020	PLANT 4	WELL	WELL 27	ELECTRICAL_INTERIOR_PLCCABINET
2020	PLANT 4	WELL	WELL 27	ELECTRICAL_INTERIOR_SECURITY_DETECTOR
2020	PLANT 4	WELL	WELL 27	ELECTRICAL_INTERIOR_MONITOR

Proposed Implementation Year	Facility	Asset Type	Asset	Asset Description
2020	PLANT 4	WELL	WELL 27	HVAC_INTERIOR_EXHAUST FAN
2020	PLANT 4	WELL	WELL 4	STRUCTURAL_INTERIOR_WELL HEAD AND PUMP BASE
2020	PLANT 4	WELL	WELL 4	MECHANICAL_EXTERIOR_MOTOR_WELL
2020	PLANT 4	WELL	WELL 4	STRUCTURAL_INTERIOR_WELL 4
2020	PLANT 4	WELL	WELL 4	MECHANICAL_EXTERIOR_PUMP_WELL
2020	PLANT 4	WELL	WELL 4	MECHANICAL_EXTERIOR_PUMP_ASSEMBLY_WELL
2020	PLANT 4	WELL	WELL 4	ELECTRICAL_INTERIOR_PL_CABINET
2020	PLANT 4	WELL	WELL 4	MECHANICAL_INTERIOR_PUMP_CHEMICAL METERING
2020	PLANT 4	WELL	WELL 10	MECHANICAL_INTERIOR_PUMP_CHEMICAL METERING
2020	PLANT 4	WELL	WELL 4	MECHANICAL_EXTERIOR_VALVE_CLA
2020	PLANT 4	WELL	WELL 10	ELECTRICAL_EXTERIOR_GENERATOR CONNECTION BOX
2020	PLANT 4	WELL	WELL 8	STRUCTURAL_SUBSURFACE_VAULT_WELL 8
2020	PLANT 4	WELL	WELL 8	STRUCTURAL_INTERIOR_WELL 8 HEAD AND PUMP BASE
2020	PLANT 4	WELL	WELL 8	MECHANICAL_INTERIOR_PUMP_WELL 8
2020	PLANT 4	WELL	WELL 8	MECHANICAL_INTERIOR_MOTOR_WELL 8
2020	PLANT 4	WELL	WELL 8	ELECTRICAL_INTERIOR_STARTER_MAGNETIC_WELL 8
2020	PLANT 4	WELL	WELL 8	MECHANICAL_INTERIOR_PUMP_ASSEMBLY_WELL 8
2020	PLANT 4	WELL	WELL 8	STRUCTURAL_INTERIOR_WELL 8
2020	PLANT 4	WELL	WELL 8	MECHANICAL_INTERIOR_PUMP_CHLORINE_WELL 8
2020	PLANT 4	WELL	WELL 8	ELECTRICAL_INTERIOR_DISCONNECT_SWITCH_WELL 8
2020	PLANT 4	WELL	WELL 8	ELECTRICAL_INTERIOR_PL_CABINET_WELL 8
2020	PLANT 4	WELL	WELL 10	MECHANICAL_INTERIOR_TANK_CHEMICAL_WELL 8
2020	PLANT 4	WELL	WELL 10	STRUCTURAL_EXTERIOR_WELL HEAD AND PUMP BASE
2020	PLANT 4	WELL	WELL 10	MECHANICAL_EXTERIOR_PUMP_WELL
2020	PLANT 4	WELL	WELL 10	MECHANICAL_EXTERIOR_MOTOR_WELL
2020	PLANT 4	WELL	WELL 10	MECHANICAL_EXTERIOR_PUMP_ASSEMBLY_WELL
2020	PLANT 4	WELL	WELL 10	STRUCTURAL_EXTERIOR_WELL 10
2020	PLANT 4	WELL	WELL 4	MECHANICAL_INTERIOR_TANK_CHEMICAL
2020	PLANT 4	WELL	WELL 10	MECHANICAL_EXTERIOR_VALVE_CLA
2020	PLANT 4	WELL	WELL 15A	STRUCTURAL_EXTERIOR_WELL HEAD AND PUMP BASE
2020	PLANT 4	WELL	WELL 15A	MECHANICAL_EXTERIOR_PUMP_WELL
2020	PLANT 4	WELL	WELL 15A	MECHANICAL_EXTERIOR_MOTOR_WELL
2020	PLANT 4	WELL	WELL 15A	ELECTRICAL_EXTERIOR_STARTER_SOFT
2020	PLANT 4	WELL	WELL 15A	MECHANICAL_EXTERIOR_PUMP_ASSEMBLY_WELL
2020	PLANT 4	WELL	WELL 15A	STRUCTURAL_EXTERIOR_WELL 15A
2020	PLANT 4	WELL	WELL 15A	MECHANICAL_EXTERIOR_VALVE_CLA
2020	PLANT 4	WELL	WELL 15A	MECHANICAL_INTERIOR_PUMP_CHLORINE
2020	PLANT 4	WELL	WELL 15A	ELECTRICAL_INTERIOR_DISCONNECT_SWITCH
2020	PLANT 4	WELL	WELL 15A	ELECTRICAL_INTERIOR_PL_CABINET
2020	PLANT 4	WELL	WELL 15A	ELECTRICAL_EXTERIOR_SWITCHBOARD
2020	PLANT 4	WELL	WELL 15A	MECHANICAL_INTERIOR_TANK_CHEMICAL
2020	PLANT 4	WELL	WELL 15A	STRUCTURAL_EXTERIOR_BUILDING_CHLORINE/ELECTRICAL_CONCRETE MASONRY
2020	PLANT 4	WELL	WELL 15A	ELECTRICAL_INTERIOR_JUNCTION BOX
2020	PLANT 4	WELL	WELL 15A	ELECTRICAL_INTERIOR_METER PANEL
2020	PLANT 4	WELL	WELL 15A	I&C_EXTERIOR_FLOW METER
2020	PLANT 4	WELL	WELL 27	I&C_EXTERIOR_FLOW METER
2020	PLANT 4	WELL	WELL 8	MECHANICAL_INTERIOR_PUMP_PHOSPHATE_WELL 8
2020	PLANT 4	WELL	WELL 8	I&C_INTERIOR_FLOW METER_WELL 8
2020	PLANT 4	WELL	WELL 4	ELECTRICAL_INTERIOR_DISCONNECT_SWITCH
2020	PLANT 4	WELL	WELL 10	ELECTRICAL_INTERIOR_DISCONNECT_SWITCH
2020	PLANT 4	WELL	WELL 4	ELECTRICAL_EXTERIOR_STARTER_MAGNETIC
2020	PLANT 4	WELL	WELL 4	I&C_EXTERIOR_FLOW METER
2020	PLANT 4	WELL	WELL 10	ELECTRICAL_EXTERIOR_STARTER_MAGNETIC
2020	PLANT 4	WELL	WELL 27	ELECTRICAL_EXTERIOR_LIGHT FIXTURE_ALUMINUM
2020	PLANT 4	WELL	WELL 15A	ELECTRICAL_INTERIOR_CONTROL PANEL

Proposed Implementation Year	Facility	Asset Type	Asset	Asset Description
2020	PLANT 4	WELL	WELL 27	ELECTRICAL_INTERIOR_LIGHT_FIXTURE
2020	PLANT 4	WELL	WELL 27	ELECTRICAL_INTERIOR_LIGHT_FIXTURE
2020	PLANT 4	WELL	WELL 27	ELECTRICAL_EXTERIOR_TRANSFORMER
2020	PLANT 4	WELL	WELL 15A	ELECTRICAL_INTERIOR_CONTROL_PANEL_FILTER
2020	PLANT 4	WELL	WELL 15A	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2020	PLANT 4	WELL	WELL 27	PLUMBING_INTERIOR_EMERGENCY_EYEWASH
2020	PLANT 4	WELL	WELL 27	MECHANICAL_EXTERIOR_CHLORINE_INJECTION_SYSTEM_AND_CONTROL_PANELS
2020	PLANT 4	WELL	WELL 4	MECHANICAL_EXTERIOR_CHLORINE_INJECTION_SYSTEM
2020	PLANT 4	WELL	WELL 10	MECHANICAL_EXTERIOR_CHLORINE_INJECTION_SYSTEM
2020	PLANT 4	WELL	WELL 10	STRUCTURAL_EXTERIOR_BUILDING_CHLORINE/ELECTRICAL_CONCRETE_MASONARY
2020	PLANT 4	WELL	WELL 15A	MECHANICAL_EXTERIOR_CHLORINE_INJECTION_SYSTEM
2020	PLANT 4	WELL	WELL 15A	ELECTRICAL_INTERIOR_DISTRIBUTION_PANEL
2020	PLANT 4	WELL	WELL 15A	ELECTRICAL_INTERIOR_LIGHT_FIXTURE
2020	PLANT 4	WELL	WELL 4	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2020	PLANT 4	WELL	WELL 10	MECHANICAL_EXTERIOR_VALVE_BUTTERFLY
2020	PLANT 4	WELL	WELL 27	STRUCTURAL_EXTERIOR_BUILDING_CHLORINE/ELECTRICAL_PRECAST_CONCRETE
2020	PLANT 4	WELL	WELL 27	ELECTRICAL_EXTERIOR_SWITCHBOARD
2020	PLANT 4	WELL	WELL 4	ELECTRICAL_INTERIOR_CONTROL_PANEL
2020	PLANT 4	WELL	WELL 10	ELECTRICAL_INTERIOR_CONTROL_PANEL
2020	PLANT 4	WELL	WELL 4	ELECTRICAL_INTERIOR_DISTRIBUTION_PANEL
2020	PLANT 4	WELL	WELL 10	ELECTRICAL_INTERIOR_DISTRIBUTION_PANEL
2020	PLANT 4	WELL	WELL 4	ELECTRICAL_INTERIOR_LIGHT_FIXTURE
2020	PLANT 4	WELL	WELL 10	ELECTRICAL_INTERIOR_LIGHT_FIXTURE
2020	PLANT 4	WELL	WELL 27	STRUCTURAL_INTERIOR_CURB_SECONDARY_CONTAINMENT_CONCRETE
2020	PLANT 4	WELL	WELL 4	ELECTRICAL_EXTERIOR_SWITCHBOARD
2020	PLANT 4	WELL	WELL 4	STRUCTURAL_EXTERIOR_BUILDING_CHLORINE/ELECTRICAL_CONCRETE_MASONARY
2020	PLANT 4	WELL	WELL 4	PLUMBING_EXTERIOR_EMERGENCY_EYEWASH
2020	PLANT 4	WELL	WELL 10	PLUMBING_EXTERIOR_EMERGENCY_EYEWASH
2020	PLANT 4	WELL	WELL 8	MECHANICAL_INTERIOR_VALVE_GATE_WELL 8
2020	PLANT 4	WELL	WELL 8	MECHANICAL_INTERIOR_VALVE_BUTTERFLY_WELL 8
2020	PLANT 4	WELL	WELL 8	MECHANICAL_EXTERIOR_CHLORINE_INJECTION_SYSTEM_WELL 8
2020	PLANT 4	WELL	WELL 8	PLUMBING_EXTERIOR_EMERGENCY_EYEWASH_WELL 8
2020	PLANT 4	WELL	WELL 8	STRUCTURAL_EXTERIOR_BUILDING_WELL 8_CHLORINE/ELECTRICAL_CONCRETE_MASONARY
2020	PLANT 4	WELL	WELL 8	ELECTRICAL_INTERIOR_CONTROL_PANEL_WELL 8
2020	PLANT 4	WELL	WELL 8	ELECTRICAL_INTERIOR_DISTRIBUTION_PANEL_WELL 8

<Page Intentionally Left Blank>

Appendix F
Model Calibration Report

<Page Intentionally Left Blank>

Documentation of the Updated Hydraulic Model for the City of Lakewood Water Distribution System

Stetson Engineers Inc.
3/14/2017

Computer hydraulic modeling analysis is a method of predicting the hydraulic gradient pattern, pressures, and flows across a water distribution network under a given set of conditions. The hydraulic gradient pattern depends upon the magnitude and location of system demands, the characteristics of the pipes in the distribution system, and the flows and gradients at network boundaries such as reservoirs and pumping stations. The head loss through each pipe is a function of flow rate, pipe diameter, length, and internal roughness. The available pressure or head, at any point in the network is the difference between the hydraulic gradient and the pipeline centerline elevation.

As part of the 2017 City of Lakewood Water System Master Plan Update, a hydraulic network model developed using H2OMAP software was used to assess hydraulic capacity, water supply reliability, and fire flow capabilities throughout the City of Lakewood's water transmission and distribution system. The original hydraulic model provided by the City (previously developed and calibrated by IDModeling in 2013) was updated by Stetson to represent all water mains (pipe sizes of 4 inches and greater), groundwater pumps and booster pumps, regulating valves, storage reservoirs, groundwater wells and water demands that were provided by the City in 2016. The updated model was recalibrated to the observed system pressures during the 2016 fire flow tests. The recalibrated model was then used to determine nodal pressures and hydraulic gradient, pipe flows, velocities and head loss, and available fire flow at hydrant for different conditions.

This technical memorandum documents our review of the original hydraulic model that was developed and calibrated in 2013, the model update, and the recalibration of the updated model.

1. Review of the Original Hydraulic Model

1.1 Overview of the Original Hydraulic Model

The original hydraulic model provided by the City was previously developed and calibrated by IDModeling in 2013 using H2OMAP software. The original model included both steady-state (SS) and extended period simulation (EPS) models. According to the 2013 model documentation prepared by IDModeling, the steady state model calibration was based on 6 separate fire flow tests performed during 3/21/2013 – 4/15/2013. The EPS model calibration was based on the condition occurred on 8/20/2012, which was an approximate Maximum Day Demand (MDD) condition. Accordingly, the original hydraulic model received from the City contained a total of 7 model calibrations:

- Steady State (SS) Calibration:
 - a. Fire Flow Test 1
 - b. Fire Flow Test 3
 - c. Fire Flow Test 4

- d. Fire Flow Test 5
- e. Fire Flow Test Alt1
- f. Fire Flow Test Alt2
- Extended Period Simulation (EPS) Calibration
 - g. EPS: 24-hour duration; 8/20/2012 diurnal pattern (MDD)

The City-provided model also contained 2 additional scenario runs that were performed in 2016 for analysis of the Plant 22 offline condition. Figure 1 below shows all the model scenarios in the model provided by the City.

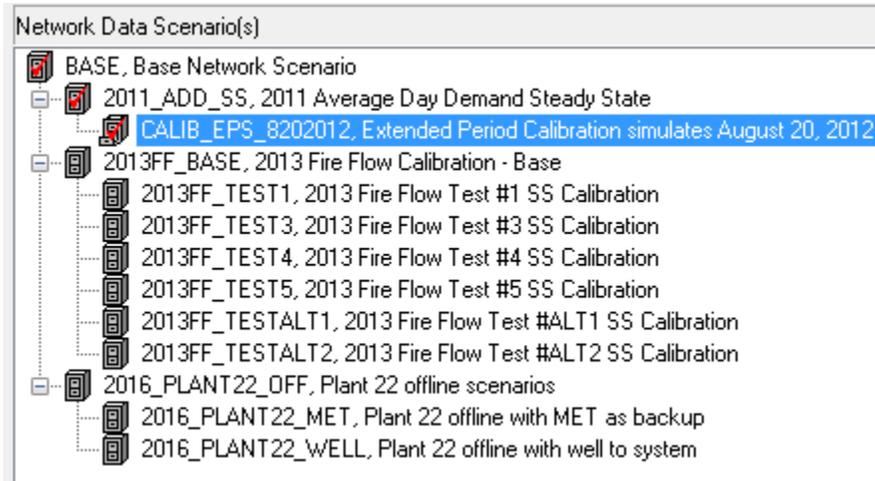


Figure 1 Model Scenarios in the City-Provided Model

The water system in the original hydraulic model consisted of the following facilities:

- 1927 pipes
- 11 groundwater wells (Wells #2A, #4, #8, #10, #13A, #14, #15, #17, #18, #22, and #27)
- 15 boosters located at the three plants
 - 7 boosters at Plant 4: Boosters #2, #3, #4, #5, #6, #7, and #8
 - 4 boosters at Plant 13: Boosters #1, #2, #3, and #4
 - 4 boosters at Plant 22: Boosters #1, #2, #3, and #4
- 3 tanks with one tank located at each of the three plants
 - The tank at Plant 4 in the model was a combination of 3 individual tanks
 - The tank at Plant 13 tank in the model was a combination of 5 individual tanks
 - The tank at Plant 22 was Reservoir 22.
- 4 regulating valves.

With regard to water demand allocation, the model used the 2011 average day demand (ADD) as the base demand (4,884 gpm). The base demand was allocated to 1,229 demand nodes out of the total of 1298 model nodes using the land use method for four different land use classes (single-family residential, multi-family residential, commercial/public, and landscape). For the steady state model calibration, the fire flow measured at each location of the 2013 fire flow tests was added as an additional demand to the 2011 base demand. For the EPS model calibration to the

maximum demand day condition of 8/22/2012, a diurnal demand pattern multiplier on an hourly time step (with an average value of 1.47 in 24 hours) was applied to the 2011 base demand.

1.2. Issues with the 2013 Model Calibration

Stetson identified the following three issues related to the 2013 model calibration.

1) Issues with Pipe Roughness and Minor Loss

The 2013 model included a total of 7 calibrations with each calibration having a different set of model parameters. The 2013 model documentation did not specify which set of model parameters are the final calibration results that should be used by the City for scenario analysis. For example, as shown in Table 1 below, minor loss was considered for certain pipes during calibration for fire flow Test 5 and Test Alt2, but was not reflected in other model calibration runs. More importantly, a C-factor (pipe roughness) of 85 was used for cast iron pipes during the calibration for fire flow Test Alt1, but the C-factor was changed to 75 for cast iron pipes during the calibrations for all the other fire flow tests and the EPS modeling. Note that cast iron pipes account for about 40% of the total pipe lengths in the model. The inconsistency of model parameters among different calibrations make it unclear which set of parameters should be used by the City for scenario analysis.

Table 1 Pipe Roughness and Minor Loss Differences Among Different Calibration Runs

Element Type	Element ID	Data Type	Steady State Calibration						EPS Calibration	Remarks
			Fire Flow Test 1	Fire Flow Test 3	Fire Flow Test 4	Fire Flow Test 5	Fire Flow Test Alt1	Fire Flow Test Alt2	EPS	
Pipe	50091	Minor Loss	0	0	0	60	0	0	0	at FH for Test 5
Pipe	50099	Minor Loss	0	0	0	0	0	20	0	at FH for Test Alt2
Pipe	P-550	Roughness	90	90	90	90	90	90	100	near well 13; Length = 106.49 ft
Pipe	P-1013	Roughness	90	90	90	90	90	90	100	near well 13; Length = 1489.79 ft
Pipe	P-1296	Roughness	120	120	120	120	120	120	100	near well 27; Length = 13.97 ft
Pipe	P-1396	Roughness	120	120	120	120	120	120	100	near well 22; Length = 33.67 ft
Pipe	P-1882	Roughness	90	90	90	90	90	90	75	near well 27 & 14; Length = 6 ft
Pipe	P-902	Roughness	90	90	90	90	90	90	75	near well 27 & 14; Length = 3 ft
Pipe	P-910	Roughness	90	90	90	90	90	90	35	near well 27 & 14; Length = 61 ft

2) Issues with Measured Fire Flows Used in the Model Calibration

During the fire flow tests, the observed fire flows were calculated based on the following formula:

$$\text{Observed fire flow} = 29.83 \cdot c \cdot d^2 \cdot p^{0.5}$$

Where d is outlet diameter (inch), p is pitot pressure (psi), c is discharge coefficient. Discharge coefficient c is typically assumed at 0.95 or 0.9 for unknown hydrant

coefficient. In order to have better calibration results to match the observed pressures, the 2013 model calibration used a discharge coefficient of 0.8 for fire flow Tests 3 and Alt1 and 0.9 for fire flow Tests 1, 4, 5, and Alt2. The 2013 model documentation did not describe the differences or similarities among the fire hydrants involved in the fire flow tests. Using inconsistent discharge coefficients is questionable.

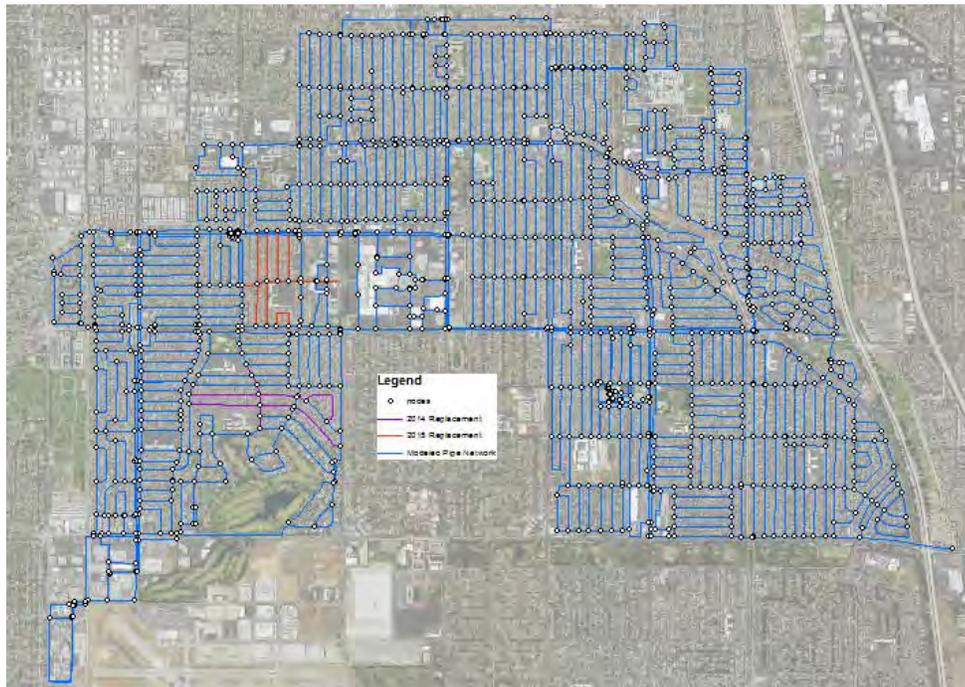
3) Issues with Water Demand Used for Model Calibration

The demand used for the calibration of the spring 2013 fire flow tests was the 2011 average day demand (ADD). However, to achieve a meaningful calibration, the demand data for the calibration run should be the actual demand during the fire flow tests. If the actual demand during fire flow tests was not available, then justification must be provided to ensure the 2011 ADD is representative as the system demand occurring during the 2013 fire flow tests.

2. Model Update

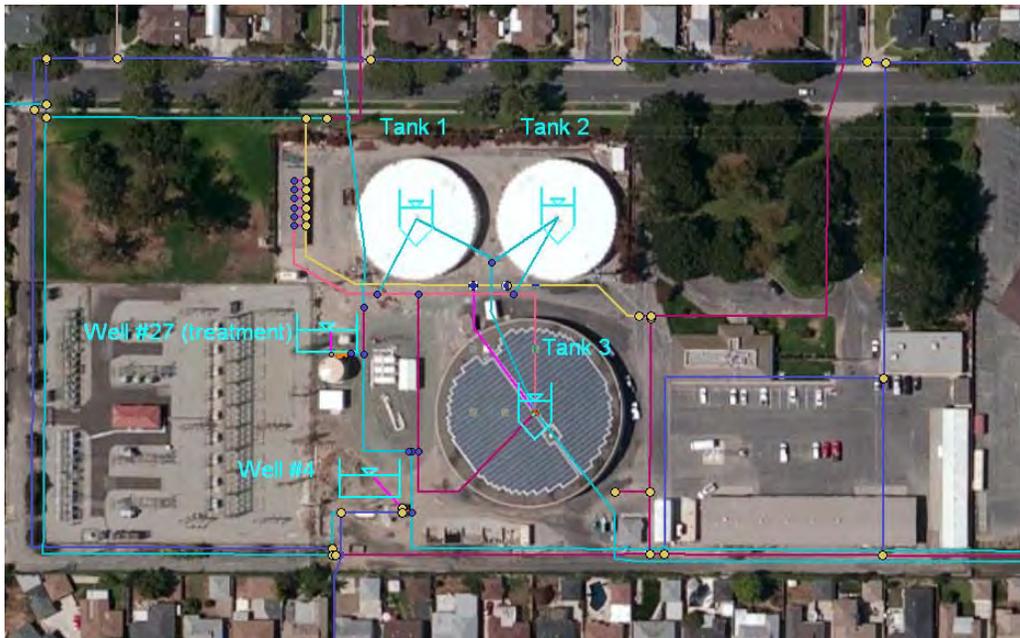
2.1. Update of Pipes

Using the most recent GIS shapefile for pipelines provided by the City, the 2013 model was updated with the approximately 8 miles of pipes replaced in years 2014 and 2015 (material, installation year, diameter, and roughness). Pipe ages for all pipes were also updated in the model. As shown in figure below, the yellow and pink colored pipes represent the 2014 and 2015 replacement pipes, respectively. Additional examination was performed to ensure that all the pipelines in the updated model exactly match the pipelines in the most recent GIS shapefile.



2.2. Update of Plant 4 Tanks

The 2013 model represented the three tanks at Plant 4 using one combined tank. In the updated model, the one combined tank was split into 3 individual tanks to represent the actual system (see the map below). This update is necessary because Tank 3 has different bottom elevation from Tanks 1 and 2. Pipe diameters at the three tanks were also updated based on as-built drawings for Plant 4. The combined tank represented in the 2013 model for the five tanks at Plant 13 was not updated because the five tanks have the same bottom elevation and height. Representing the five tanks at Plant 13 as one combined tank will not have noticeable hydraulic effect.



2.3. Initial Water Levels of Tanks

The initial water levels of tanks in the updated model (Table 2) were set based on the average levels of summer 2016 SCADA record (Table 3).

Table 2 Tank Initial Water Levels Used in the Updated Model

Tank ID	Bottom Elevation	Max Water Depth	Initial Water Depth	% Full
	(ft)	(ft)	(ft)	
Plant 22	54	14	7	50%
Plant 4, Tank 1	47	20.5	14.5	71%
Plant 4, Tank 2	47	20.5	14.5	71%
Plant 4, Tank 3	40	27.5	22	80%
Plant 13, Combo Tank	45	17	11.9	70%

Table 3 SCADA Record of Tank Storages during Summer 2016 Fire Flow Test Days

Date	Plant 4, Tank 1 & 2	Plant 4, Tank 3	Plant 13 Tank	Plant 22 Tank
	(gallon)	(gallon)	(gallon)	(gallon)
5/17/2016	1,992,412	4,257,301	1,527,162	1,322,000
6/28/2016	1,948,720	4,258,314	1,418,708	1,268,250
7/12/2016	2,074,473	4,363,798	1,617,748	1,385,250
8/15 (16) /2016	2,234,797	4,546,836	1,365,658	1,251,500
9/28/2016	2,184,622	4,427,474	1,521,907	1,239,750
Average Storage (Gallon)	2,087,005	4,370,745	1,490,237	1,293,350
Full Storage (Gallon)	3,000,000	5,400,000	2,100,000	2,500,000
Average % Full	70%	81%	71%	52%

2.4. Update of Pump Curves

All of the booster and well pump curves used in the updated model were based on the 2013 and 2015 pump tests except for Well #13A and Well #22 which were recently replaced in 2016. The manufacture pump curves for Well #13A and Well #22 were used in the updated model.

2.5. Model Demand Allocation

The updated model used the metered average day water use in the 2015-16 fiscal year as the base demand (4,400 gpm). The base demand was allocated to the demand nodes in the updated model using the geo-coded water meters, rather than the hypothetical land use method that was used in the 2013 model development. Using the geo-coded meters is the most accurate method for demand allocation (H2OMAP Demand Allocator User Manual).

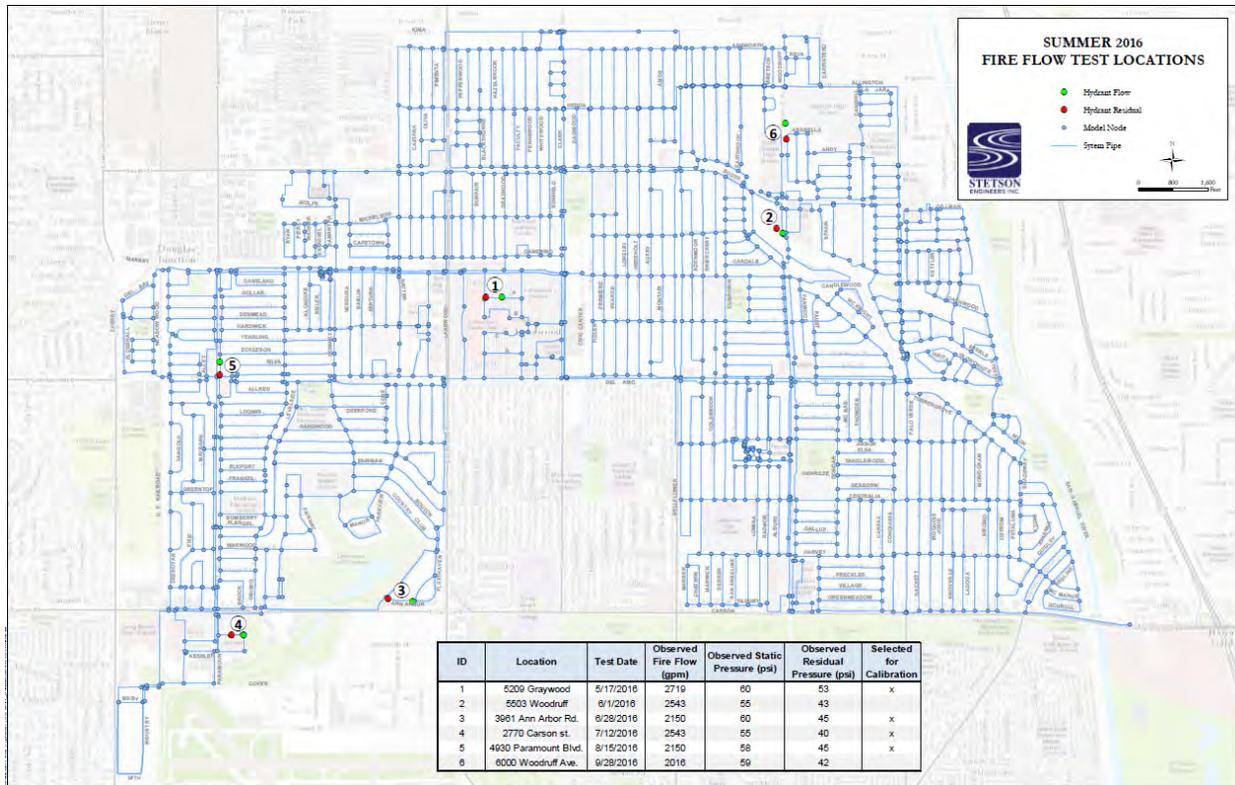
3. Recalibration of the Updated Model

3.1. Fire Flow Test Locations

A total of 6 fire flow tests were performed during the summer 2016, among which 4 tests were selected for model calibration (the other 2 tests were not in the modelled pipe network). All of the 6 first flow tests were conducted at midnight (around 11:00 – 11:30 pm). Table 4 is a summary of the fire flow test results and the selected 4 tests for model calibration (see the map below for the 2016 fire flow test locations). The selected 4 tests for model calibration included the tests conducted on 5/17/2016, 6/28/2016, 7/12/2016, and 8/15/2016.

Table 4 2016 Fire Flow Test Results

Fire Flow Test Date	Location	Static Pressure	Residual Pressure	Flow	Selected for Calibration
		(psi)	(psi)	(gpm)	
5/17/2016	5209 Graywood	60	53	2,719	x
6/1/2016	5503 Woodruff	55	43	2,543	
6/28/2016	3961 Ann Arbor Rd.	60	45	2,150	x
7/12/2016	2770 Carson st.	55	40	2,543	x
8/15/2016	4930 Paramount Blvd.	58	45	2,150	x
9/28/2016	6000 Woodruff Ave.	59	42	2,016	



2016 Fire Flow Test Locations

3.2. Model Recalibration Using the 2016 Fire Flow Tests

The Hazen-Williams Coefficient, or C-factor, was assigned to pipes based on material and age group. Aging is expected to increase pipe’s roughness, as indicated by reduced C-factor. Normally, age has more significant effect on cast iron than other materials. The blue curve in the graph below shows the C-factor reduction rate with age for cast iron pipes recommended by the Engineering Toolbox (http://www.engineeringtoolbox.com/hazen-williams-coefficients-d_798.html). The Engineering Toolbox does not provide C-factor reduction rates for other pipe materials. For the purpose of this model recalibration, the C-factor reduction rates for other materials were assumed the same and proportionate to the reduction rate of cast iron. The final calibrated C-factor reduction rates for other materials were about 50% of the reduction rate for cast iron (see the red curve in the graph below). Table 5 shows the final calibrated C-factors.

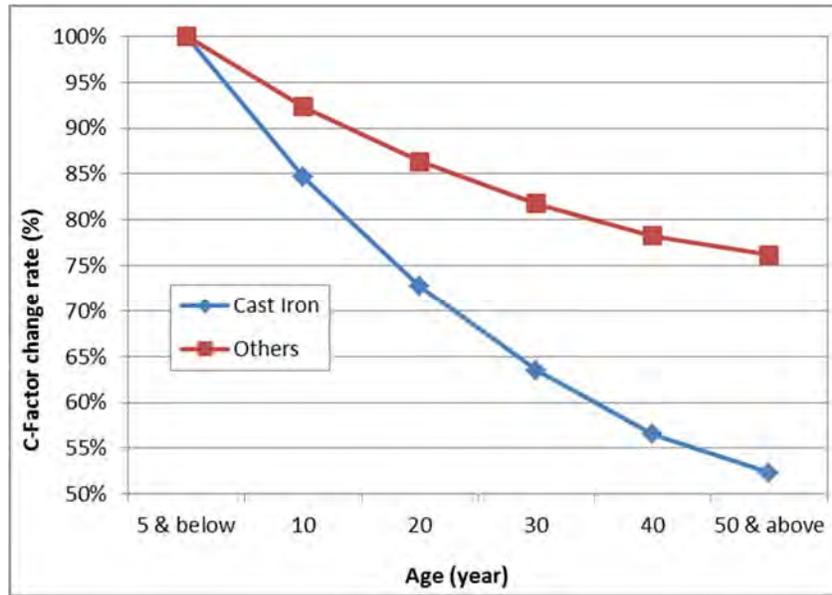


Table 5 Calibrated C-factors

Pipe Materials	Short ID in Model	C – Factors by Age Group					
		5 & below	10	20	30	40	50 & above
Asbestos Cement	AC	140	129	121	114	110	110
PVC	C900	150	138	130	123	117	115
Concrete	CCP	140	129	121	114	110	110
Cast-Iron	CI	130	110	95	83	75	70
Ductile Iron	DI	140	129	121	114	110	110
Steel	ST	120	111	104	98	94	90

In order to know the pump ON/OFF status and the water demand during the fire flow test days, the SCADA records were collected and examined. Table 6 below shows the SCADA-recorded operating time of the wells and boosters that discharge directly to the system (Note: The wells and boosters that discharge to tanks are not included in the table since these pumps have no hydraulic effects on the system in steady-state hydraulic modeling. Their hydraulic effects will be reflected by the water levels of the tanks). As shown in Table 6, Wells #2A, #4, #17, and #18, Boosters #3, #5, and #7 at Plant 4, Booster #1 at Plant 13, and Booster #3 at Plant 22 were operated almost every day. Booster # 2 at Plant 4 and Booster #1 at Plant 22 were operated occasionally. These wells and boosters were assumed ON and defined as “normal operating” wells and boosters in the hydraulic analysis of different scenarios.

Table 6 SCADA-Recorded Operating Time (hours) of the Wells and Boosters That Discharge Directly to the System

	5/17/2016	6/1/2016	6/28/2016	7/12/2016	8/15/2016	9/28/2016
Well #2A	12.52		18.03	17.02	16.50	22.00
Well #4	18.02		19.00	18.02	16.02	21.98
Well #17	22.68		24.0	24.00	24.00	22.03
Well #18	16.02		18.50	19.00	19.02	21.98
Plant 4 B#2					2.62	
Plant 4 B#3	9.15			2.23	10.48	16.37
Plant 4 B#4						
Plant 4 B#5	23.83		19.05	19.05	18.98	8.18
Plant 4 B#6						
Plant 4 B#7	1.77		7.88	6.47	4.82	9.78
Plant 13 B#1	4.00		22.78	20.05	22.72	
Plant 13 B#2						
Plant 13 B#3						
Plant 13 B#4						
Plant 22 B#1	0.03					
Plant 22 B#2						
Plant 22 B#3	9.15		6.00	6.27	5.00	13.47
Plant 22 B#4						

Notes: (1) No data for 6/1/2016. (2) The dates in red were selected for model calibration. (3) No data for 8/15/2016, the data for 8/16/2016 were used for 8/15/2016.

The model was first calibrated to the static pressures observed prior to the fire flow tests. The model was then calibrated to the observed residual pressures by adding the measured fire flows as the additional demand. Pump ON/OFF status could be different prior to the fire flow tests and during the fire flow tests because of very different water demands, and was determined based on the SCADA-recorded operating time. Table 7 shows the model calibration results for static pressures and residual pressures. The differences between the model-simulated static pressures and the observed static pressures were within 5 psi. The differences between the model-simulated residual pressures and the observed residual pressures were also within 5 psi. One set

of model parameters were used in all calibration runs. The final calibrated C-factors are shown in Table 5. No minor loss was considered in the recalibrated model.

**Table 7 Comparison between Observed Pressures and Model-Simulated Pressures
(2016 Fire Flow Tests)**

Ref No	System	Flow Fire Hydrant			Residual Hydrant							
	Demand	Node	Elev- ation	Flow	Node	Elevation	Static Pres- sure (psi)			Residual Pressure (psi)		
	(gpm)	ID	(feet)	(gpm)	ID	(feet)	Field	Model	Diffe- rence	Field	Model	Diffe- rence
5/17/2016	4,166	1036	56	2,719	1040	56	60.0	60.1	0.1	53.0	52.2	-2.1
6/28/2016	4,885	J6384	51	2,150	J7786	52.14	60.0	63.6	3.6	45.0	40.3	-4.7
7/12/2016	4,920	J1048	61	2,543	J1047	61.4	55.0	59.3	4.3	40.0	36.8	-3.2
8/15/2016	5,000	1042	49	2,150	J4088	50	58.0	56.9	-1.1	45.0	48.8	3.8

3.3. Model Verification Using the 2013 Fire Flow Tests

The recalibrated model was also verified using two of the 2013 fire flow tests (Test 1 and Test 5). Pump ON/OFF settings were set based on the SCADA record for the 2013 fire flow test dates. Model verification results are shown in Table 8. The differences between the model-simulated static pressures and the observed static pressures were within 3 psi. The differences between the model-simulated residual pressures and the observed residual pressures were within 7 psi.

Table 8 Model Verification Results Using the 2013 Fire Flow Tests

Ref No	System	Flow Fire Hydrant			Residual Hydrant							
	Demand	Node	Elev- ation	Flow	Node	Elevation	Static Pres- sure (psi)			Residual Pressure (psi)		
	(gpm)	ID	(feet)	(gpm)	ID	(feet)	Field	Model	Diffe- rence	Field	Model	Diffe- rence
2013 TEST 1 (3/21/2013)	6,000	1010	60	2,015	J4182	60	59.0	56.0	-3.0	42.0	39.6	-2.4
2013 TEST 5 (3/27/2013)	6,000	1016	59	531	1018	60	62.0	60.0	-2.0	32.0	25.0	-7.0

Appendix G
Listing of First Priority Pipelines

<Page Intentionally Left Blank>

Proposed Water Main Replacements (First Priority) (1),(2)

Pipe ID	Model ID	Length (ft)	Length (miles)	Existing Pipe		Proposed Pipe				Proposed Installation Year (FY)	Adjusted Total Cost ⁽⁶⁾	Location	
				Type	Diameter (Inches)	Year of Installation	Type	Diameter (Inches)	Unit Rate (\$ per Linear Foot) ⁽⁶⁾				Total Cost (2017)
1	P-70	175		AC	6	1952	C900	8	\$131	\$23,000	2019-20	\$24,000	Hackett Ave (at Bigelow St)
2	P-959	1,276		CI	4	1952	C900	8	\$131	\$167,200	2019-20	\$174,000	4100 Block of Conquista Ave
3	P-1428	701		AC	4	1956	C900	8	\$131	\$91,900	2019-20	\$95,700	La Jara St (at Balfour Ave)
4	P-1485	260		CI	4	1952	C900	8	\$131	\$34,100	2019-20	\$35,500	4230 Block of Carfax Ave
5	P-1486	256		CI	4	1952	C900	8	\$131	\$33,600	2019-20	\$35,000	Carfax Ave (btw Warmwood Rd and Freckles Rd)
6	P-1487	256		CI	4	1952	C900	8	\$131	\$33,600	2019-20	\$35,000	Carfax Ave (btw Freckles Rd Village Rd)
7	P-1488	249		CI	4	1952	C900	8	\$131	\$32,700	2019-20	\$34,100	Carfax Ave (btw Village Rd and Greenmeadow Rd)
8	P-1491	233		CI	4	1952	C900	8	\$131	\$30,500	2019-20	\$31,800	4100 Block of Carfax Ave
9	P-1536	1,287		CI	4	1952	C900	8	\$131	\$168,600	2019-20	\$175,500	4700 Block of Canchill Ave
10	P-1501	1,279		CI	4	1952	C900	8	\$131	\$167,600	2020-21	\$177,900	4300 Block of Canchill Ave
11	P-1231	263		CI	4	1952	C900	8	\$131	\$34,500	2021-22	\$37,400	McKnight Dr (btw Turnergrove Dr)
12	P-1635	489		CI	4	1952	C900	8	\$131	\$64,100	2021-22	\$69,400	McKnight Dr (btw Turnergrove Dr)
13	P-1232	1,291		CI	4	1952	C900	8	\$131	\$169,200	2020-21	\$179,600	6200 Block of Seaborn St
14	P-1525	1,296		CI	4	1952	C900	8	\$131	\$169,900	2020-21	\$180,300	6200 Block of Seaborn St
15	P-1446	958		AC	4	1956	C900	8	\$131	\$125,600	2020-21	\$133,300	5600 Block of Canchill Ave
16	P-1646	1,792		CI	4	1952	C900	8	\$131	\$234,800	2020-21	\$249,200	4900 Block of Mc Nab Ave
17	P-1645	1,719		CI	4	1952	C900	8	\$131	\$225,200	2020-21	\$239,000	6100 Block of Silva St
18	P-1495	1,456		CI	4	1952	C900	8	\$131	\$190,800	2021-22	\$206,600	6100 Block of Warwick Rd
19	P-1644	1,609		CI	4	1952	C900	8	\$131	\$210,800	2021-22	\$228,200	6100 Block of Eckleson St
20	P-1493	1,456		CI	4	1952	C900	8	\$131	\$190,800	2021-22	\$206,600	6100 Block of Freckles Rd
21	P-1489	1,456		CI	4	1952	C900	8	\$131	\$190,800	2021-22	\$206,600	6100 Block of Village Rd
22	P-1534	1,287		CI	4	1952	C900	8	\$131	\$168,600	2021-22	\$185,100	4700 Block of Mc Nab Ave
23	P-1499	1,279		CI	4	1952	C900	8	\$131	\$167,600	2022-23	\$186,200	4300 Block of Mc Nab Ave
24	P-1467	2,788		CI	4	1956	C900	8	\$131	\$365,300	2022-23	\$403,400	Alley
25	P-1517	250		CI	4	1952	C900	8	\$131	\$32,800	2021-22	\$35,600	4440 Block of Gondar Ave
26	P-1518	250		CI	4	1952	C900	8	\$131	\$32,800	2021-22	\$35,600	Gondar Ave (btw Fairman St and Elkport St)
27	P-1519	250		CI	4	1952	C900	8	\$131	\$32,800	2022-23	\$36,300	Gondar Ave (btw Elkport St and Gallup St)
28	P-1520	250		CI	4	1952	C900	8	\$131	\$32,800	2022-23	\$36,300	Gondar Ave (btw Gallup St and Greentop St)
29	P-1521	280		CI	4	1952	C900	8	\$131	\$36,700	2022-23	\$40,600	4300 Block of Gondar Ave
30	P-1634	329		CI	6	1952	C900	8	\$131	\$43,100	2022-23	\$47,000	Senasc Ave (btw McKnight Dr and Turnergrove Dr)
31	P-1640	257		CI	4	1952	C900	8	\$131	\$33,700	2022-23	\$37,300	Faust Ave (btw Yearling St) and Eberle St
32	P-1641	860		CI	4	1952	C900	8	\$131	\$112,700	2023-24	\$127,000	Faust Ave (btw Turnergrove Dr and Yearling St)
33	P-1435	1,096		AC	4	1956	C900	8	\$131	\$143,700	2023-24	\$161,900	5700 Block of Fanwood Ave
34	P-1601	293		CI	4	1952	C900	8	\$131	\$38,400	2023-24	\$43,300	4600 Block of Woodruff Ave
35	P-1602	1,082		CI	4	1952	C900	8	\$131	\$135,300	2023-24	\$152,400	4500 Block of Woodruff Ave
36	P-1679	270		CI	4	1952	C900	8	\$131	\$35,400	2023-24	\$39,900	Woodruff Ave (btw Denmead St and Hardwick St)
37	P-1678	256		CI	4	1952	C900	8	\$131	\$33,500	2023-24	\$37,800	Woodruff Ave (btw Dashiwood St and Denmead St)
38	P-177	97		AC	6	1956	C900	10	\$143	\$13,900	2023-24	\$15,700	Under 5500 blk of Woodruff Ave
39	P-1677	259		CI	4	1952	C900	8	\$131	\$33,900	2023-24	\$38,200	Woodruff Ave (btw Danieland St and Dashiwood St)
40	P-1684	212		CI	4	1942	C900	10	\$143	\$30,300	2023-24	\$34,200	Woodruff Ave (btw Danieland St and Dashiwood St)
41	P-1680	252		CI	4	1952	C900	8	\$131	\$33,000	2023-24	\$37,200	Harvey Way (btw Woodruff Ave and Albany Ave)
42	P-1680	233		AC	8	1952	C900	10	\$143	\$33,400	2023-24	\$37,600	5250 Block of Woodruff Ave
43	P-1605	1,219		CI	4	1952	C900	8	\$131	\$159,700	2023-24	\$179,900	Southwest of South St and Woodruff Ave
44	P-1579	772		CI	4	1952	C900	8	\$131	\$101,100	2023-24	\$113,900	4700 Block of Albany Ave
45	P-1580	1,259		CI	4	1952	C900	8	\$131	\$165,000	2024-25	\$189,600	4300 Block of Albany Ave
46	P-139	103		AC	8	1952	C900	12	\$155	\$16,000	2024-25	\$18,400	Under South St (at Lakewood Marketplace Shopping Center)
47	P-1891	236		CI	6	1952	C900	8	\$131	\$30,900	2024-25	\$34,800	Tanglewood St (btw Radnor Ave and Albany Ave)
48	P-142	196		CI	8	1942	C900	10	\$143	\$35,200	2024-25	\$40,500	Harvey Way (btw Radnor Ave and Albany Ave)
49	P-142	196		AC	8	1956	C900	12	\$155	\$30,400	2024-25	\$35,000	Lakewood Marketplace Shopping Center (Along 5700 blk South St)
50	P-1631	161		CI	4	1952	C900	8	\$131	\$21,100	2024-25	\$24,300	Under Del Amo Blvd (at Silva St)
51	P-1623	307		CI	4	1952	C900	8	\$131	\$40,300	2024-25	\$46,700	Radnor Ave (btw Del Amo Blvd and Albany Ave)
52	P-1604	979		CI	4	1952	C900	8	\$131	\$128,200	2024-25	\$147,300	4700 Block of Radnor Ave
53	P-1581	1,259		CI	4	1942	C900	10	\$143	\$165,000	2024-25	\$189,600	4300 Block of Radnor Ave
54	P-1068	1,128		AC	6	1952	C900	12	\$155	\$161,300	2025-26	\$189,000	Alley (btw Harvey Way and Tilbury St)
55	P-143	198		AC	8	1956	C900	10	\$143	\$90,100	2024-25	\$105,300	Lakewood Marketplace Shopping Center (Along 5700 blk South St)
56	P-101	630		AC	8	1952	C900	10	\$143	\$90,100	2026-27	\$105,300	Along South St (South of South St)
57	P-1598	250		CI	6	1952	C900	8	\$131	\$32,800	2026-27	\$39,200	Tanglewood St (btw Lomina Ave and Radnor Ave)
58	P-1603	1,286		CI	4	1952	C900	8	\$131	\$168,500	2026-26	\$197,500	4800 Block of Lomina Ave
59	P-1582	1,277		CI	4	1952	C900	8	\$131	\$167,400	2026-26	\$196,200	4300 Block of Lomina Ave
60	P-1656	1,437		CI	4	1952	C900	8	\$131	\$188,900	2026-26	\$220,700	5700 Block of Eckleson St
61	P-1657	1,419		CI	4	1952	C900	8	\$131	\$185,900	2026-27	\$222,200	5700 Block of Eckleson St
62	P-1658	1,401		CI	4	1952	C900	8	\$131	\$183,500	2026-27	\$219,300	5700 Block of Yearling St
63	P-1892	282		CI	6	1952	C900	8	\$131	\$37,000	2026-27	\$44,300	5750 Block of Tanglewood St
64	P-1618	1,286		CI	4	1975	C900	8	\$131	\$166,500	2026-27	\$201,400	4800 Block of Otana Ave
65	P-1910	241		CI	6	1952	C900	8	\$131	\$31,600	2026-27	\$37,800	Tanglewood St (btw Eastbrook Ave and Otana Ave)
66	P-1608	1,286		CI	4	1952	C900	8	\$131	\$168,500	2026-27	\$201,400	4800 Block of Eastbrook Ave
67	P-1686	1,040		CI	4	1952	C900	8	\$131	\$136,300	2026-27	\$162,900	5100 Block of Dunrobin Ave
68	P-1612	1,337		CI	4	1952	C900	8	\$131	\$175,200	2026-27	\$209,300	4800 Block of Dunrobin Ave
69	P-1578	1,337		CI	4	1952	C900	8	\$131	\$175,200	2027-28	\$213,600	4500 Block of Dunrobin Ave
70	50095	627		CI	4	1952	C900	8	\$131	\$82,200	2026-27	\$98,300	5000 Block of Coldbrook Ave
71	P-1705	1,377		CI	4	1952	C900	8	\$131	\$180,500	2027-28	\$220,100	5600 Block of Coldbrook Ave
72	50093	562		CI	4	1952	C900	8	\$131	\$73,600	2027-28	\$89,800	4900 Block of Coldbrook Ave

Pipe ID	Model ID	Length (ft)	Length (miles)	Existing Pipe		Proposed Pipe				Adjusted Total Cost ⁽¹⁾	Location	
				Type	Diameter (Inches)	Year of Installation	Type	Diameter (Inches)	Unit Rate (\$ per Linear Foot) ⁽²⁾			Total Cost (2017)
73	P-1614	228		CI	4	1952	C900	8	\$131	\$29,900	2027-28	Under Del Amo Blvd
74	P-1607	1,400		CI	4	1952	C900	8	\$183,500	\$228,200	2028-29	4700 Block of Coldbrook Ave
75	P-1577	1,290		CI	4	1952	C900	8	\$131	\$169,100	2028-29	4500 Block of Coldbrook Ave
76	P-1683	1,040		CI	4	1952	C900	8	\$136,300	\$169,500	2028-29	5200 Block of Briercrest Ave
77	P-1669	901		CI	4	1952	C900	8	\$118,100	\$144,000	2027-28	5000 Block of Briercrest Ave
78	P-1704	1,459		CI	4	1952	C900	8	\$186,500	\$239,100	2029-30	5600 Block of Briercrest Ave
79	P-1666	395		CI	4	1952	C900	8	\$51,800	\$64,500	2029-29	Briercrest Ave North (btw Adenmoor Ave and Del Amo Blvd)
80	P-1908	119		CI	4	1952	C900	8	\$15,600	\$19,800	2029-30	Del Amo Blvd
81	P-1888	309		CI	4	1952	C900	8	\$43,300	\$51,500	2029-30	Briercrest Ave South (btw Adenmoor Ave and Del Amo Blvd)
82	P-1611	1,093		CI	4	1952	C900	8	\$143,300	\$181,800	2029-30	4700 Block of Briercrest Ave
83	P-1576	1,275		CI	4	1952	C900	8	\$167,100	\$212,000	2029-30	4500 Block of Briercrest Ave
84	P-1573	1,312		CI	4	1952	C900	8	\$171,900	\$218,100	2029-30	4300 Block of Briercrest Ave
85	P-1667	1,138		CI	4	1952	C900	8	\$149,100	\$189,100	2029-30	5000 Block of Adenmoor Ave
86	P-1709	1,228		CI	4	1952	C900	8	\$166,900	\$204,100	2029-30	5600 Block of Adenmoor Ave
87	P-1610	1,334		CI	4	1952	C900	8	\$174,800	\$221,700	2029-30	4700 Block of Adenmoor Ave
88	P-1571	1,278		CI	4	1952	C900	8	\$167,500	\$212,500	2029-30	4500 Block of Adenmoor Ave
89	P-1572	1,887		CI	4	1952	C900	8	\$247,200	\$319,800	2030-31	4340 Block of Adenmoor Ave
90	P-1574	1,283		CI	4	1952	C900	8	\$168,100	\$217,500	2030-31	4500 Block of Bellflower Blvd
91	P-1745	1,040		CI	4	1952	C900	8	\$136,300	\$176,400	2030-31	5200 Block of Montair Ave
92	P-1749	930		CI	4	1952	C900	8	\$121,800	\$157,600	2030-31	5300 Block of Montair Ave
93	P-1769	1,195		CI	4	1952	C900	8	\$156,600	\$202,600	2030-31	5000 Block of Montair Ave
94	P-1737	1,301		CI	4	1952	C900	8	\$170,500	\$220,600	2030-31	5600 Block of Montair Ave
95	P-1765	1,040		CI	4	1952	C900	8	\$136,300	\$176,400	2030-31	5200 Block of Autry Ave
96	P-1750	927		CI	4	1952	C900	8	\$121,500	\$157,200	2030-31	5300 Block of Autry Ave
97	P-1744	943		CI	4	1952	C900	8	\$123,600	\$159,900	2030-31	5000 Block of Autry Ave
98	P-1746	1,042		CI	4	1952	C900	8	\$136,500	\$180,200	2031-32	5500 Block of Autry Ave
99	P-1770	306		CI	4	1952	C900	8	\$40,200	\$52,100	2030-31	Autry Ave (btw Montair Ave and Del Amo Blvd)
100	P-1724	438		CI	4	1952	C900	8	\$57,400	\$75,800	2031-32	Autry Ave (btw South St and Montair Ave)
101	P-490	306		AC	8	1952	C900	12	\$155	\$47,500	2031-32	B St (at Faculty Ave)
102	P-711	493		CI	8	1952	C900	12	\$155	\$76,200	2031-32	C St (at Hazelbrook Ave)
103	P-498	633		CI	10	1952	C900	12	\$155	\$129,600	2031-32	Hazelbrook Ave (btw Candlewood St and A St)
104	P-714	402		CI	10	1952	C900	12	\$155	\$82,400	2031-32	B St (at A St)
105	P-709	463		CI	10	1952	C900	12	\$155	\$94,800	2031-32	Hazelbrook Ave (btw C St and D St)
106	P-183	581		CI	10	1952	C900	12	\$155	\$119,100	2031-32	4900 Block of Hazelbrook Ave
107	P-1752	872		CI	10	1952	C900	12	\$155	\$178,600	2031-32	Pepperwood Ave (at Candlewood St)
108	P-50101	832		CI	10	1952	C900	12	\$155	\$129,000	2031-32	Pepperwood Ave (at Hardwick St)
109	P-1836	790		CI	10	1952	C900	12	\$155	\$122,600	2031-32	4800 Block of Castana Ave
110	P-1831	1,322		CI	4	1951	C900	8	\$131	\$173,200	2031-32	Hayter Ave (btw Del Amo Blvd and Hardwick St)
111	P-836	1,322		CI	4	1951	C900	8	\$131	\$173,200	2031-32	Hayter Ave (btw Del Amo Blvd and Hardwick St)
112	P-744	382		CI	8	1951	C900	10	\$143	\$54,700	2032-33	4800 Block of Pimenta Ave
113	50087	605		CI	8	1951	C900	10	\$143	\$86,600	2032-33	4900 Block of Hayter Ave
114	50085	146		CI	8	1951	C900	10	\$143	\$20,900	2032-33	4900 Block of Hayter Ave
115	P-1839	1,252		CI	4	1951	C900	8	\$131	\$164,100	2032-33	3600 Block of Allied St
116	P-677	352		CI	8	1951	C900	10	\$143	\$50,400	2032-33	Country Club Dr (at Downey)
117	P-1841	249		CI	6	1951	C900	8	\$131	\$32,600	2032-33	4800 Block of Downey Ave
118	P-45	386		CI	6	1951	C900	8	\$131	\$50,600	2032-33	4830 Block of Downey Ave
119	P-95	1,125		CI	4	1951	C900	8	\$131	\$147,400	2032-33	5100 Block of Downey Ave
120	P-1817	1,253		CI	4	1951	C900	8	\$131	\$164,200	2032-33	5100 Block of Downey Ave
121	P-1846	1,382		CI	4	1951	C900	8	\$181,100	\$221,000	2032-33	3300 Block of Sradwood St
122	P-1818	398		CI	4	1951	C900	8	\$52,200	\$70,300	2032-33	Kneelike Ave (at Bliker Ave)
123	P-1819	1,019		CI	4	1951	C900	8	\$133,600	\$179,900	2032-33	5100 Block of Kneelike Ave
124	P-1822	1,144		CI	4	1951	C900	8	\$149,900	\$201,800	2032-33	3200 Block of Kneelike Ave
125	P-1821	1,147		CI	4	1951	C900	8	\$150,400	\$206,500	2032-33	3200 Block of Kneelike Ave
126	P-1824	1,151		CI	4	1951	C900	8	\$150,800	\$207,100	2033-34	3200 Block of Kneelike Ave
127	P-1815	1,420		CI	4	1951	C900	8	\$186,100	\$255,500	2033-34	5200 Block of Levesiste Ave
128	P-616	577		AC	6	1951	C900	8	\$75,600	\$101,800	2032-33	4800 Block of Levesiste Ave
131	P-516	1,051		CI	8	1951	C900	12	\$155	\$162,900	2033-34	Hayter Ave (btw Candlewood St and Hardwick St)
132	P-533	480		ST	10	1942	C900	10	\$143	\$68,700	2033-34	Pepperwood Blvd at Ashworth St
133	P-575	438		CI	6	1952	C900	8	\$57,400	\$78,800	2033-34	5700 Block of Michelson St
134	P-683	765		CI	4	1952	C900	8	\$131	\$137,700	2033-34	4500 Block of Ocana Ave
135	P-1497	1,279		CI	4	1952	C900	8	\$167,600	\$230,100	2033-34	4300 Block of Carfax Ave
136	P-1500	1,279		CI	4	1952	C901	8	\$167,600	\$230,100	2033-34	4300 Block of Carfax Ave
137	P-1509	948		CI	4	1952	C900	8	\$124,300	\$170,700	2033-34	5900 Block of Fairman St
138	P-1510	948		CI	4	1952	C900	8	\$124,300	\$170,700	2033-34	5900 Block of Elkport St
139	P-1511	948		CI	4	1952	C900	8	\$124,200	\$170,500	2033-34	5900 Block of Gallup St
140	P-1512	948		CI	4	1952	C900	8	\$124,200	\$170,500	2033-34	5900 Block of Gallup St
141	P-1524	1,291		CI	4	1952	C900	8	\$169,200	\$237,000	2034-35	6200 Block of Elisa St
142	P-1524	1,291		CI	4	1952	C900	8	\$169,200	\$237,000	2034-35	6200 Block of Hemillee St
143	P-1535	1,287		CI	4	1952	C900	8	\$168,600	\$236,100	2034-35	4700 Block of Snowden Ave
144	P-1537	1,287		CI	4	1952	C900	8	\$168,600	\$236,100	2034-35	4700 Block of Snowden Ave
145	P-1546	948		CI	4	1952	C900	8	\$124,200	\$181,000	2036-37	5900 Block of Deerford St
146	P-1547	948		CI	4	1952	C900	8	\$124,300	\$181,000	2036-37	5900 Block of Loomis St
147	P-1548	948		CI	4	1952	C900	8	\$124,300	\$181,000	2036-37	5900 Block of Sradwood St
148	P-1556	742		CI	4	1952	C900	8	\$131	\$97,300	> 2037-38	6000 Block of Sugarwood St

Pipe ID	Model ID	Length (ft)	Length (miles)	Existing Pipe		Proposed Pipe				Adjusted Total Cost ⁽¹⁾	Location		
				Type	Diameter (inches)	Year of Installation	Type	Diameter (inches)	Unit Rate (\$ per Linear Foot) ⁽²⁾			Total Cost (2017)	Proposed Installation Year (FY)
149	P-1585	765		CI	4	1952	C900	8	\$131	\$100,200	> 2037-38	#N/A	4500 Block of Radnor Ave
150	P-1587	765		CI	4	1952	C900	8	\$131	\$100,200	> 2037-38	#N/A	4500 Block of Lomira Ave
151	P-1597	770		CI	4	1952	C900	8	\$131	\$100,900	> 2037-38	#N/A	4500 Block of Eastbrook Ave
152	P-1632	1,317		CI	4	1952	C900	8	\$131	\$173,600	> 2037-38	#N/A	5700 Block of Silva St
153	P-1671	781		CI	4	1952	C900	8	\$131	\$103,300	> 2037-38	#N/A	5800 Block of Danfield St
154	P-1672	799		CI	4	1952	C900	8	\$131	\$104,700	> 2037-38	#N/A	5800 Block of Dashiwood St
155	P-1673	817		CI	4	1952	C900	8	\$131	\$107,100	> 2037-38	#N/A	5800 Block of Denmark St
156	P-1682	1,040		CI	4	1952	C900	8	\$131	\$136,300	> 2037-38	#N/A	5800 Block of Aldenmoor Ave
157	P-1688	955		CI	4	1952	C900	8	\$131	\$125,200	> 2037-38	#N/A	5800 Block of Aldenmoor Ave
158	P-1689	975		CI	4	1952	C900	8	\$131	\$127,800	> 2037-38	#N/A	5800 Block of Aldenmoor Ave
159	P-1692	999		CI	4	1952	C900	8	\$131	\$130,900	> 2037-38	#N/A	5800 Block of Aldenmoor Ave
160	P-1697	532		CI	4	1952	C900	8	\$131	\$69,800	> 2037-38	#N/A	5700 Block of Candor St
161	P-1699	788		CI	4	1952	C900	8	\$131	\$103,300	> 2037-38	#N/A	5700 Block of Candor St
162	P-1701	1,094		CI	4	1952	C900	8	\$131	\$143,300	> 2037-38	#N/A	5700 Block of Gardale St
163	P-1709	424		CI	4	1952	C900	8	\$131	\$55,600	> 2037-38	#N/A	5700 Block of Mc Auley St
164	P-1710	426		CI	4	1952	C900	8	\$131	\$55,900	> 2037-38	#N/A	5700 Block of Wolfe St
165	P-1711	429		CI	4	1952	C900	8	\$131	\$56,200	> 2037-38	#N/A	5700 Block of Wolfe St
166	P-1835	1,323		CI	4	1951	C900	8	\$131	\$173,300	> 2037-38	#N/A	4800 Block of Olive Ave
167	P-1869	399		CI	4	1951	C900	8	\$131	\$52,300	> 2037-38	#N/A	4130 Block of Clubhouse Dr
168	P-90	266		AC	6	1952	C900	8	\$131	\$34,900	> 2037-38	#N/A	Hackett Ave (btw Michelson St and Bigelow St)
169	P-170	910		CI	8	1951	C900	10	\$143	\$130,200	> 2037-38	#N/A	3400 Block of Country Club Dr
170	P-217	34		CI	6	1951	C900	10	\$143	\$4,900	> 2037-38	#N/A	Hayter Ave (at Hardwick St)
171	P-385	77		CI	6	1951	C900	12	\$155	\$11,900	> 2037-38	#N/A	Hayter Ave (at Hardwick St)
total:	133	141,600	26.82							\$18,790,900		#N/A	

Summary	Annual Total		Length
	Annual Total	Length	
2017-18	\$0	0	
2018-19	\$0	0	
2019-20	\$640,600	4,693	
2020-21	\$1,159,300	8,336	
2021-22	\$990,400	6,979	
2022-23	\$1,009,100	6,969	
2023-24	\$1,053,800	7,085	
2024-25	\$726,300	4,708	
2025-26	\$909,000	5,758	
2026-27	\$1,436,100	9,168	
2027-28	\$700,000	4,405	
2028-29	\$672,500	4,125	
2029-30	\$1,746,700	10,535	
2030-31	\$1,840,100	10,853	
2031-32	\$1,813,500	9,497	
2032-33	\$1,836,400	10,269	
2033-34	\$2,346,300	12,803	
2034-35	\$946,200	5,156	
2035-36	\$0	0	
2036-37	\$543,200	2,844	
Total	\$20,376,500	124,173	

Notes:
AC = asbestos cement pipes; CI = cast iron pipe; C900 = polyvinyl chloride pipe; ST = steel pipe.
(1) Proposed pipes of replacement considering field fit or flow requirement, pressure, velocity and head loss in pipes.
(2) Results are based on normal operators under existing Maximum Dry Demand plus Fire Flow conditions based on an existing average annual demand of 7,100 AFY.
(3) Pipeline unit costs include material cost of the pipe per linear foot (including bases, handling, and profit), valve and fittings, laying, and installation labor.
(4) Adjusted cost based on an annual inflation rate increase of 2 percent.
Shaded rows (Pipe IDs 132 through 167) are recommended based on improving existing pipes with maintenance and leaking problems. All other pipeline recommendations are based on solving fire flow deficiencies.

<Page Intentionally Left Blank>

Appendix H
Sensitivity Analysis Scenario Results

<Page Intentionally Left Blank>

Scenario 0
 Deficiency Nodes with Normal Operation
 Under Maximum Day Demand + Fire Flow
 (Existing Average Annual Demand of 7,100 AF)
 (Baseline)

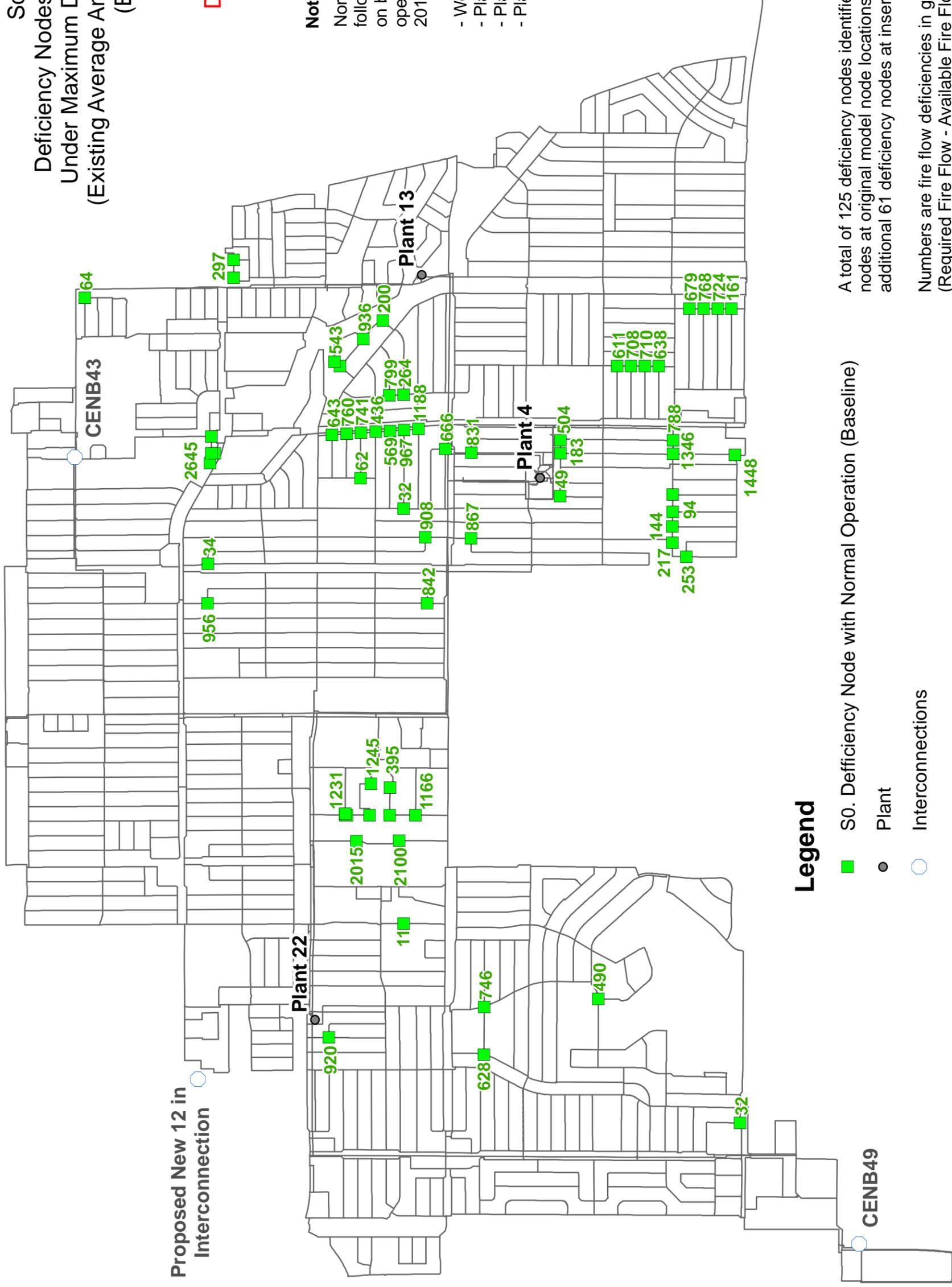
Proposed New 12 in Interconnection

DRAFT

Note:

Normal Operations assume the following wells/boosters are turned on based on examination of the operating wells/boosters during the 2016 fire flow tests:

- Wells: #2A, #4, #17, #18
- Plant 4 Boosters: #2, #3, #5, #7
- Plant 13 Booster: #1
- Plant 22 Boosters: #1, #3



Legend

- S0. Deficiency Node with Normal Operation (Baseline)
- Plant
- Interconnections

A total of 125 deficiency nodes identified, including 64 deficiency nodes at original model node locations (shown on map), and additional 61 deficiency nodes at inserted model node locations.

Numbers are fire flow deficiencies in gpm
 (Required Fire Flow - Available Fire Flow)

Scenario 1
 Deficiency Nodes with Normal Operation
 & CENB43 On
 Under Maximum Day Demand + Fire Flow
 (Existing Average Annual Demand of 7,100 AF)

DRAFT

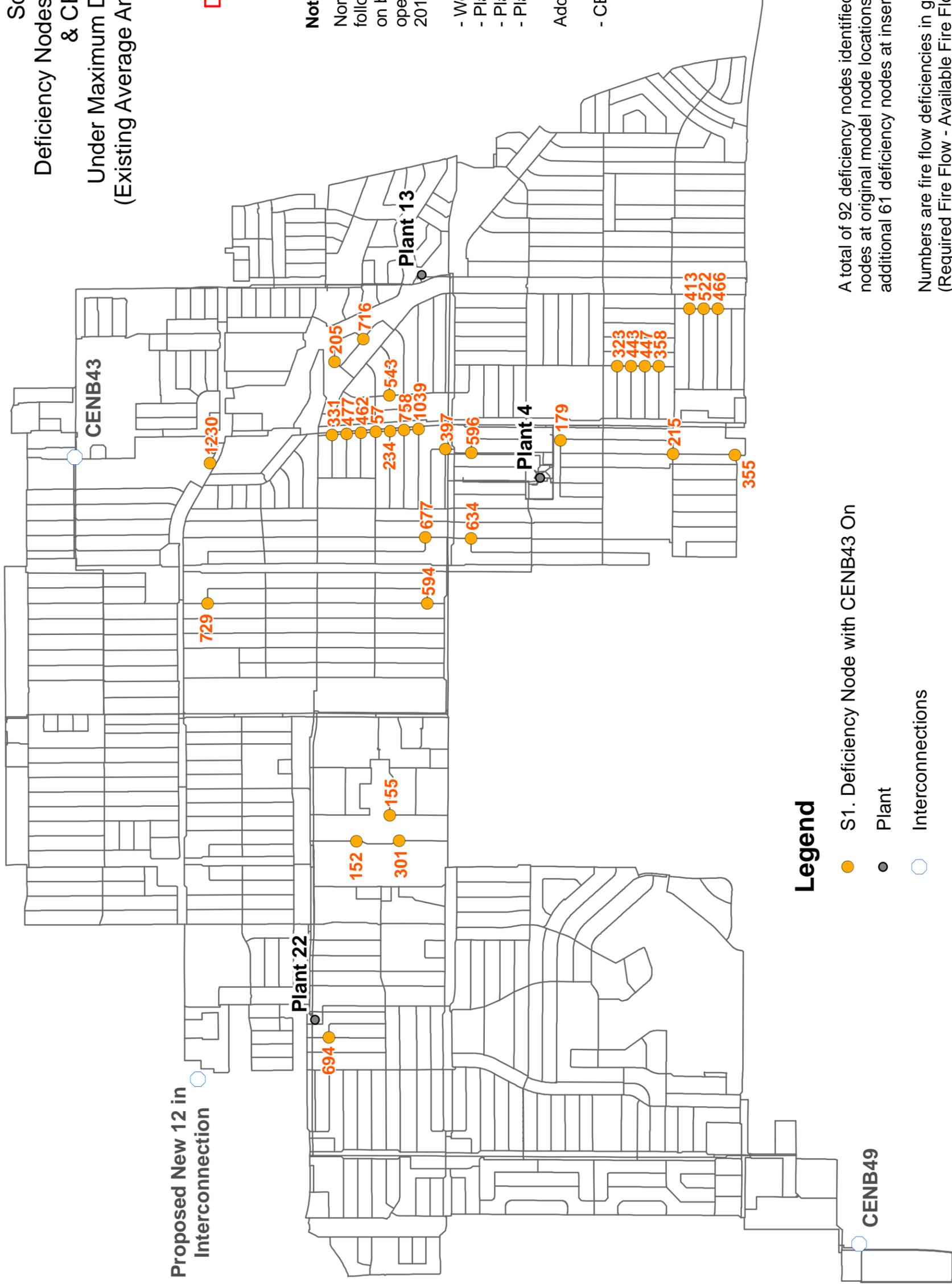
Note:

Normal Operations assume the following wells/boosters are turned on based on examination of the operating wells/boosters during the 2016 fire flow tests:

- Wells: #2A, #4, #17, #18
- Plant 4 Boosters: #2, #3, #5, #7
- Plant 13 Booster: #1
- Plant 22 Boosters: #1, #3

Additional Facility:

- CENB43: On



Legend

- S1. Deficiency Node with CENB43 On
- Plant
- Interconnections

A total of 92 deficiency nodes identified, including 31 deficiency nodes at original model node locations (shown on map), and additional 61 deficiency nodes at inserted model node locations.

Numbers are fire flow deficiencies in gpm (Required Fire Flow - Available Fire Flow)

Scenario 2
Deficiency Nodes with Normal Operation
& CENB49 On
Under Maximum Day Demand + Fire Flow
(Existing Average Annual Demand of 7,100 AF)

Proposed New 12 in Interconnection

DRAFT

Note:

Normal Operations assume the following wells/boosters are turned on based on examination of the operating wells/boosters during the 2016 fire flow tests:

- Wells: #2A, #4, #17, #18
- Plant 4 Boosters: #2, #3, #5, #7
- Plant 13 Booster: #1
- Plant 22 Boosters: #1, #3

Additional Facility:

- CENB49: On



Legend

- S2. Deficiency Node with CENB49 On
- Plant
- Interconnections

A total of 103 deficiency nodes identified, including 42 deficiency nodes at original model node locations (shown on map), and additional 61 deficiency nodes at inserted model node locations.

Numbers are fire flow deficiencies in gpm (Required Fire Flow - Available Fire Flow)

Scenario 3

Deficiency Nodes with Normal Operation & Proposed New 12 inch LB Interconnection On Under Maximum Day Demand + Fire Flow (Existing Average Annual Demand of 7,100 AF)

Proposed New 12 in
Interconnection

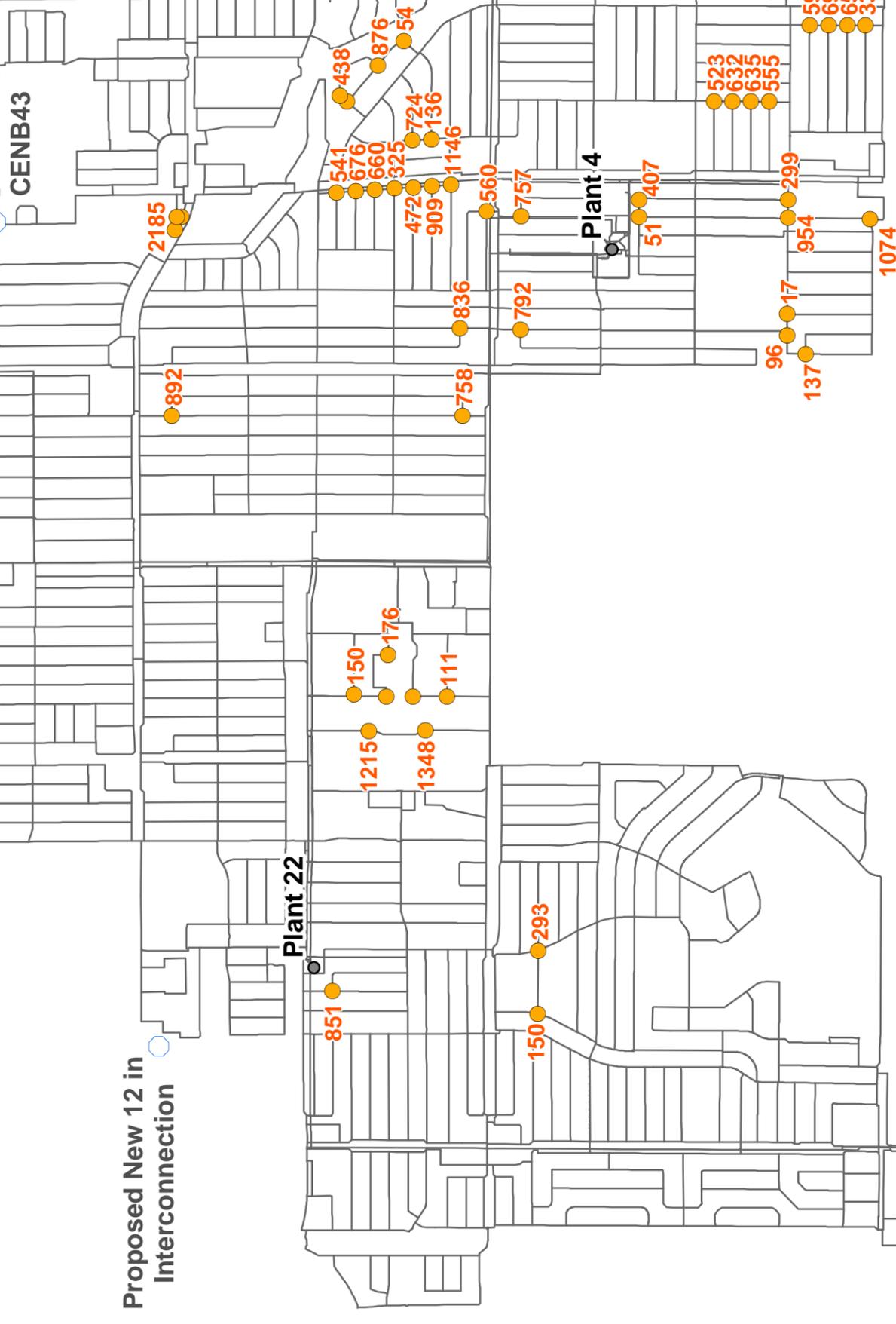
DRAFT

Plant 22

Plant 13

Plant 4

CENB49



Note:

Normal Operations assume the following wells/boosters are turned on based on examination of the operating wells/boosters during the 2016 fire flow tests:

- Wells: #2A, #4, #17, #18
- Plant 4 Boosters: #2, #3, #5, #7
- Plant 13 Booster: #1
- Plant 22 Boosters: #1, #3

Additional Facility:

- New 12" LB Interconnection: On

Legend

- S3. Deficiency Node with New 12 inch LB Interconnection On
- S3. Deficiency nodes identified, including 48 deficiency nodes at original model node locations (shown on map), and additional 61 deficiency nodes at inserted model node locations.
- Plant
- Interconnections

Numbers are fire flow deficiencies in gpm
(Required Fire Flow - Available Fire Flow)

Scenario 4
Deficiency Nodes with Normal Operation
& Plant 4 Boosters All On
Under Maximum Day Demand + Fire Flow
(Existing Average Annual Demand of 7,100 AF)

DRAFT

Note:
 Normal Operations assume the following wells/boosters are turned on based on examination of the operating wells/boosters during the 2016 fire flow tests:

- Wells: #2A, #4, #17, #18
- Plant 4 Boosters: #2, #3, #5, #7
- Plant 13 Booster: #1
- Plant 22 Boosters: #1, #3

Additional Facilities:

- Plant 4 Boosters #4, #6, #8: On



Legend

- S4. Deficiency Node with Plant4 All Boosters On
- Plant
- Interconnections

A total of 113 deficiency nodes identified, including 52 deficiency nodes at original model node locations (shown on map), and additional 61 deficiency nodes at inserted model node locations.

Numbers are fire flow deficiencies in gpm (Required Fire Flow - Available Fire Flow)

<Page Intentionally Left Blank>

Appendix I
Pipeline Leak Memorandum

<Page Intentionally Left Blank>



DRAFT TECHNICAL MEMORANDUM

2171 E. Francisco Blvd., Suite K • San Rafael, California • 94901
TEL: (415) 457-0701 FAX: (415) 457-1638 e-mail: milesm@stetsonengineers.com

TO: City of Lakewood DATE: 3/8/2017
FROM: Stetson Engineers Inc. JOB NO: 2624
RE: Statistical Analysis of the Water Main Leak Records from the City of Lakewood
Water Department

1.0 INTRODUCTION

As part of the Water System Master Plan Update for the City of Lakewood's ("City") Water Department ("Department"), the following analysis was conducted regarding the City's historical water main leaks and their variation with material and size.

Locations of main breaks from 1989 through 2000 were previously plotted in the 2002 Master Plan (Figure IV-4) report provided by the City. Leaks from this period were not plotted as part of this work. Initial findings from other documents provided by the City indicate pressures throughout the City's system ranged from approximately 55 to 65 psi. Because this range is not large, pressure is assumed to not be a significant factor with regards to main leaks. Stetson plotted leak locations as part of this work, and there did not appear to be a correlation with location and pressure.

City staff previously provided Geographical Information Systems (GIS) files which included information on parcels within the City, road centerlines, City general plan, and topography (one foot contours). The City's service area includes approximately 180 miles of main lines, and GIS layers provided included fire hydrants, water valves, water lines, water meters, and water valves.

The City provided information on historical leaks, dating back to 1989, but a number of years from 2001 through 2012 were missing from this initial data set. Stetson performed an initial analysis using this data set. This analysis found that the majority of historical leaks were service leaks, with main leaks comprising just less than a quarter of the leaks. Additionally this initial analysis identified the winter months of December, January, and October as having greater than average number of Main breaks when compared to other times of the year.

2.0 MAIN LINE LEAKS

2.1 WATER MAIN REPLACEMENT

City staff provided records regarding water main replacement projects from 2003 through 2015. Replacement projects generally consisted of replacing stretches of cast iron (CI) pipe, generally 4 inches in diameter, but occasionally 6 or 8 inches in diameter, with generally 8-inch diameter AWWA C900¹ polyvinyl chloride (C900) pipelines, with one exception (2005) when 8-inch ductile iron pipe (“DIP”) was installed. Lengths of the pipeline replacement were not provided in the estimates from 2003 through 2008, however, approximately 12.5 miles of pipeline was replaced from 2009 through 2015, averaging slightly over 2 miles replaced every year.

The City’s water main replacement program (2003 through 2015) appears to have been effective in reducing the number of leaks that occur on an annual basis, as the annual average of water main breaks after 2012 is significantly less than the annual average before 2001.

Stetson reviewed if the water main replacement program was based on the locations of known main leaks, by comparing main leak locations versus the pipes replaced as part of the water main replacement program. It was found that there was not a direct relationship between the two.

2.2 SUMMARY OF MAIN LEAKS BY PIPE SIZE AND COMPOSITION

Stetson was subsequently provided an additional data set which included repair information on the main leaks. After January 2000, this data set included information on the pipe material type, as well as the pipe size. Based on all data received, the following summary tabulation was developed:

¹ American Water Works Association (AWWA) sets technical standards for various kinds of pipe. A “C900” pipe, regardless of manufacture or purchase is asserted that it meets the AWWA C900 standards.

**Summary of Pipe Size and Pipe Composition for all Main Leaks
(Jan. 2000 - Jan. 2017)**

Pipe Type	Pipe Size						Total	%
	4 inch	6 inch	8 inch	8.5 inch	10 inch	12 inch		
Cast Iron (CI)	202	29	18	1	4	1	255	92.1%
Asbestos Cement (AC)	6	5	6	0	0	1	18	6.5%
Steel (ST)	2	1	0	0	0	0	3	1.1%
PVC (C-900)	0	0	1	0	0	0	1	0.4%
<i>Total</i>	210	35	25	1	4	2	227	
%	75.8%	12.6%	9.0%	0.4%	1.4%	0.7%		100%

This tabulation indicates that a vast majority of the leaks during this period since 2000 were from 4-inch Cast Iron pipe. This is the same older pipe that was targeted for replacement by the City as part of the water main replacement program (from 2003 through 2015).

As shown in the following tabulation, 4-inch Cast Iron pipe continues to be the source of the majority of the main leaks (based on the more recent period from 2016 through 2017):

**Summary of Pipe Size and Pipe Composition for all Main Leaks
(Jan. 2016 - Jan. 2017)**

Pipe Type	Pipe Size						Total	%
	4 inch	6 inch	8 inch	8.5 inch	10 inch	12 inch		
Cast Iron (CI)	11	0	1	0	2	0	14	100%
Asbestos Cement (AC)	0	0	0	0	0	0	0	0%
Steel (ST)	0	0	0	0	0	0	0	0%
PVC (C-900)	0	0	0	0	0	0	0	0%
<i>Total</i>	11	0	1	0	2	0	14	
%	78.6%	0%	7.1%	0%	14.3%	0%		100%

3.0 DISCUSSION

The majority (over 75 percent) of the main leaks are in the 4-inch cast iron (“CI”) pipes that were targeted for replacement as part of the City’s water main replacement program. The recommendation for reducing future main leaks is that the City should continue to focus replacements on the 4-inch cast iron pipe segments, as was done during the 2003 through 2015 pipeline replacement program.

Appendix J
Listing of Secondary Priority Pipelines

<Page Intentionally Left Blank>

Proposed Water Main Replacements (Secondary Priority) ^{(1),(2)}

Pipe ID	Model ID	Length (ft)	Length (miles)	Existing Pipe		Proposed Pipe				Location			
				Type	Diameter (inches)	Year of Installation	Type	Diameter (inches)	Unit Rate (\$ per Lineal Foot) ⁽³⁾		Total Cost (2017)	Proposed Installation Year (FY)	Adjusted Total Cost ⁽⁴⁾
1	P-414	12		AC	12	0	PVC	12	\$155	\$2,000	> 2037-38	#N/A	2000 Block of Bibby Rd
2	P-675	856		AC	12	0	PVC	12	\$155	\$132,800	> 2037-38	#N/A	Cherry Ave at Bibby Rd
3	P-1912	3,878		AC	12	0	PVC	12	\$155	\$601,100	> 2037-38	#N/A	2000 Block of 36th St
4	P-1029	63		AC	12	0	PVC	12	\$155	\$9,900	> 2037-38	#N/A	Cover St at Industry
5	P-394	180		AC	12	0	PVC	12	\$155	\$27,900	> 2037-38	#N/A	2000 Block of Cover St
6	P-238	15		AC	12	0	PVC	12	\$155	\$2,400	> 2037-38	#N/A	2100 Block of Bibby Rd
7	P-1030	351		AC	12	0	PVC	12	\$155	\$54,400	> 2037-38	#N/A	3800 Block of Industry Ave
8	P-1031	72		AC	12	0	PVC	12	\$155	\$11,200	> 2037-38	#N/A	Cover St at Industry
9	P-1032	281		AC	12	0	PVC	12	\$155	\$43,600	> 2037-38	#N/A	Cover St at U P Railroad
10	P-405	287		AC	16	0	CMCLCS	16	\$214	\$61,400	> 2037-38	#N/A	2200 Block of Cover St
11	P-169	1,914		ST	16	0	CMCLCS	16	\$214	\$409,600	> 2037-38	#N/A	U P Railroad
12	P-99	126		ST	12	0	PVC	12	\$155	\$19,600	> 2037-38	#N/A	U P Railroad
13	P-389	159		AC	12	0	PVC	12	\$155	\$24,600	> 2037-38	#N/A	2400 Block of Carson St
14	P-406	488		AC	12	0	PVC	12	\$155	\$75,700	> 2037-38	#N/A	Cover St at Pixie Ave
15	P-407	703		AC	12	0	PVC	12	\$155	\$109,000	> 2037-38	#N/A	Pixie Ave at Cover St
16	P-951	24		AC	12	0	PVC	12	\$3,800	\$3,800	> 2037-38	#N/A	3900 Block of Pixie Ave
17	P-1060	1,021		AC	12	0	PVC	12	\$155	\$158,300	> 2037-38	#N/A	2500 Block of Carson St
18	P-1035	692		AC	12	0	PVC	12	\$155	\$107,300	> 2037-38	#N/A	Cover St at Paramount Blvd
19	P-674	664		AC	12	0	PVC	12	\$155	\$103,000	> 2037-38	#N/A	Kessler at Pixie Ave
20	P-912	58		AC	12	0	PVC	12	\$155	\$9,100	> 2037-38	#N/A	4000 Block of Paramount Blvd
21	P-865	46		AC	12	0	PVC	12	\$155	\$7,200	> 2037-38	#N/A	4000 Block of Paramount Blvd
22	P-408	394		AC	12	0	PVC	12	\$155	\$61,200	> 2037-38	#N/A	Paramount Blvd at Kessler
23	50123	434		AC	12	0	PVC	12	\$155	\$67,300	> 2037-38	#N/A	Paramount Blvd at Carson St
24	P-866	36		AC	12	0	PVC	12	\$155	\$5,600	> 2037-38	#N/A	Paramount Blvd at Carson St
25	P-672	1,030		AC	12	0	PVC	12	\$155	\$159,800	> 2037-38	#N/A	Carson St at Paramount
26	P-1417	23		ST	12	1942	PVC	12	\$3,600	\$3,600	> 2037-38	#N/A	Clark Below Rose St
27	P-261	23		AC	12	1942	PVC	12	\$3,700	\$3,700	> 2037-38	#N/A	5050 Block of Ashworth St
28	P-56	20		AC	12	1942	PVC	12	\$3,100	\$3,100	> 2037-38	#N/A	6230 Block of Clark Ave
29	P-1003	364		AC	12	1942	PVC	12	\$155	\$56,500	> 2037-38	#N/A	6200 Block of Clark Ave
30	P-1001	57		ST	12	1942	PVC	12	\$8,900	\$8,900	> 2037-38	#N/A	6230 Block of Clark Ave
31	P-172	343		AC	12	1942	PVC	12	\$155	\$53,200	> 2037-38	#N/A	6100 Block of Clark Ave
32	P-223	250		AC	12	1942	PVC	12	\$155	\$38,800	> 2037-38	#N/A	6100 Block of Clark Ave
33	P-886	283		AC	12	1942	PVC	12	\$155	\$43,900	> 2037-38	#N/A	6000 Block of Clark Ave
34	P-397	269		AC	12	1942	PVC	12	\$155	\$41,800	> 2037-38	#N/A	6000 Block of Clark Ave
35	P-1359	5		CCP	27	1942	PVC	27	\$800	\$800	> 2037-38	#N/A	Hedda St
36	P-1360	14		CCP	27	1942	CMCLCS	27	\$303	\$4,300	> 2037-38	#N/A	Hedda St
37	P-222	269		AC	12	1942	PVC	12	\$155	\$41,800	> 2037-38	#N/A	6000 Block of Clark Ave
38	P-256	774		CCP	27	1942	CMCLCS	27	\$303	\$234,700	> 2037-38	#N/A	Bellflower Blvd
39	P-255	129		CCP	27	1942	CMCLCS	27	\$303	\$39,200	> 2037-38	#N/A	5510 Block of Allington St
40	P-1782	291		CCP	27	1942	CMCLCS	27	\$303	\$88,100	> 2037-38	#N/A	5550 Block of Allington St
41	P-1557	1,174		CI	4	1942	PVC	8	\$131	\$153,900	> 2037-38	#N/A	4200 Block of Chatwin Ave
42	P-327	260		CCP	27	1942	CMCLCS	27	\$303	\$78,800	> 2037-38	#N/A	5600 Block of Allington St
43	P-1558	1,152		CI	4	1942	PVC	8	\$131	\$150,900	> 2037-38	#N/A	4200 Block of Warwick Ave
44	P-277	300		CCP	27	1942	CMCLCS	27	\$303	\$90,900	> 2037-38	#N/A	5650 Block of Allington St
45	P-1559	1,152		CI	4	1942	PVC	8	\$131	\$151,000	> 2037-38	#N/A	4200 Block of Sebrun Ave
46	P-1236	280		CCP	27	1942	CMCLCS	27	\$303	\$84,800	> 2037-38	#N/A	5700 Block of Allington St
47	P-1560	1,152		CI	4	1942	PVC	8	\$131	\$151,000	> 2037-38	#N/A	San Anselme Ave at Harvey Way
48	P-1561	48		CI	4	1942	PVC	8	\$131	\$151,000	> 2037-38	#N/A	4200 Block of Ocala Ave
49	P-50105	557		CCP	27	1942	CMCLCS	27	\$303	\$168,800	> 2037-38	#N/A	5750 Block of Allington St
50	P-281	5		CI	16	1942	CMCLCS	16	\$214	\$1,100	> 2037-38	#N/A	Woodruff Ave at Carwood Shopping Center
51	P-699	338		CI	16	1942	CMCLCS	16	\$214	\$72,400	> 2037-38	#N/A	Woodruff Ave at E Carson St
52	P-398	943		CI	16	1942	CMCLCS	16	\$214	\$201,900	> 2037-38	#N/A	Woodruff Ave at Carwood Shopping Center
53	P-1276	1,152		CI	6	1942	PVC	8	\$131	\$151,000	> 2037-38	#N/A	Lomina Ave (Btw Harvey Way and Tibury St)
54	P-1002	844		CI	10	1942	PVC	10	\$143	\$120,800	> 2037-38	#N/A	Next to Bellflower Blvd (Btw Rose St and Ashworth St)
55	P-85	1,707		CI	12	1942	PVC	12	\$155	\$264,700	> 2037-38	#N/A	Under Ardmore Ave (Btw Rose St and Ashworth St)
56	P-196	207		CI	12	1942	PVC	12	\$155	\$32,200	> 2037-38	#N/A	Above Whitewood Ave (Btw Rose St and Ashworth St)
57	P-147	207		AC	12	1942	PVC	12	\$155	\$32,200	> 2037-38	#N/A	Above Whitewood Ave (Btw Rose St and Ashworth St)
58	P-857	595		AC	12	0	PVC	12	\$155	\$92,300	> 2037-38	#N/A	Paramount Blvd (Under Carson St)
59	P-954	696		DI	12	0	PVC	12	\$155	\$107,900	> 2037-38	#N/A	Next to Paramount Blvd (Btw Kohl's and SkyBlue Insurance)
60	P-955	902		DI	12	0	PVC	12	\$155	\$139,800	> 2037-38	#N/A	Under E Carson St (Around Cal Bowl)
61	P-216	296		ST	18	0	CMCLCS	18	\$230	\$68,100	> 2037-38	#N/A	Industry Ave (Btw Cover St and Bibby Rd)
62	P-527	234		DI	12	0	PVC	12	\$155	\$36,300	> 2037-38	#N/A	Above Pixie Ave (Btw Stick Figure Sports and SkyBlue Insurance)
63	P-215	42		ST	18	0	CMCLCS	18	\$230	\$9,600	> 2037-38	#N/A	Corner of Cover St and Industry Ave
64	P-961	24		C900	12	1942	PVC	12	\$155	\$3,800	> 2037-38	#N/A	Corner of Carson St and Woodruff Ave

Pipe ID	Model ID	Length (ft)	Length (miles)	Existing Pipe			Proposed Pipe				Location		
				Type	Diameter (inches)	Year of Installation	Type	Diameter (inches)	Unit Rate (\$ per Linear Foot) ⁽³⁾	Total Cost (2017)		Proposed Installation Year (FY)	Adjusted Total Cost ⁽⁴⁾
65	P-962	81		C900	12	1942	PVC	12	\$155	\$12,500	> 2037-38	#N/A	Corner of Carson St and Woodruff Ave
66	P-1033	26		AC	18	0	CMLCS	18	\$230	\$6,100	> 2037-38	#N/A	Corner of Cover St and Industry Ave
67	P-1034	59		AC	18	0	CMLCS	18	\$230	\$13,600	> 2037-38	#N/A	Corner of Cover St and Industry Ave
68	P-1383	64		DI	12	0	PVC	12	\$155	\$9,900	> 2037-38	#N/A	Corner of E Kessler Rd and Pike Ave
Total:	68	32,501	6.16							\$5,487,500		#N/A	

Notes:

AC = asbestos cement pipes; CI = cast iron pipes; PVC = polyvinyl chloride pipes; ST = steel pipes; CMLCS = Cement Mortar Lined and Coated Steel Pipe

⁽¹⁾ Proposed pipe replacement based on size, material, and age

⁽²⁾ Results are based on normal operations under existing Maximum Day Demand plus Fire Flow conditions based on an existing average annual demand of 7,100 AFY.

⁽³⁾ Pipeline unit costs include material cost of the pipe per linear foot (including taxes, handling, and profit), valves and fittings, paving, and installation labor.

⁽⁴⁾ Adjusted cost based on an annual inflation rate increase of 3 percent.

Summary	Annual Total	Length
2017-18	\$0	0
2018-19	\$0	0
2019-20	\$0	0
2020-21	\$0	0
2021-22	\$0	0
2022-23	\$0	0
2023-24	\$0	0
2024-25	\$0	0
2025-26	\$0	0
2026-27	\$0	0
2027-28	\$0	0
2028-29	\$0	0
2029-30	\$0	0
2030-31	\$0	0
2031-32	\$0	0
2032-33	\$0	0
2033-34	\$0	0
2034-35	\$0	0
2035-36	\$0	0
2036-37	\$0	0
Total	\$0	0



CITY OF LAKEWOOD

Water Rate Study Report

Final Report / August 2017





445 S Figueroa St.
Suite 2270
Los Angeles, CA 90071

Phone 213.262.9300
Fax 213.262.9303

www.raftelis.com

September 1, 2017

Ms. Diane Perkin
Director of Administrative Services
5050 Clark Ave
Lakewood, CA 90712

Subject: Water Rate Study Report

Dear Ms. Perkin:

Raftelis Financial Consultants, Inc. (Raftelis) is pleased to present this water rate study (Study) to the City. The Study involved a comprehensive review of the City's financial plan and a cost of service study to establish fair and equitable rates. We are confident that the results, based on cost of service principles, result in fair and equitable water rates for the City's customers and meet the requirements of Proposition 218.

The report includes a brief Executive Summary followed by study assumptions and a detailed rate derivation.

It was a pleasure working with you and other City Staff. Please extend a thank you to all your staff for their support during the study. If you have any questions, please call me at (626) 583-1894

Sincerely,

RAFTELIS FINANCIAL CONSULTANTS, INC.

A handwritten signature in blue ink, appearing to read 'Sanjay Gaur'.

Sanjay Gaur
Vice President

A handwritten signature in blue ink, appearing to read 'Steve Gagnon'.

Steve Gagnon, PE
Manager

A handwritten signature in blue ink, appearing to read 'Magu Diagne'.

Magu Diagne, PE

TABLE OF CONTENTS

- 1 EXECUTIVE SUMMARY8**
 - 1.1 BACKGROUND 8
 - 1.2 METHODOLOGY 8
 - 1.3 RESULTS AND RECOMMENDATIONS 8
 - Revenue Adjustments..... 8
 - Proposed Rates 8
- 2 POTABLE WATER ACCOUNT AND USE DATA..... 12**
 - 2.1 SYSTEM BACKGROUND 12
 - 2.2 ACCOUNT AND USE DATA 12
 - Projected Potable Water Sales and Account Growth 12
- 3 FINANCIAL PLAN 14**
 - 3.1 INFLATIONARY ASUMPTIONS..... 14
 - 3.2 REVENUE FROM CURRENT RATES..... 16
 - 3.3 PROPOSED REVENUE ADJUSTEMNTS 16
 - 3.4 REVENUE REQUIREMENT 17
 - 3.5 O&M EXPENSES AND GENERAL FUND TRANSFER 17
 - 3.6 CAPITAL IMPROVEMENT PLAN (CIP)..... 17
 - 3.7 EXISTING DEBT SERVICE 18
 - 3.8 NET CASH FLOW AND RESERVE REQUIREMENTS 18
 - 3.9 WATER FUND BALANCES 19
 - 3.10PROPOSED FINANCIAL PLAN..... 19
- 4 COST OF SERVICE ANALYSIS..... 21**
 - 4.1 FUNCTIONALIZATION AND ALLOCATION TO COST COMPONENTS..... 22
 - 4.2 REVENUE REQUIREMENT DETERMINATION 26
 - 4.3 UNIT COST DERIVATION..... 26
 - Tier Width Design 26
 - 4.4 DISTRIBUTION OF COST COMPONENTS TO CUSTOMER CLASSES..... 30
- 5 RATE DERIVATION 31**
 - 5.1 PROPOSED BI-MONTHLY METER CHARGE..... 31
 - 5.2 PROPOSED VOLUMETRIC RATES 32

Base Rate	32
Peaking Rate	32
Conservation Rate	33
6 BILL IMPACTS AND RATE COMPARSION	35
Customer Bill Impacts.....	35
Rate Comparison.....	36
7 RECYCLED WATER	37
7.1 ACCOUNT AND USAGE DATA.....	37
7.2 REVENUE REQUIREMENT DETERMINATION	37
8 PRIVATE FIRE	40

LIST OF TABLES

Table 1-1: Proposed Revenue Adjustments.....	8
Table 1-2: Current and Proposed Bi-Monthly Potable Water Meter Charge.....	9
Table 1-3: Current Volumetric Rates (\$/hcf).....	9
Table 1-4: Proposed Volumetric Rates (\$/hcf)	10
Table 1-5: Current and Proposed Bi-Monthly Private Fire Meter Charge	10
Table 1-6: Current and Proposed Bi-Monthly Recycled Water Meter Charge.....	10
Table 1-7: Current and Proposed Recycled Water Volumetric Rates (\$/hcf)	11
Table 2-1: Projected Potable Water Use	12
Table 2-2: Accounts by Meter Size	13
Table 2-3: Private Fire Accounts by Meter Size	13
Table 3-1: Expense and Non-Rate Revenue Inflation Assumptions	14
Table 3-2: Proposed Financial Plan Cash Flow	15
Table 3-3: Current Bi-Monthly Meter Charge.....	16
Table 3-4: Current Volumetric Rate by Customer Class (\$/hcf)	16
Table 3-5: Proposed Revenue Adjustments.....	17
Table 3-6: Capital Improvement Projects	18
Table 3-7: Operating, Capital, and Rate Stabilization Minimum Reserve Targets	18
Table 3-8: Water Fund Balances	19
Table 4-1: Peaking Factors and Cost Component Percentage Allocation	22
Table 4-2: O&M Allocation by Percentage to Cost Components	23
Table 4-3: O&M Allocation to Cost Components	24
Table 4-4: Asset Allocation by Percentage to Cost Components.....	25
Table 4-5: Asset Allocation to Cost Component.....	25
Table 4-6: Revenue Requirement Determination	26
Table 4-7: Average and Peak Usage Demand by Customer Class	28
Table 4-8: Unit Cost Calculation	29
Table 4-9: Cost of Service by Customer Class	30

Table 5-1: Derivation of Bi-Monthly Meter Charge.....	31
Table 5-2: Current and Proposed Bi-Monthly Meter Charge	31
Table 5-3: Derivation of Volumetric Rate (\$/hcf)	32
Table 5-4: Derivation of Peaking Component of Volumetric Rate (\$/hcf).....	33
Table 5-5: Derivation of Conservation Component of Volumetric Rate (\$/hcf).....	34
Table 5-6: Current and Proposed Volumetric Rates (\$/hcf).....	34
Table 6-1: SFR Customer Bill Impacts for 3/4” or 5/8" Meter	35
Table 6-2: MFR Customer Bill Impacts for 1 1/2" Meter.....	35
Table 6-3: Commercial Customer Bill Impacts for 2" Meter	35
Table 6-4: Institution Customer Bill Impacts for 2" Meter	36
Table 6-5: Irrigation - Potable Customer Bill Impacts for 1 1/2" Meter	36
Table 7-1: Projected Recycled Water Usage	37
Table 7-2: Revenue Requirement Determination	37
Table 7-3: Recycled Water Meter and Volumetric Revenue Requirement.....	38
Table 7-4: Derivation of Recycled Water Meter Charge.....	38
Table 7-5: Current and Proposed Recycled Water Bi-Monthly Meter Charge.....	38
Table 7-6: Recycled Water Volumetric Rate (\$/hcf)	39
Table 8-1: Public Fire Protection Demand Units	40
Table 8-2: Private Fire Demand Units	40
Table 8-3: Derivation of Private Fire Unit Cost.....	41
Table 8-4: Current and Proposed Bi-Monthly Private Fire Meter Charge	41

LIST OF FIGURES

Figure 3-1: Water Fund Financial Plan	19
Figure 3-2: Water Fund Balance.....	20
Figure 3-3: Water Fund Capital Financing Plan	20
Figure 6-4: Single Family Bill Comparison Among Neighboring Cities	36

This page intentionally left blank to facilitate two-sided printing.

1 EXECUTIVE SUMMARY

1.1 BACKGROUND

In November 2016, the City of Lakewood (City) contracted Stetson Engineers, Inc. to update the City's Water Master Plan and incorporate the resulting long term Capital Improvement Plan into the water rates. Stetson subcontracted Raftelis Financial Consultants (Raftelis) to conduct a Water Rate Study (Study) and five-year Financial Plan. This report presents the Financial Plan and the resulting rates assuming implementation in December of 2017 or early January 2018.

This Executive Summary summarizes the rate study methodology, results and recommendations. The City wishes to establish fair and equitable rates that:

- » Meet the City's fiscal needs in terms of operational expenses, reserve goals and capital investment to maintain the system;
- » Are easy for customers to understand and easy for City staff to implement and update in the future; and
- » Proportionately allocate the costs of providing service in accordance with California Constitution article XIII D, section 6 (commonly referred to as Proposition 218).

1.2 METHODOLOGY

The rates were developed using cost of service principles set forth by the American Water Works Association (AWWA) M1 Manual titled *Principles of Water Rates, Fees and Charges*. Cost of service principles endeavor to distribute costs to customer classes in accordance with the way each class uses the water system. This Study used the Base-Extra Capacity Method, described in the AWWA M1 Manual to distribute costs.

1.3 RESULTS AND RECOMMENDATIONS

Revenue Adjustments

Table 1-1 shows the proposed revenue adjustments for the Water Fund for FY 2018 through FY 2022. The proposed revenue adjustments represent the additional revenue compared to the prior year, to be collected through rates. For example, the 5% revenue adjustment in fiscal year (FY) 2018 means that the City would adjust rates to collect 5% more revenue compared to FY 2017.

Table 1-1: Proposed Revenue Adjustments

	2018 (Dec 1, 2017)	2019 (July 1, 2018)	2020 (July 1, 2019)	2021 (July 1, 2020)	2022 (July 1, 2021)
Revenue Adjustments	5.0%	4.0%	4.0%	4.0%	4.0%

Proposed Rates

Based on discussions with City Staff, Raftelis calculated a 3-Tier Single-Family Residential (SFR) volumetric rate to replace the existing SFR 2-Tier rate structure. The proposed 3-Tier SFR volumetric rate removes the existing free water for the first four units (hcf – hundred cubic feet) in Tier 1. The proposed Multi-Family Residential (MFR) volumetric rate is a 3-Tier structure based on the number of dwelling units in each MFR complex, replacing the existing uniform rate structure. The proposed SFR and MFR customer rates also include a meter charge, similar to the existing structure. Raftelis calculated the

proposed Commercial, Institution, Fire, and Potable Irrigation rates using the City’s current rate structure which is a uniform volumetric rate and meter charge. **Table 1-2** shows the current and proposed bi-monthly potable water meter charge for all customer classes.

Table 1-2: Current and Proposed Bi-Monthly Potable Water Meter Charge

Meter Size	Current	FY 2018 (Dec 1, 2017)	FY 2019 (July 1, 2018)	FY 2020 (July 1, 2019)	FY 2021 (July 1, 2020)	FY 2022 (July 1, 2021)
5/8" or 3/4"	\$15.00	\$17.69	\$18.40	\$19.14	\$19.91	\$20.71
1"	\$22.50	\$27.37	\$28.47	\$29.61	\$30.80	\$32.04
1 1/2"	\$37.47	\$51.58	\$53.65	\$55.80	\$58.04	\$60.37
2"	\$53.70	\$80.64	\$83.87	\$87.23	\$90.72	\$94.35
3"	\$96.15	\$172.64	\$179.55	\$186.74	\$194.21	\$201.98
4"	\$142.37	\$308.23	\$320.56	\$333.39	\$346.73	\$360.60
6"	\$249.75	\$632.67	\$657.98	\$684.30	\$711.68	\$740.15
8"	\$344.66	\$1,165.33	\$1,211.95	\$1,260.43	\$1,310.85	\$1,363.29

Table 1-3 shows the current volumetric rates by customer class.

Table 1-3: Current Volumetric Rates (\$/hcf)

Customer Class	Tier Width (hcf)	Current Rate (\$/hcf)
SFR		
Tier 1	4	\$0.00
Tier 2	>4	\$3.50
MFR		
		\$3.50
Commercial		
		\$3.50
Institution		
		\$3.50
Fire		
		\$3.50
Irrigation - Potable		
		\$3.50

Table 1-4 shows the proposed volumetric rates by customer class.

Table 1-4: Proposed Volumetric Rates (\$/hcf)

Customer Class	Proposed Tier Width (hcf)	FY 2018 (Dec 1, 2017)	FY 2019 (July 1, 2018)	FY 2020 (July 1, 2019)	FY 2021 (July 1, 2020)	FY 2022 (July 1, 2021)
SFR						
Tier 1	14	\$2.78	\$2.89	\$3.01	\$3.14	\$3.27
Tier 2	25	\$3.03	\$3.16	\$3.29	\$3.43	\$3.57
Tier 3	>25	\$3.35	\$3.49	\$3.63	\$3.78	\$3.94
MFR						
Tier 1	9	\$2.78	\$2.90	\$3.02	\$3.15	\$3.28
Tier 2	12	\$3.03	\$3.16	\$3.29	\$3.43	\$3.57
Tier 3	> 12	\$3.16	\$3.30	\$3.44	\$3.58	\$3.73
Commercial		\$2.92	\$3.04	\$3.17	\$3.30	\$3.44
Institution		\$3.00	\$3.13	\$3.26	\$3.40	\$3.54
Fire		\$3.18	\$3.31	\$3.45	\$3.59	\$3.74
Irrigation - Potable		\$3.18	\$3.31	\$3.45	\$3.59	\$3.74

Table 1-5 shows the current and proposed bi-monthly private fire meter charge. The private fire charges are based on the potential flow through each connection/meter size.

Table 1-5: Current and Proposed Bi-Monthly Private Fire Meter Charge

Meter Size	Current	FY 2018 (Dec 1, 2017)	FY 2019 (July 1, 2018)	FY 2020 (July 1, 2019)	FY 2021 (July 1, 2020)	FY 2022 (July 1, 2021)
2"	\$45.00	\$8.91	\$9.27	\$9.65	\$10.04	\$10.45
3"	\$56.25	\$25.88	\$26.92	\$28.00	\$29.12	\$30.29
4"	\$70.31	\$55.15	\$57.36	\$59.66	\$62.05	\$64.54
6"	\$87.89	\$160.20	\$166.61	\$173.28	\$180.22	\$187.43
8"	\$109.86	\$341.38	\$355.04	\$369.25	\$384.02	\$399.39
10"	\$137.33	\$613.92	\$638.49	\$664.03	\$690.60	\$718.23

Table 1-6 shows the current and proposed bi-monthly recycled water meter charge. By design and for simplicity, the recycled water meter charge is the same as the potable water charge in Table 1-2.

Table 1-6: Current and Proposed Bi-Monthly Recycled Water Meter Charge

Meter Size	Current	FY 2018 (Dec 1, 2017)	FY 2019 (July 1, 2018)	FY 2020 (July 1, 2019)	FY 2021 (July 1, 2020)	FY 2022 (July 1, 2021)
2"	\$53.70	\$80.64	\$83.87	\$87.23	\$90.72	\$94.35
3"	\$96.15	\$172.64	\$179.55	\$186.74	\$194.21	\$201.98
4"	\$142.37	\$308.23	\$320.56	\$333.39	\$346.73	\$360.60
6"	\$249.75	\$632.67	\$657.98	\$684.30	\$711.68	\$740.15
8"	\$344.66	\$1,165.33	\$1,211.95	\$1,260.43	\$1,310.85	\$1,363.29

Table 1-7 shows the current and proposed recycled water volumetric rates. Line 1 shows the recycled water rates based on the costs to serve recycled water. Line 2 shows the average potable water rate (i.e. the weighted average rate for all customer classes) for comparison purposes. Note that the recycled volumetric rate exceeds the average potable rate beyond FY 2021 based on our projected recycled

water expenses. Should the projected recycled water expenses materialize, the City could choose to price recycled water based on a discount to potable water as shown in lines 4 and 5.

Table 1-7: Current and Proposed Recycled Water Volumetric Rates (\$/hcf)

Line	Current	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	
		(Dec 1, 2017)	(July 1, 2018)	(July 1, 2019)	(July 1, 2020)	(July 1, 2021)	
1	Cost of Service Volumetric Rate (\$/hcf)	\$1.86	\$2.74	\$2.95	\$3.16	\$3.40	\$3.65
2	Average Potable Rate (\$/hcf)		\$2.91	\$3.02	\$3.14	\$3.27	\$3.40
3	Difference (line 2 - line 1)		\$0.17	\$0.08	(\$0.02)	(\$0.13)	(\$0.25)
4	10% Discount		\$2.62	\$2.72	\$2.83	\$2.94	\$3.06
5	15% Discount		\$2.47	\$2.57	\$2.67	\$2.78	\$2.89

2 POTABLE WATER ACCOUNT AND USE DATA

2.1 SYSTEM BACKGROUND

The City of Lakewood’s Department of Water Resources supplies water to residents and businesses west of the San Gabriel River. The City draws all of its water from the Central Groundwater Basin. The City currently owns 9,432 acre-feet of groundwater rights. In addition to the groundwater source the City has three emergency interconnections (with the Golden State Water Company, the City of Cerritos, and the City of Long Beach) and two imported water connections with Central Basin Municipal Water District (to purchase imported treated water from Metropolitan Water District of Southern California) to meet water demand. Pumped water flows directly into the distribution system or to one of the storage facilities. Lakewood maintains approximately 180 miles of water distribution pipeline, ten potable wells and one irrigation well, an arsenic treatment facility, fifteen booster pumps, and nine storage reservoirs with a total capacity of 12.9 million gallons.

2.2 ACCOUNT AND USE DATA

Projected Potable Water Sales and Account Growth

One of the most important assumptions affecting the Financial Plan is projected water sales. **Table 2-1** shows the projected potable water use (sales) incorporated into the Financial Plan by fiscal year. The City’s fiscal year runs from July 1 to June 30 of the following calendar year. Potable water use in line 2 is inflated annually by the water sales trend shown in line 1.

Table 2-1: Projected Potable Water Use

Line	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
1 Water Sales Trend (%)		8.0%	3.0%	2.0%	1.0%	1.0%	0.0%
2 Potable Water Use (hcf)	2,859,021	3,087,743	3,180,375	3,243,982	3,276,422	3,309,187	3,309,187

The Financial Plan assumes the City is “built-out” and therefore assumes no increase in the number of accounts. Therefore, the projected increase in water sales is solely attributed to an increase in use. **Table 2-2** shows the number of potable water accounts by meter size. The quantities are based on FY 2017 data, do not include Private Fire or Recycled water customers, and are constant throughout the Study period.

**Table 2-2: Accounts by Meter Size
(not including Fire or Recycled customers)**

Accounts by Meter Size	FY 2018
5/8" or 3/4"	18,362
1"	963
1 1/2"	292
2"	343
3"	26
4"	17
6"	4
8"	1
Total	20,008

Table 2-3 shows the quantity of Private Fire connections/meters by size. Similar to **Table 2-2** the quantity of Private Fire meters is constant throughout the study period. The quantities are based on FY 2017 data.

Table 2-3: Private Fire Accounts by Meter Size

Private Fire Accounts by Meter Size	FY 2018
2"	0
3"	1
4"	31
6"	60
8"	37
10"	2
Total	131

3 FINANCIAL PLAN

This section of the report describes the Financial Plan, which is shown in **Table 3-2** below, line by line. The assumptions shown in **Table 3-1** were used to project annual revenue, O&M expenses, and capital expenses shown in **Table 3-2**.

3.1 INFLATIONARY ASUMPTIONS

To project future expenses and revenues, we assumed expense and non-rate revenue inflation factors as shown in **Table 3-1**. General and utility inflation reflect long term averages. The City provided the Personnel and Water Replenishment District Replenishment Assessment inflationary assumptions.

Table 3-1: Expense and Non-Rate Revenue Inflation Assumptions

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Expense Inflation Factors					
General	3.0%	3.0%	3.0%	3.0%	3.0%
Personnel	5.0%	5.0%	4.0%	4.0%	4.0%
Utilities	5.0%	5.0%	5.0%	5.0%	5.0%
Water Replenishment District Replenishment Assessment	7.1%	5.0%	5.0%	5.0%	5.0%
Non-Rate Revenue Increases					
Service Initiation and Restoration	1.0%	1.0%	1.0%	1.0%	1.0%

Table 3-2: Proposed Financial Plan Cash Flow

Line	FY 2017 Budget	FY 2018 Budget	FY 2019 Projected	FY 2020 Projected	FY 2021 Projected	FY 2022 Projected
1	Revenue					
2	Revenue at Current Rates	\$9,391,473	\$10,126,341	\$10,287,519	\$10,369,719	\$10,452,742
3	Additional Revenue:					
4						
5	Fiscal Year					
6	2018		\$295,352	\$514,376	\$518,486	\$522,637
7	2019			\$432,076	\$435,528	\$439,015
8	2020				\$452,949	\$456,576
9	2021					\$474,839
10	2022					\$493,832
11	Additional Rate Revenue		\$295,352	\$946,452	\$1,406,964	\$1,893,067
12	Total Rate Revenue	\$9,391,473	\$10,421,693	\$11,233,970	\$11,776,683	\$12,345,809
13	Other Revenue	\$1,386,824	\$573,965	\$576,015	\$578,086	\$580,177
14	Interest Income	\$100,000	\$100,000	\$32,817	\$31,921	\$66,295
15	Total Revenue	\$10,878,297	\$11,095,658	\$11,842,802	\$12,386,690	\$12,992,280
16						
17	Water Operations O&M Expense					
18	8100 Source/Supply	\$115,500	\$115,500	\$121,344	\$126,234	\$131,322
19	56810 Accrue WRD Water Storage	\$2,350,000	\$2,585,000	\$2,646,050	\$2,806,136	\$2,975,907
20	58400 Water Rights	\$150,000	\$150,000	\$157,590	\$163,941	\$170,548
21	8200 Pumping	\$1,636,206	\$1,175,279	\$1,258,724	\$1,334,877	\$1,415,637
22	56800 Electric Power	\$0	\$540,000	\$578,340	\$613,330	\$650,436
23	8300 Treatment	\$84,235	\$0	\$0	\$0	\$0
24	8400 Storage	\$180,562	\$0	\$0	\$0	\$0
25	8600 Water Lines	\$594,551	\$1,058,683	\$1,112,252	\$1,157,076	\$1,203,706
26	8700 Meters	\$176,123	\$0	\$0	\$0	\$0
27	8800 Hydrant	\$478,228	\$0	\$0	\$0	\$0
28	8900 Customer Service	\$226,691	\$278,982	\$298,790	\$313,849	\$329,667
29	8000 Administration	\$1,150,529	\$1,344,099	\$1,439,530	\$1,512,082	\$1,588,291
30	51050 Legal Services	\$10,000	\$10,000	\$10,506	\$10,929	\$11,370
31	55100 Special Supplies - Conservation	\$14,800	\$14,800	\$15,549	\$16,175	\$16,827
32	55937 Water Conservation Awareness	\$14,500	\$14,500	\$15,234	\$15,848	\$16,486
33	55938 Water Conservation Device	\$25,000	\$25,000	\$26,265	\$27,323	\$28,425
34	Total Water Operations Expense	\$7,206,925	\$7,311,843	\$7,680,173	\$8,097,800	\$8,538,621
35	Non-Operating Expense					
36	59400 Overhead General Fund Charge	\$1,417,210	\$1,459,726	\$1,533,588	\$1,595,391	\$1,659,686
37	Total Water Non-Operations Expense	\$1,417,210	\$1,459,726	\$1,533,588	\$1,595,391	\$1,659,686
38						
39	Total Operating Expense	\$8,624,135	\$8,771,569	\$9,213,761	\$9,693,192	\$10,198,307
40						
41	Capital Expense					
42	Rate Funded CIP	\$1,523,800	\$2,605,300	\$2,764,267	\$2,361,267	\$2,045,367
43	Total Capital Expense	\$1,523,800	\$2,605,300	\$2,764,267	\$2,361,267	\$2,045,367
44						
45	Debt Service					
46	Existing Debt Service	\$278,013	\$278,014	\$278,013	\$278,014	\$278,013
47	Total Debt Service	\$278,013	\$278,014	\$278,013	\$278,014	\$278,013
48						
49	Total Operating, Capital and Debt Exp.	\$10,425,948	\$11,654,883	\$12,256,041	\$12,332,473	\$12,521,687
50						
51	Net Cash Flow	\$452,349	(\$559,225)	(\$413,239)	\$54,217	(\$215,627)

3.2 REVENUE FROM CURRENT RATES

Line 2 of **Table 3-2** show the City’s projected current rate revenue without rate revenue adjustments. Raftelis calculated meter revenue from current rates by multiplying the number of meters for each meter size by the current charge by meter size. The volumetric revenue from current rates is calculated by multiplying the projected use by the current volumetric rate. Line 2 is the sum of the meter charge revenue and volumetric revenue. The total revenue from rates does not include revenue from Recycled water customers which is described in Section 7. The current bi-monthly meter charges, used to calculate revenue under current rates, are shown in **Table 3-3**.

Table 3-3: Current Bi-Monthly Meter Charge

Meter Size	Current Charge
5/8" or 3/4"	\$15.00
1"	\$22.50
1 1/2"	\$37.47
2"	\$53.70
3"	\$96.15
4"	\$142.37
6"	\$249.75
8"	\$344.66

Current volumetric rates used to calculate revenue under current rates are shown in **Table 3-4**.

Table 3-4: Current Volumetric Rate by Customer Class (\$/hcf)

Customer Class	Tier Width (hcf)	Current Rate (\$/hcf)
SFR		
Tier 1	4	\$0.00
Tier 2	>4	\$3.50
MFR		\$3.50
Commercial		\$3.50
Institution		\$3.50
Fire		\$3.50
Irrigation - Potable		\$3.50

3.3 PROPOSED REVENUE ADJUSTEMENTS

Table 3-5 summarizes the proposed annual revenue adjustments necessary to meet the expenses (also known as revenue requirements) shown in **Table 3-2**. Lines 6 through 10 in **Table 3-2** show the annual additional revenue as a result of the revenue adjustments. The total revenue shown in line 15 of **Table 3-2** is a result of applying the revenue adjustments to the current revenue in line 2 for each year in the Study period. Each subsequent additional rate adjustment compounds on top of the revenue from the previous year and is summed in line 11. For example, in FY 2019, line 6 shows the additional revenue from the FY 2018 adjustment and line 7 shows the additional revenue from the FY 2019 adjustment.

Table 3-5: Proposed Revenue Adjustments

	2018 (Dec 1, 2017)	2019 (July 1, 2018)	2020 (July 1, 2019)	2021 (July 1, 2020)	2022 (July 1, 2021)
Revenue Adjustments	5.0%	4.0%	4.0%	4.0%	4.0%

The City endeavored to minimize revenue adjustments (rate increases) while balancing the need to meet capital improvement expenses and operating reserve requirements. A final note, the Financial Plan includes annual revenue of \$300,000 for water lease sales.

3.4 REVENUE REQUIREMENT

Line 12 of **Table 3-2** shows the revenue required from rates which is intended to cover all operating and capital costs. Line 12 is the sum of the revenue adjustments (line 11) and existing rate revenue (line 2). The revenue required from rates is the annual revenue needed to operate, maintain and ensure fiscal solvency. The revenue requirement covers;

- 1) O&M Expenses
- 2) rate funded capital expenditures,
- 3) existing debt service,
- 4) reserve requirements.

Each of these expenses funded by the revenue requirement is described below. To complete the City's total revenue from all sources we add other revenue summarized in lines 13 and 14 which includes other/miscellaneous revenue and accrued interest from reserve funds.

3.5 O&M EXPENSES AND GENERAL FUND TRANSFER

The City's projected O&M expenses are shown in lines 18 through 33 of **Table 3-2**. Raftelis calculated the expenses by escalating FY 2017 expenses by the inflationary factors shown in **Table 3-1**. Total O&M expenses are shown in line 34. Transfers from the Water Fund to the General Fund in line 36 pays for overhead expenses incurred by the General Fund to assist in the management and operation of the Water Utility.

3.6 CAPITAL IMPROVEMENT PLAN (CIP)

The capital improvement plan, shown in **Table 3-6** was derived as part of a comprehensive Water Master Plan by Stetson Engineers performed in tandem with this rate study. Line 43 of **Table 3-2** shows the capital expenses which are further detailed in **Table 3-6**. The City funds capital projects through rate revenue.

Table 3-6: Capital Improvement Projects

Capital Improvement Project	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Emergency Intertie	\$50,000	\$0	\$0	\$0	\$0	\$0
Water Master Plan & Water Rate Study	\$275,000	\$0	\$0	\$0	\$0	\$0
Plant 13 Upgrade	\$1,035,000	\$0	\$0	\$0	\$0	\$0
Watermain Replacment Design	\$43,800	\$0	\$0	\$0	\$0	\$0
AMI Water Meter Program	\$120,000	\$1,000,000	\$780,467	\$780,467	\$780,467	\$780,467
Well #28 - Drilling	\$0	\$1,200,000	\$0	\$0	\$0	\$0
Well #28 - Equiping	\$0	\$0	\$1,200,000	\$0	\$0	\$0
SCADA	\$0	\$221,500	\$0	\$0	\$0	\$0
Equipment Replacement	\$0	\$90,000	\$0	\$0	\$0	\$0
Watermain Replacement Design	\$0	\$43,800	\$43,800	\$43,800	\$43,800	\$43,800
Water System Intertie	\$0	\$50,000	\$0	\$0	\$0	\$0
Decommission Res #22	\$0	\$0	\$450,000	\$0	\$0	\$0
Plant 13 VFD	\$0	\$0	\$90,000	\$0	\$0	\$0
Facility Upgrades	\$0	\$0	\$200,000	\$526,600	\$350,600	\$135,800
Pipeline Upgrades	\$0	\$0	\$0	\$615,200	\$617,500	\$1,164,750
Facility Improvements	\$0	\$0	\$0	\$395,200	\$253,000	\$0
Recoat Plant 13	\$0	\$0	\$0	\$0	\$0	\$400,000
Total	\$1,523,800	\$2,605,300	\$2,764,267	\$2,361,267	\$2,045,367	\$2,524,817

3.7 EXISTING DEBT SERVICE

As shown in line 46 of **Table 3-2** the City has existing debt service for a solar panel project. The final payment of the debt service will be paid in FY 2023. The Financial Plan does not assume the issuance of new debt throughout the Study period. The minimum debt coverage ratio (net income/debt service) for the City’s existing debt is 115 percent.

3.8 NET CASH FLOW AND RESERVE REQUIREMENTS

Line 51 of **Table 3-2** shows the resulting net cash flow. As shown in line 51, even with the proposed revenue adjustments the Utility’s net cash flow is negative in FY 2018, FY 2019, and FY 2022 – meaning the City uses reserves to make up for the revenue shortfall under our expense assumptions.

The City does not have an official reserve policy for the Water Utility but maintains at least three months of O&M expenses as an operating reserve in line with industry standards. Raftelis assumed industry standard reserve goals as shown in **Table 3-7**.

Table 3-7: Operating, Capital, and Rate Stabilization Minimum Reserve Targets

Reserve	Target Level
Operating Reserve	90 days (25% of O&M)
Capital Reserve	Yearly Average CIP Expenditure Over 5 Years
Rate Stabilization Reserve	10% Volumetric Rate Revenue

3.9 WATER FUND BALANCES

Table 3-8 shows the projected ending balances for the Water Fund. Although the net cash flow in line 2 is projected to be negative for three years of the forecast, the total Fund ending balance in line 3 exceeds the proposed reserve targets in line 10.

Table 3-8: Water Fund Balances

Line	Water Fund	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
1	Beginning Balance	\$6,893,225	\$7,345,574	\$6,786,349	\$6,373,110	\$6,427,326	\$6,897,919
2	Net Cash Flow	\$452,349	(\$559,225)	(\$413,239)	\$54,217	\$470,593	(\$215,627)
3	Ending Balance	\$7,345,574	\$6,786,349	\$6,373,110	\$6,427,326	\$6,897,919	\$6,682,292
4	Interest Income		\$17,540	\$32,817	\$31,921	\$66,295	\$67,563
5							
6	Reserve Targets						
7	Operating Reserve Target	\$1,801,731	\$1,827,961	\$1,920,043	\$2,024,450	\$2,134,655	\$2,228,700
8	Capital Reserve Target	\$2,260,000	\$2,460,204	\$2,428,307	\$2,386,717	\$2,488,267	\$2,601,907
9	Rate Stabilization Reserve Target	\$782,416	\$805,889	\$822,006	\$830,226	\$838,529	\$838,529
10	Total Proposed Reserves Target	\$4,844,148	\$5,094,053	\$5,170,357	\$5,241,393	\$5,461,451	\$5,669,135

3.10 PROPOSED FINANCIAL PLAN

Figure 3-1 through **Figure 3-3** show the Financial Plan (**Table 3-2**) in graphical format. The figures show the sources of revenue and expenses, reserve balances and CIP graphs. **Figure 3-1** illustrates the Water Fund Financial Plan with the proposed revenue (after revenue adjustments) shown by the blue line. Expenses, inclusive of reserve funding, are shown by the stacked bars. The revenue at current rates assuming no revenue adjustments, shown by the orange line, is insufficient to meet projected expenses.

Figure 3-1: Water Fund Financial Plan

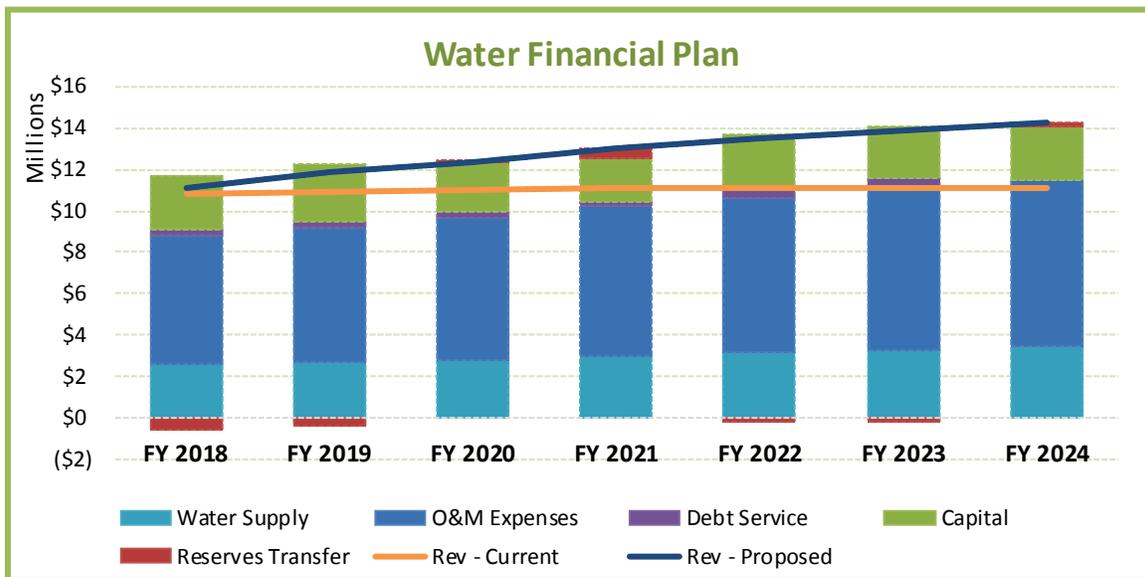


Figure 3-2 illustrates the total reserve balance shown by the blue line and total reserve targets – shown by the stacked bars. Throughout the Study period the reserve balance exceeds the minimum total reserve target.

Figure 3-2: Water Fund Balance

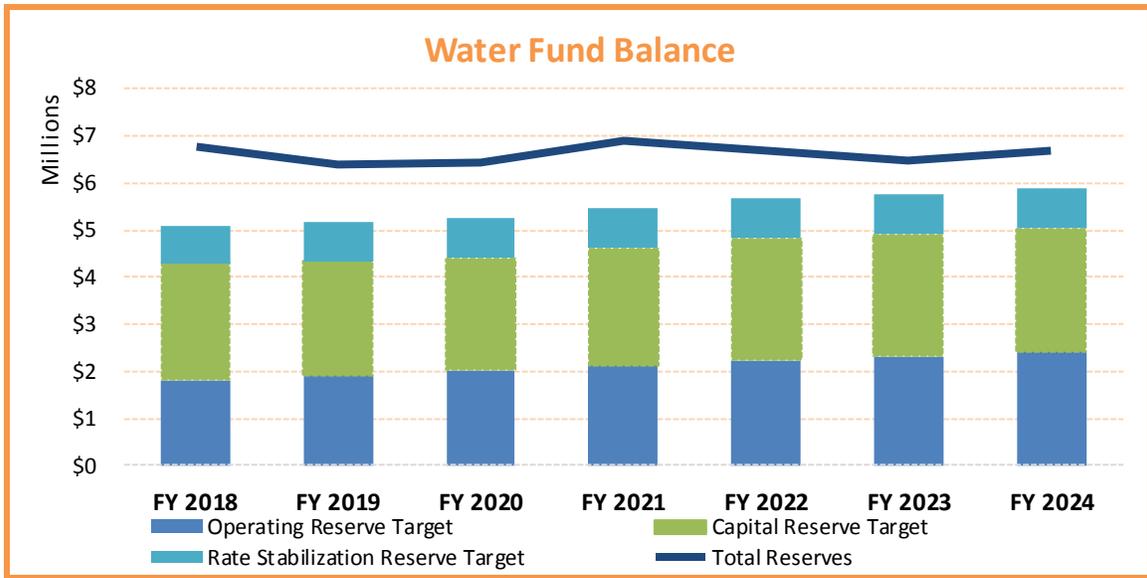
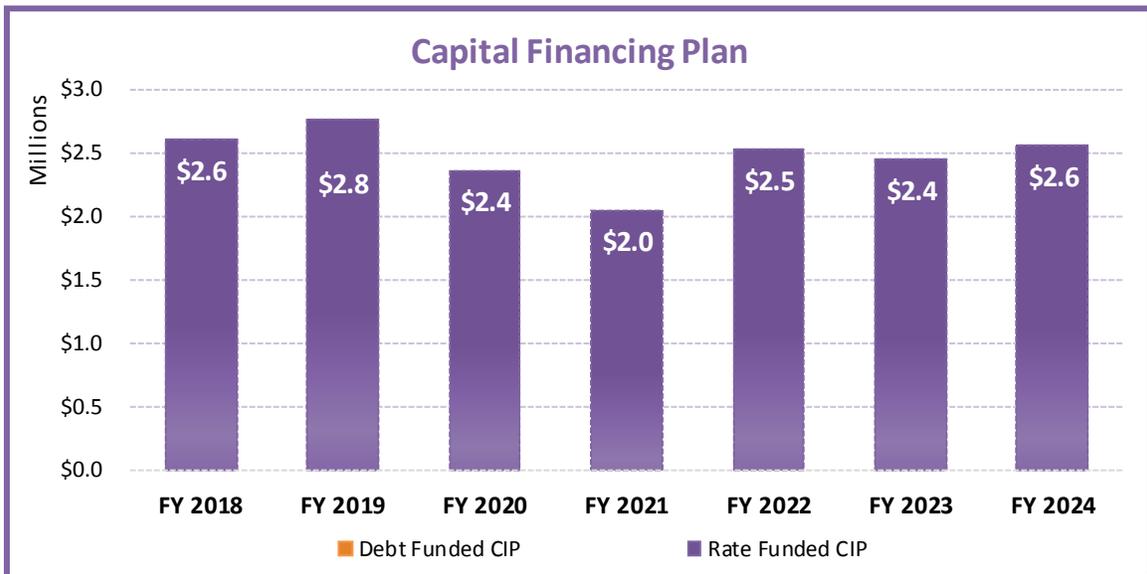


Figure 3-3 illustrates the Capital Financing Plan, which is fully funded by rates. The capital improvement plan was developed in tandem with the Water Master Plan. The City does not plan on funding CIP projects by issuing debt.

Figure 3-3: Water Fund Capital Financing Plan



4 COST OF SERVICE ANALYSIS

As stated in the American Water Works Association (AWWA), M1 Manual – Principles of Water Rates, Fees and Charges, “a utility’s full revenue requirements should be equitably recovered from customers or classes of customers in proportion to the cost of serving those customers.” To develop utility rates that comply with Proposition 218 and industry standards while meeting other goals and objectives of the utility, there are four major steps discussed below.

1 Calculate Revenue Requirement

The rate-making process starts by determining the test year revenue requirement - which for this Study is FY 2018. The expenses in the test year is the year with which we base rates on and escalate future year rates. The revenue requirement should sufficiently fund the utility’s O&M, debt service, capital expenses, and reserve funding.

2 Cost Of Service Analysis (COS)

The annual cost of providing water service is distributed among customer classes commensurate with their service requirements. A COS analysis involves the following:

1. Functionalizing costs. Examples of functions are supply, treatment, transmission, distribution, storage, meter servicing and customer billing and collection.
2. Allocating functionalized costs to cost components. Cost components include base, maximum day, maximum hour¹, meter service, customer service and conservation costs.
3. Distributing the cost components. Distributing cost components to customer classes using unit costs, in proportion to their demands on the water system. This is described in the M1 Manual published by AWWA.

A COS analysis considers both the average quantity of water consumed (base costs) and the peak rate at which it is consumed (peaking or capacity costs as identified by maximum day and maximum hour demands).² Peaking costs are costs that are incurred during peak times of consumption. There are additional costs associated with designing, constructing, and operating and maintaining facilities to meet peak demands. These peak demand costs need to be allocated to those imposing such costs on the utility. In other words, not all customer classes share the same responsibility for peaking related costs.

3 Rate Design and Rate Calculations

Rates do more than simply recover costs. Within the legal framework and industry standards, properly designed rates should support and optimize a blend of various utility objectives, such as conservation, affordability for essential needs and revenue stability among other objectives. Rates may also act as a public information tool in communicating these objectives to customers.

¹ Collectively maximum day and maximum hour costs are known as peaking costs or capacity costs.

² System capacity is the system’s ability to supply water to all delivery points at the time when demanded. Coincident peaking factors are calculated for each customer class at the time of greatest system demand. The time of greatest demand is known as peak demand. Both the operating costs and capital asset related costs incurred to accommodate the peak flows are generally allocated to each customer class based upon the class’s contribution to the peak month, day and hour of water use.

4 Rate Adoption

Rate adoption is the last step of the rate-making process to comply with Proposition 218. Raftelis documented the rate study results in this Study Report to help educate stakeholders about the proposed changes, the rationale and justifications behind the changes and their anticipated financial impacts in lay terms.

4.1 FUNCTIONALIZATION AND ALLOCATION TO COST COMPONENTS

System wide peaking factors shown in **Table 4-1**, column A, are used to determine the allocation basis (i.e. percentages) of O&M expenses to allocate cost to the cost components. These are shown in columns B through E. The maximum day peaking factor in line 2, column A, shows that during the maximum day, customers demand 1.5 times the amount of water compared to an average day. The maximum hour demand in line 3 is the ratio of maximum usage during the max hour compared to the average day. The maximum hour with fire demand in line 4 is maximum hour usage with a percentage allocated to the additional system capacity required to meet peak fire flow. The 49 percent allocation to Fire in line 4 is calculated using the max day demand flow and the typical fire flow. Stetson Engineers provided max day demand flow of 885 gallons per minute (gpm) and 1750 gpm fire flow. The difference in flows (1750-885 gpm), divided by the fire flow results in a 49 percent allocation to Fire. Different facilities, such as distribution and storage facilities, and the corresponding O&M costs associated with those facilities, are designed to meet the peaking demands of customers.

We first functionalize O&M expenses which allows Raftelis to follow the principles of rate setting theory in which the end goal is to allocate the City’s O&M expenses to cost components. **Table 4-2**, column A, shows the functionalization of the City’s O&M expenses. The second step is to allocate expenses to cost causation components shown in columns C through J in **Table 4-2**. The allocation basis in column B, is the basis we used to allocate costs to the cost components. The entire Customer Service expense in line 7, **Table 4-2** is allocated to the Billing & Customer Service cost component in column H. The Administration expense is split between Meter and General & Admin cost components based on discussion with City Staff. Special Supplies – Conservation, Water Conservation Awareness, and Water Conservation Device expenses are entirely allocated to the Conservation cost component.

Table 4-1: Peaking Factors³ and Cost Component Percentage Allocation

Line	Factor [A]	Base Delivery [B]	Max Day [C]	Max Hour [D]	Fire [E]	Total [F]
1 Base	1.00	100%	0%	0%	0%	100%
2 Max Day	1.50	67%	33%	0%	0%	100%
3 Max Hour	2.49	40%	20%	40%	0%	100%
4 Max Hour with Fire	2.49	24%	4%	23%	49%	100%
5 Average		53%	24%	13%	10%	100%

³ System wide peaking factor is calculated by the average of the customer class peaking factors weighted by the average bi-monthly usage by customer class; equal to 1.12.

Table 4-2: O&M Allocation by Percentage to Cost Components⁴

Line	O&M Functions	Function [A]	Allocation Basis [B]	Base			Fire [F]	Meter [G]	Billing & Customer	General		TOTAL [K]
				Delivery [C]	Max Day [D]	Max Hour [E]			Service [H]	Conservation [I]	& Admin [J]	
1	8100 Source/Supply	Supply	Max Day	67%	33%	0%						100%
2	56810 Accrue WRD Water Storage	Supply	Max Day	67%	33%	0%						100%
3	58400 Water Rights	Supply	Base	100%	0%	0%						100%
4	8200 Pumping	Pumping	Max Day	67%	33%	0%	0%					100%
5	56800 Electric Power	Pumping	Base	100%	0%	0%	0%					100%
6	8600 Water Lines	Distribution	Max Hour with Fire	24%	4%	23%	49%					100%
7	8900 Customer Service	Bill & Cust. Serv	Bill & Cust. Serv						100%			100%
8	8000 Administration	Gen. & Admin.	Gen. & Admin.					14%			86%	100%
9	51050 Legal Services	Gen. & Admin.	Gen. & Admin.								100%	100%
10	55100 Special Supplies - Conservation	Gen. & Admin.	Gen. & Admin.								100%	100%
11	55937 Water Conservation Awareness	Gen. & Admin.	Gen. & Admin.								100%	100%
12	55938 Water Conservation Device	Gen. & Admin.	Gen. & Admin.								100%	100%

⁴ Raftelis determined the cost of service and corresponding rates based on FY 2018. The City revised their budget format between FY 2017 and FY 2018 budget years. Due to the format change, the list of O&M expenses in **Table 4-2** is an abridged version of O&M expenses listed in **Table 3-2**, lines 18 through 33.

Table 4-3 shows the resulting O&M expense allocation to each cost component. The total expense in column K is distributed to cost components in columns C through J based on percentage allocations in **Table 4-2**. The total O&M expense in row 13 of **Table 4-3** is the same as the total water operations expense in line 34, **Table 3-2** for FY 2018. Line 14 of **Table 4-3** is calculated by dividing the total of each cost component by the total O&M expense for FY 2018 in column K. This resulting percentage allocation to each cost component that is used to allocate the revenue requirement to the cost components in **Table 4-8**.

Table 4-3: O&M Allocation to Cost Components

Line	O&M Functions	Function [A]	Allocation Basis [B]	Base			Fire [F]	Meter [G]	Billing & Customer		General &		TOTAL [K]
				Delivery [C]	Max Day [D]	Max Hour [E]			Service [H]	Conservation [I]	Admin [J]		
1	8100 Source/Supply	Supply	Max Day	\$77,000	\$38,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$115,500
2	56810 Accrue WRD Water Storage	Supply	Max Day	\$1,723,333	\$861,667	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,585,000
3	58400 Water Rights	Supply	Base	\$150,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150,000
4	8200 Pumping	Pumping	Max Day	\$783,519	\$391,760	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,175,279
5	56800 Electric Power	Pumping	Base	\$540,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$540,000
6	8600 Water Lines	Distribution	Max Hour with Fire	\$250,743	\$38,156	\$246,492	\$523,292	\$0	\$0	\$0	\$0	\$0	\$1,058,683
7	8900 Customer Service	Bill & Cust. Serv	Bill & Cust. Serv	\$0	\$0	\$0	\$0	\$0	\$278,982	\$0	\$0	\$0	\$278,982
8	8000 Administration	Gen. & Admin.	Gen. & Admin.	\$0	\$0	\$0	\$0	\$188,174	\$0	\$0	\$1,155,925	\$0	\$1,344,099
9	51050 Legal Services			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,000	\$0	\$10,000
10	55100 Special Supplies - Conservation			\$0	\$0	\$0	\$0	\$0	\$0	\$14,800	\$0	\$0	\$14,800
11	55937 Water Conservation Awareness			\$0	\$0	\$0	\$0	\$0	\$0	\$14,500	\$0	\$0	\$14,500
12	55938 Water Conservation Device			\$0	\$0	\$0	\$0	\$0	\$0	\$25,000	\$0	\$0	\$25,000
13	TOTAL O&M EXPENSES			\$3,524,596	\$1,330,083	\$246,492	\$523,292	\$188,174	\$278,982	\$54,300	\$1,165,925	\$0	\$7,311,843
14	Allocation to Cost Components			48.2%	18.2%	3.4%	7.2%	2.6%	3.8%	0.7%	15.9%	\$0	100%

We also allocate capital assets to cost components which is used to allocate debt service costs and capital expenses to the cost components in **Table 4-8**. The allocation process for O&M expenses described above is repeated for the City’s current potable water assets. Recycled water and Fire protection assets are not included. **Table 4-4** shows the asset allocation by function in Column A, and the allocation bases used to allocate assets to the cost components (columns B through F). Raftelis first functionalized the City’s assets and then escalated them to today’s value (less depreciation) using the Engineering News Record Construction Cost Index (ENR -CCI) to yield the total asset value in **Table 4-5**.

Table 4-4: Asset Allocation by Percentage to Cost Components

Line	Capital by Function	Allocation Basis [A]	Base Delivery [B]	Max Day [C]	Max Hour [D]	Meter [E]	General & Admin [F]	TOTAL [G]
1	Source of Supply	Max Day	67%	33%	0%			100%
2	Pumping	Max Day	67%	33%	0%			100%
3	Treatment	Max Day	67%	33%	0%			100%
4	Transmission	Max Day	67%	33%	0%			100%
5	Distribution	Max Hour	40%	20%	40%			100%
6	Meters	Meters				100%		100%
7	Water Rights	Supply	100%					100%
8	Land	Gen. & Admin.					100%	100%
9	General	Gen. & Admin.					100%	100%

Table 4-5 shows the resulting asset allocation to each cost component. The functionalized cost in column G is distributed to cost components using the percentages by function shown in **Table 4-4**. Line 11 of

Table 4-5, is calculated by dividing the total asset cost for each cost component by the total asset cost in column G. This resulting allocation to each cost component is used to allocate capital expenses and debt service expenses to the cost components in **Table 4-8**.

Table 4-5: Asset Allocation to Cost Component

Line	Capital Allocation	Allocation Basis [A]	Base Delivery [B]	Max Day [C]	Max Hour [D]	Meter [E]	General & Admin [F]	TOTAL [G]
1	Source of Supply	Max Day	\$1,416,700	\$708,350	\$0	\$0	\$0	\$2,125,050
2	Pumping	Max Day	\$246,296	\$123,148	\$0	\$0	\$0	\$369,445
3	Treatment	Max Day	\$756,202	\$378,101	\$0	\$0	\$0	\$1,134,303
4	Transmission	Max Day	\$3,391,945	\$1,695,972	\$0	\$0	\$0	\$5,087,917
5	Distribution	Max Hour	\$5,896,205	\$2,948,102	\$5,837,243	\$0	\$0	\$14,681,550
6	Meters	Meters	\$0	\$0	\$0	\$692,305	\$0	\$692,305
7	Water Rights	Supply	\$1,013,310	\$0	\$0	\$0	\$0	\$1,013,310
8	Land	Gen. & Admin	\$0	\$0	\$0	\$0	\$66,080	\$66,080
9	General	Gen. & Admin	\$0	\$0	\$0	\$0	\$5,716,119	\$5,716,119
10	TOTAL ASSETS		\$12,720,658	\$5,853,674	\$5,837,243	\$692,305	\$5,782,199	\$30,886,078
11	Allocation to Cost Components		41%	19%	19%	2%	19%	100%

4.2 REVENUE REQUIREMENT DETERMINATION

Raftelis calculated the rate revenue requirement (the amount to be collected from rates) using FY 2018 expenses, which include purchased water, O&M expenses, capital expenses and existing debt (lines 3 through 7) shown in **Table 4-6**. To arrive as the rate revenue requirement, we subtract revenue offsets (lines 13) from total expenses (line 8) and adjust for annual cash balances (line 16) and for the fact that the impending rate adjustment will take place six months into the fiscal year and we must therefore annualize the rate increase (line 17). The adjustment, shown as negative value are subtracted (therefore added as a result of subtracting a negative number) to arrive at the total revenue required from rates in line 20, column C. This is the amount the meter charge and volumetric rates are designed to collect.

Table 4-6: Revenue Requirement Determination

Line	FY 2018		
	[A]	[B]	[C]=[A]+[B]
1	Operating	Capital	Total
2	Expense		
3	O&M Expense		\$7,311,843
4	General Fund Transfer		\$1,459,726
5	Existing Debt Service	\$278,014	\$278,014
6	Proposed Debt Service	\$0	\$0
7	Rate Funded Capital Projects	\$2,605,300	\$2,605,300
8	Total Expense	\$8,771,569	\$2,883,314
9			
10	Less: Revenue Offsets		
11	Other Revenue		\$573,965
12	Interest Income		\$100,000
13	Total Revenue Offsets	\$673,965	\$0
14			
15	Less: Adjustments		
16	Adjustment for Cash Balance	\$559,225	\$559,225
17	Adjustment for Midyear Increase	(\$210,965)	(\$210,965)
18	Total Adjustments	(\$210,965)	\$559,225
19			
20	Revenue Requirement from Rates	\$8,308,569	\$2,324,089

4.3 UNIT COST DERIVATION

Our end goal is to proportionately distribute the cost components to each user class. To do so we must calculate the cost component unit costs, which starts by assessing the total units demanded by each class for each cost component in FY 2018. The first step is to determine the FY 2018 water use for each customer class as shown in column B of **Table 4-7**. Before calculating the use in each tier, we designed tier widths for SFR and MFR customer classes as shown in column A of **Table 4-7**.

Tier Width Design

The proposed SFR rate structure is a 3-Tier structure. We calculated the tier breakpoints based on an indoor water budget (IWB) and outdoor water budget (OWB). The IWB assumes 3.11 occupants per

household⁵ and 55 gallons per person per day which is a reasonable amount of indoor water use as put forth in California Water Code Section 10608.20(b)(2)(A). The Tier 1 width is calculated by multiplying the assumed occupants per household by the 55 GPCD⁶ usage per person resulting in the breakpoint shown in line 2, column A of **Table 4-7**. The OWB is based on the maximum summer evapotranspiration (Eto) rate, assumed lot size, percent of lot requiring irrigation, and Eto factor. We assume the maximum summer Eto is 0.49 feet/month⁷. Stetson engineers provided the 5,612-sq. ft. assumed typical lot size and 26 percent area of lot requiring irrigation. The 11 hcf width of Tier 2 is the product of the max summer Eto rate, assumed lot size, percent of lot requiring irrigation, and 80 percent Eto factor. An 80% Eto factor assumes some drought tolerant plantings and efficient irrigation systems. The Tier 2 breakpoint is the sum of the IWB and OWB shown in line 3 column A of **Table 4-7**. Tier 3 is any usage above the Tier 2 breakpoint.

The proposed MFR rate structure is a 3-Tier structure in lieu of the existing uniform rate. Tier 1 width is determined by the average winter use per dwelling unit (DU) shown in line 7 of **Table 4-7**. The width of Tier 2 is set with the goal of Tier 3 usage accounting for approximately 10 percent of the total usage. The iterative process resulted in a Tier 2 width of 3 hcf, and Tier 2 breakpoint of 12 hcf shown in line 8 of **Table 4-7**. Tier 3 is any usage above the Tier 2 breakpoint. The proposed MFR tiers are a function of the number of DUs per MFR customer. The tiers for a specific MFR customer are determined by multiplying the tiers describe above by the number of DUs. For example, a MFR customer with 10 DUs has a Tier 1 breakpoint of 90 units and a Tier 2 breakpoint of 120 units.

After the SFR and MFR Tiers are determined, the total FY 2018 usage in line 14 of **Table 4-7** is calculated for each customer class as shown in column B. Average daily use in column C is simply column B divided by 365 days. The max day capacity factor in column D is derived from the City water use data – it is the maximum bi-monthly usage divided by the average bi-monthly usage for each tier or customer class. Max day total capacity in column E is the product of the max day capacity factor in column D and the average daily usage in column C. The extra system capacity required to satisfy max day peaking is the difference between the total capacity and average daily usage, shown in column F. Max hour extra capacity factor in column G is the max day capacity factor in column D multiplied by 1.66 which is an industry standard factor used to calculate max hour demand (**Table 4-1**, line 3 column A divided by line 2 column A). Total max hour capacity in column H is the average daily usage multiplied by the max hour capacity factor. Finally, the extra system capacity required to satisfy max hour peaking is the difference between column E and H.

⁵ The US Census Bureau, Persons per household, 2011 – 2015, for the City of Lakewood is 3.11.

⁶ SBX7-7 defines 55 gallons per capita day (GPCD) as the standard for residential indoor water usage.

⁷ The evapotranspiration rate is from the California Irrigation Management Information System (CIMIS) data for Lakewood, CA.

Table 4-7: Average and Peak Usage Demand by Customer Class

Line	Customer Class	Bi-Monthly Tiers (hcf) [A]	2018 Annual Use (hcf) [B]	Average Daily Use (hcf/day) [C]=[B]/365	Maximum Day Requirements			Maximum Hour Requirements		
					Max Day Capacity Factor [D]	Total Capacity (hcf/day) [E]=[C]*[D]	Extra Capacity (hcf/day) [F]=[E]-[C]	Max Hour Capacity Factor [G]=[D]*1.66	Total Capacity (hcf/day) [H]=[C]*[G]	Extra Capacity (hcf/day) [I]=[E]-[H]
1	SFR									
2	Tier 1	14	1,419,989	3,890	1.04	6,069	2,179	1.73	6,716	647
3	Tier 2	25	487,218	1,335	1.21	2,423	1,088	2.01	2,681	258
4	Tier 3	>25	238,027	652	1.37	1,340	688	2.27	1,483	143
5										
6	MFR	(x EDUs)								
7	Tier 1	9	90,011	247	1.03	380	133	1.71	421	41
8	Tier 2	12	12,777	35	1.21	64	29	2.01	70	7
9	Tier 3	>12	12,525	34	1.31	67	33	2.18	75	7
10	Commercial		400,097	1,096	1.13	1,858	762	1.88	2,056	198
11	Institution		56,987	156	1.19	279	123	1.98	308	30
12	Fire		237	1	1.32	1.3	0.6	2.19	1.4	0.1
13	Irrigation - Potable		46,793	128	1.32	254	126	2.19	281	27
14	TOTAL		2,764,663				5,160			1,358

Table 4-8 shows the derivation of unit costs for the cost components in line 14, columns A through G. Total operating expenses and capital expenses in line 1 and 2, column I are distributed among the cost components by the percentages in line 14 of

Table 4-3 for O&M and line 11 of

Table 4-5 for capital expenses. General & Admin costs in column H are redistributed to the other cost components by the percentages in line 4. Public fire costs in column D are reallocated to meter costs in column E. In order to collect 25 percent⁸ of total rate revenue through meter charges, 37 percent of the max day and max hour cost components are reallocated to the meter cost component as shown in line 8. The total adjusted cost of service in line 9, divided by the units of service in line 11, equals the unit costs in line 14.

Table 4-8: Unit Cost Calculation

Line	Base Delivery [A]	Max Day [B]	Max Hour [C]	Fire [D]	Meter [E]	Customer [F]	Conservation [G]	General & Admin [H]	TOTAL [I]
1 Operating Expenses	\$4,005,057	\$1,511,395	\$280,092	\$594,625	\$213,825	\$317,012	\$61,702	\$1,324,860	\$8,308,569
2 Capital Expenses	\$957,193	\$440,472	\$439,236	\$0	\$52,094	\$0	\$0	\$435,094	\$2,324,089
3 Total Cost of Service	\$4,962,250	\$1,951,867	\$719,328	\$594,625	\$265,919	\$317,012	\$61,702	\$1,759,954	\$10,632,658
4 Allocation % w/o General	56%	22%	8%	7%	3%	4%	1%		100%
5 Allocation of General Cost	\$984,292	\$387,165	\$142,683	\$117,947	\$52,747	\$62,881	\$12,239	(\$1,759,954)	\$0
6 Subtotal	\$5,946,542	\$2,339,032	\$862,011	\$712,573	\$318,666	\$379,893	\$73,941	\$0	\$10,632,658
7 Allocation of Public Fire to Meter				(\$561,335)	\$561,335				\$0
8 Allocation of Peaking Cost to Meter		(\$865,442)	(\$318,944)		\$1,184,386				\$0
9 Total Adjusted Cost of Service	\$5,946,542	\$1,473,590	\$543,067	\$151,238	\$2,064,387	\$379,893	\$73,941	\$0	\$10,632,658
10	56%	14%	5%	1%	19%	4%	1%	0%	100%
11 Unit of Service	2,764,663	5,160	1,358	17,514	23,684	120,292	2,764,426		
12 Unit	hcf	hcf/day	hcf/day	EMU	EMU	bill\$			
13									
14 Unit Cost	\$2.15	\$285.56	\$399.79	\$1.44	\$14.53	\$3.16	\$0.03		

⁸ The City is targeting 25 percent revenue from fixed meter charges as a policy decision.

4.4 DISTRIBUTION OF COST COMPONENTS TO CUSTOMER CLASSES

The final step in a cost of service analysis is to distribute the cost components to the customer classes using the unit costs derived in **Table 4-8**. This is the goal of a cost of service analysis and yields the cost to serve each customer class. **Table 4-9** shows the derivation of the cost to serve each class. The total cost component amounts shown in line 16 in columns A, B and C are collected through volumetric rates (\$/hcf). The cost components in line 16 shown in columns E, F and G are collected through the meter charge. The private fire protection cost component in column D will be collected through the private fire meter charge described in Section 8.

To derive the total cost to serve each class in column H **Table 4-9**, the unit costs from line 14 of **Table 4-8** are multiplied by the units shown in **Table 4-7**. For example, the base delivery cost for the Commercial customer class is base delivery cost in line 14 of **Table 4-8** multiplied by the usage in line 10, column A of **Table 4-7**. Similar calculations for the other customer classes and cost components yield the total cost of service to serve each customer class shown in column H of **Table 4-9**. Note that the total cost of service is equal to the total revenue requirement in **Table 4-6**. We have now calculated the cost to serve each customer class and tier and can proceed to derive rates to collect the cost to serve each class.

Table 4-9: Cost of Service by Customer Class

Line		Base Delivery [A]	Max Day [B]	Max Hour [C]	Fire [D]	Meter [E]	Customer Conservation [F] [G]	TOTAL [H]	
1	SFR								
2	Tier 1	\$3,054,269	\$622,121	\$258,808			\$37,981	\$3,973,179	
3	Tier 2	\$1,047,963	\$310,658	\$103,316			\$13,032	\$1,474,969	
4	Tier 3	\$511,975	\$196,463	\$57,149			\$6,367	\$771,953	
5	SFR Total	\$4,614,206	\$1,129,242	\$419,273			\$57,379	\$6,220,100	
6	MFR								
7	Tier 1	\$193,606	\$38,102	\$16,206			\$2,408	\$250,321	
8	Tier 2	\$27,483	\$8,170	\$2,713			\$342	\$38,708	
9	Tier 3	\$26,941	\$9,473	\$2,878			\$335	\$39,627	
10	MFR Total	\$248,030	\$55,745	\$21,797			\$3,084	\$328,657	
11	Commercial	\$860,573	\$217,546	\$79,233			\$10,702	\$1,168,054	
12	Institution	\$122,574	\$34,998	\$11,885			\$1,524	\$170,982	
13	Private Fire	\$511	\$182	\$55	\$151,238			\$151,985	
14	Irrigation - Potable	\$100,648	\$35,876	\$10,825			\$1,252	\$148,601	
15	Meter and Customer Costs					\$2,064,387	\$379,893	\$2,444,280	
16	TOTAL	\$5,946,542	\$1,473,590	\$543,067	\$151,238	\$2,064,387	\$379,893	\$73,941	\$10,632,658

5 RATE DERIVATION

5.1 PROPOSED BI-MONTHLY METER CHARGE

The City's current bi-monthly meter charge is shown in **Table 3-3**. **Table 5-1** shows the derivation of the proposed meter charge in column D. For a 5/8" or 3/4" meter, the meter charge in column B is derived in line 14 of **Table 4-8**. Meter service charges for larger meters are calculated by multiplying the 5/8" or 3/4" meter charge by the corresponding AWWA meter capacity ratio in column A. The meter service component recovers costs associated with maintaining and serving meters. All meters have the same customer/billing rate component in column C, which is the unit rate calculated in column F of **Table 4-8**. The customer/billing rate component recovers costs associated with meter reading, customer billing and collection as well as answering customer calls. These costs are the same for all meter sizes since it costs the same to bill a small meter as it does a larger meter.

The total meter charge in column D of **Table 5-1** is the sum of the meter and customer/billing rates in column B and C. Column F shows the percentage difference between the current and proposed meter charge. The City desires a higher level of revenue stability and therefore we have increased the fixed meter charge to reduce revenue fluctuations.

Table 5-1: Derivation of Bi-Monthly Meter Charge

Line	Meter Size	Meter Ratio [A]	Meter [B]	Customer /Billing [C]	Total Fixed Meter Charge [D]=[B]+[C]	Current Fixed Meter Charge [E]	Difference, % [F]=[D]/[E]-1
1	5/8" or 3/4"	1.00	\$14.53	\$3.16	\$17.69	\$15.00	17.9%
2	1"	1.67	\$24.21	\$3.16	\$27.37	\$22.50	21.6%
3	1 1/2"	3.33	\$48.42	\$3.16	\$51.58	\$37.47	37.7%
4	2"	5.33	\$77.48	\$3.16	\$80.64	\$53.70	50.2%
5	3"	11.67	\$169.48	\$3.16	\$172.64	\$96.15	79.6%
6	4"	21.00	\$305.07	\$3.16	\$308.23	\$142.37	116.5%
7	6"	43.33	\$629.51	\$3.16	\$632.67	\$249.75	153.3%
8	8"	80.00	\$1,162.18	\$3.16	\$1,165.33	\$344.66	238.1%

Table 5-2 shows the current and proposed bi-monthly meter charge through FY 2022. The charge is escalated annually by the revenue adjustments in **Table 3-5**.

Table 5-2: Current and Proposed Bi-Monthly Meter Charge

Meter Size	Current	FY 2018 (Dec 1, 2017)	FY 2019 (July 1, 2018)	FY 2020 (July 1, 2019)	FY 2021 (July 1, 2020)	FY 2022 (July 1, 2021)
5/8" or 3/4"	\$15.00	\$17.69	\$18.40	\$19.14	\$19.91	\$20.71
1"	\$22.50	\$27.37	\$28.47	\$29.61	\$30.80	\$32.04
1 1/2"	\$37.47	\$51.58	\$53.65	\$55.80	\$58.04	\$60.37
2"	\$53.70	\$80.64	\$83.87	\$87.23	\$90.72	\$94.35
3"	\$96.15	\$172.64	\$179.55	\$186.74	\$194.21	\$201.98
4"	\$142.37	\$308.23	\$320.56	\$333.39	\$346.73	\$360.60
6"	\$249.75	\$632.67	\$657.98	\$684.30	\$711.68	\$740.15
8"	\$344.66	\$1,165.33	\$1,211.95	\$1,260.43	\$1,310.85	\$1,363.29

5.2 PROPOSED VOLUMETRIC RATES

The total proposed volumetric rates, shown in column E of, are the sum of the base delivery, peaking, and conservation volumetric rates shown in columns B through D. The volumetric rates are slightly lower than current rates because we are collecting more revenue through the fixed meter charge. Each rate component is discussed below.

Table 5-3: Derivation of Volumetric Rate (\$/hcf)

Line	Customer Class	Bi-Monthly [A]	Base Delivery [B]	Conservation [C]	Peaking [D]	Total Rate [E]=[B]+[C]	Current Rate [F]	Difference, % [G]=[E]/[F]-1
1	SFR							
2	Tier 1	14	\$2.15	\$0.01	\$0.62	\$2.78	\$0.00	N/A
3	Tier 2	25	\$2.15	\$0.03	\$0.85	\$3.03	\$3.50	-13%
4	Tier 3	>25	\$2.15	\$0.14	\$1.07	\$3.35	\$0.00	N/A
5	MFR							
6	Tier 1	9	\$2.15	\$0.03	\$0.60	\$2.78	\$0.00	N/A
7	Tier 2	12	\$2.15	\$0.03	\$0.85	\$3.03	\$0.00	N/A
8	Tier 3	> 12	\$2.15	\$0.03	\$0.99	\$3.16	\$0.00	N/A
9	Commercial		\$2.15	\$0.03	\$0.74	\$2.92	\$3.50	-17%
10	Institution		\$2.15	\$0.03	\$0.82	\$3.00	\$3.50	-14%
11	Fire		\$2.15	\$0.03	\$1.00	\$3.18	\$3.50	-9%
12	Irrigation - Potable		\$2.15	\$0.03	\$1.00	\$3.18	\$3.50	-9%

Base Rate

Base delivery costs are the operating and capital costs associated with delivering water at a constant average rate of use – also known as serving customers under average daily demand conditions. Delivery costs are spread over all units of water irrespective of customer class or tiers. The base delivery unit rate is calculated in line 14, **Table 4-8**.

Peaking Rate

Peaking (or extra capacity) costs represent the costs incurred to meet customer peak demands in excess of a base use (or in excess of average daily demand). Total peaking costs in column B of **Table 5-4** are comprised of max day and max hour demand costs. The peaking costs, shown in column B of **Table 5-4**, are the sum of the max day and max hour costs shown in line 16, column B and C of **Table 4-9**. Further description of max day and max hour cost derivation is described in Section 4.4. Usage in column C of **Table 5-4** is the same usage as column B of **Table 4-7**. The peaking rate component is derived in column D of **Table 5-4** for each customer class as the peaking cost in column B divided by the usage in column C.

Table 5-4: Derivation of Peaking Component of Volumetric Rate (\$/hcf)

Line	Customer Class	Monthly Tier (hcf) [A]	Peaking Costs [B]	Usage (hcf) [C]	Unit Cost [D]=[B]/[C]
1	SFR				
2	Tier 1	14	\$880,929	1,419,989	\$0.62
3	Tier 2	25	\$413,974	487,218	\$0.85
4	Tier 3	>25	\$253,611	238,027	\$1.07
5	MFR				
6	Tier 1	9	\$54,308	90,011	\$0.60
7	Tier 2	12	\$10,883	12,777	\$0.85
8	Tier 3	>12	\$12,351	12,525	\$0.99
9	Commercial		\$296,779	400,097	\$0.74
10	Institution		\$46,883	56,987	\$0.82
11	Fire		\$237	237	\$1.00
12	Irrigation - Potable		\$46,701	46,793	\$1.00
13	Total		\$2,016,657	2,764,663	

Conservation Rate

The conservation rate component is derived in column F of **Table 5-5**. The conservation rate component collects the total conservation program cost shown on line 16, column G of **Table 4-9**. The conservation program cost by customer class is shown in column G of **Table 4-9** (column C of **Table 5-5**). The conservation rate for each customer class is derived by dividing the conservation cost by the use for each class as shown in **Table 5-5**. Conservation programs are targeted to higher volume users to promote reasonable water use. Therefore, high volume SFR users are responsible for a larger proportion of conservation program costs compared to lower volume users. Low volume users are not the target of conservation programs. Therefore, we reallocate conservation costs to the higher SFR tiers as shown in column D of **Table 5-5**. Conservation costs are cost that cover water conservation and efficiency programs and efforts.

Table 5-5: Derivation of Conservation Component of Volumetric Rate (\$/hcf)

Line		FY 2018 Annual Usage (hcf) [A]	Percent of Use [B]	Allocated Conservation Cost [C]	Percentage Responsibility for Conservation [D]	Reallocated Conservation Cost [E]	Unit Rate (\$/ hcf) [F]=[E]/[A]
1	SFR						
2	Tier 1	1,419,989	51%	\$37,978	14%	\$8,196	\$0.01
3	Tier 2	487,218	18%	\$13,031	29%	\$16,393	\$0.03
4	Tier 3	238,027	9%	\$6,366	57%	\$32,785	\$0.14
5	SFR Subtotal			\$57,374	100%	\$57,374	
6	MFR						
7	Tier 1	90,011	3%	\$2,407	78%	\$2,407	\$0.03
8	Tier 2	12,777	0%	\$342	11%	\$342	\$0.03
9	Tier 3	12,525	0%	\$335	11%	\$335	\$0.03
10	MFR Subtotal			\$3,084	100%	\$3,084	
11	Commercial	400,097	14%	\$10,701		\$10,701	\$0.03
12	Institution	56,987	2%	\$1,524		\$1,524	\$0.03
13	Fire	237	0%	\$6		\$6	\$0.03
14	Irrigation - Potable	46,793	2%	\$1,251		\$1,251	\$0.03
15	Total	2,764,663	100%	\$73,941		\$73,941	

Table 5-6 shows the current and proposed volumetric rates through FY 2022. The rates are escalated annually by the revenue adjustments in Table 3-5.

Table 5-6: Current and Proposed Volumetric Rates (\$/hcf)

Customer Class	Current Tier Width (hcf)	Proposed Tier Width (hcf)	Current Rate	FY 2018 (Dec 1, 2017)	FY 2019 (July 1, 2018)	FY 2020 (July 1, 2019)	FY 2021 (July 1, 2020)	FY 2022 (July 1, 2021)
SFR								
Tier 1	4	14	N/A	\$2.78	\$2.89	\$3.01	\$3.14	\$3.27
Tier 2	>4	25	\$3.50	\$3.03	\$3.16	\$3.29	\$3.43	\$3.57
Tier 3		>25	\$3.50	\$3.35	\$3.49	\$3.63	\$3.78	\$3.94
MFR								
Tier 1		9	\$3.50	\$2.78	\$2.90	\$3.02	\$3.15	\$3.28
Tier 2		12	\$3.50	\$3.03	\$3.16	\$3.29	\$3.43	\$3.57
Tier 3		> 12	\$3.50	\$3.16	\$3.30	\$3.44	\$3.58	\$3.73
Commercial			\$3.50	\$2.92	\$3.04	\$3.17	\$3.30	\$3.44
Institution			\$3.50	\$3.00	\$3.13	\$3.26	\$3.40	\$3.54
Fire			\$3.50	\$3.18	\$3.31	\$3.45	\$3.59	\$3.74
Irrigation - Potable			\$3.50	\$3.18	\$3.31	\$3.45	\$3.59	\$3.74

N/A - Currently the City does not charge SFR customers for the first 4 units of water

6 BILL IMPACTS AND RATE COMPARSION

Customer Bill Impacts

This section shows the customer bill impacts for each customer class under the proposed rates. **Table 6-1** shows the SFR customer impacts. The average usage for a SFR customer is 18 hcf. At 18 hcf, the current SFR bill is \$64.00 and the proposed bill is \$68.70. The \$4.70 difference is a 7.3% increase in the current bill. Low usage SFR customers have the largest customer impact due to the removal of the free 0 – 4 hcf tier currently in effect as well as the increased fixed charge based on the City’s goal for higher fixed revenue.

Table 6-1: SFR Customer Bill Impacts for 3/4" or 5/8" Meter

	Usage (hcf)	Current Bill	Proposed Bill	Uniform	Difference, \$	Difference, %
SFR						
Low	5	\$18.50	\$31.57	\$32.22	\$13.07	70.7%
Medium	10	\$36.00	\$45.46	\$46.76	\$9.46	26.3%
Below Average	15	\$53.50	\$59.60	\$61.29	\$6.10	11.4%
Above Average	20	\$71.00	\$74.77	\$75.83	\$3.77	5.3%
Very High	25	\$88.50	\$89.94	\$90.36	\$1.44	1.6%

Under the proposed rates MFR customers will realize lower bills compared to their current bill as shown in **Table 6-2**. Similarly, the average Commercial, Institution, and Irrigation – Potable customers will see lower bills as shown in **Table 6-3**, **Table 6-4**, and **Table 6-5**. Note that the bill impact tables assume a certain meter size – the most common meter size for that class.

Table 6-2: MFR Customer Bill Impacts for 1 1/2" Meter

MFR	Usage (hcf)	Current Bill	Proposed Bill	Difference
25th Percentile	50	\$212.47	\$194.38	(\$18.09)
Average	109	\$418.97	\$381.04	(\$37.93)
75th Percentile	126	\$478.47	\$434.82	(\$43.65)

Table 6-3: Commercial Customer Bill Impacts for 2" Meter

Commercial	Usage (hcf)	Current Bill	Proposed Bill	Difference
25th Percentile	2	\$60.70	\$86.48	\$25.78
Average	86	\$354.70	\$331.71	(\$22.99)
75th Percentile	78	\$326.70	\$308.35	(\$18.35)

Table 6-4: Institution Customer Bill Impacts for 2" Meter

Institution	Usage (hcf)	Current Bill	Proposed Bill	Difference
25th Percentile	24	\$137.70	\$152.64	\$14.94
Average	157	\$603.20	\$551.69	(\$51.51)
75th Percentile	190	\$718.70	\$650.70	(\$68.00)

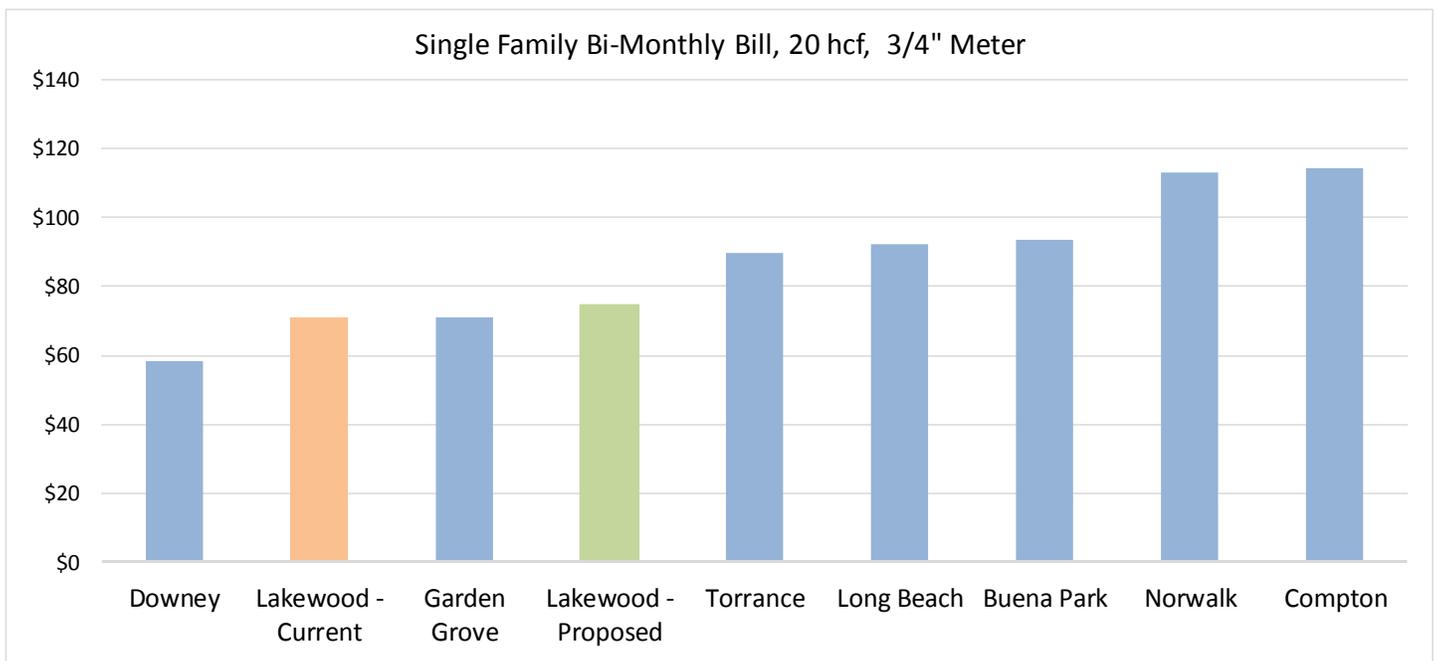
Table 6-5: Irrigation - Potable Customer Bill Impacts for 1 1/2" Meter

Irrigation - Potable	Usage (hcf)	Current Bill	Proposed Bill	Difference
25th Percentile	8	\$65.47	\$76.99	\$11.52
Average	65	\$264.97	\$258.00	(\$6.97)
75th Percentile	69	\$278.97	\$270.70	(\$8.27)

Rate Comparison

This section shows a SFR bi-monthly bill comparison based on the current City rates, proposed City rates, and existing rates for seven cities near the City of Lakewood. The comparison assumes 20 hcf usage and a typical 3/4" meter. The seven cities are Buena Park, Garden Grove, Torrance, Long Beach, Compton, Norwalk and Downey. Buena Park and Norwalk have uniform volumetric rates. The other five cities have a tiered volumetric rate structure. The total bill is comprised of a volumetric charge and bi-monthly meter charge. **Figure 6-4** shows the total bi-monthly SFR bill for each city. The total bill based on the City's current rate structure (shown in orange) is the second lowest among the surveyed cities. This is mainly due to the free, 0-4 unit Tier 1. Although the proposed rates eliminate the free tier, the City's total bi-monthly SFR bill (shown in green) is less than Torrance, Long Beach, Buena Park, Norwalk, and Compton.

Figure 6-4: Single Family Bill Comparison Among Neighboring Cities



7 RECYCLED WATER

The following section describes the derivation of the proposed meter charge and volumetric rates for recycled water irrigation customers.

7.1 ACCOUNT AND USAGE DATA

Table 7-1 shows the projected recycled water use for Irrigation customers. Recycled water use in line 2 is inflated annually by the recycled water sales trend percentage in line 1. We assumed a 10 percent annual increase in purchased recycled water costs based on discussions with City Staff

Table 7-1: Projected Recycled Water Usage

Line	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
1 Recycled Water Sales Trend (%)		3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
2 Recycled Water Use (hcf)	215,070	221,522	228,168	235,013	242,063	249,325	256,805

7.2 REVENUE REQUIREMENT DETERMINATION

The revenue requirement for recycled water includes, operations and CIP expenses shown in lines 2 through 4 of **Table 7-2**. Line 1 source/supply expense is the recycled water supply cost. Line 2 reclaimed water expense is the salary expense associated with providing recycled water. The recycled general fund charge in line 4 is a transfer to the general fund for general fund services. Recycled water CIP expense is shown in line 7. The CIP expense approximates depreciation and is calculated as 10 percent of the recycled water system asset value. Asset value is calculated as the replacement cost less depreciation of recycled water system assets as of 30 June, 2016. The total recycled water revenue requirement is the sum of line 5 and line 7.

Table 7-2: Revenue Requirement Determination

Line	Budget FY 2017	Budget FY 2018	Projected FY 2019	Projected FY 2020	Projected FY 2021	Projected FY 2022
1 Recycled Water Operating Expense						
2 8100 Source/Supply	\$297,500	\$424,069	\$480,471	\$544,373	\$616,775	\$698,806
3 8500 Reclaimed Water	\$103,150	\$103,099	\$110,419	\$115,984	\$121,830	\$126,703
4 Recycled General Fund Charge	\$122,640	\$126,319	\$132,711	\$138,059	\$143,623	\$147,932
5 Total Recycled Water Operations Expense	\$523,290	\$653,488	\$723,601	\$798,417	\$882,228	\$973,441
6						
7 Recycled Water CIP Expense	\$9,341	\$9,341	\$9,341	\$9,341	\$9,341	\$9,341
8 Total Recycled Water Revenue Requirement	\$532,631	\$662,829	\$732,942	\$807,758	\$891,569	\$982,782

After calculating the total recycled water revenue requirement, we design the amount to be collected from fixed meter charges and volumetric revenue (line 1 and 2 of **Table 7-3**). For simplicity, the City chose to develop a recycled water meter charge that matches the proposed potable water meter charges. Therefore, by an iterative process we determined the recycled meter charge revenue requirement that resulted in recycled meter charges matching the proposed potable water meter charges. The iterative solution resulted in a 5.72 percent allocation of the total recycled revenue requirement to the meter revenue requirement. In **Table 7-3**, the meter revenue requirement in line 1 is 5.72 percent of the total recycled revenue requirement in line 3.

Table 7-3: Recycled Water Meter and Volumetric Revenue Requirement

Line	Revenue Requirement	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
1	Fixed Revenue Requirement	\$38,693	\$40,242	\$41,853	\$43,528	\$45,269
2	Volumetric Revenue Requirement	\$624,136	\$692,700	\$765,904	\$848,041	\$937,512
3	Total Recycled Revenue Requirement	\$662,829	\$732,942	\$807,758	\$891,569	\$982,782

Table 7-4 shows the derivation of the recycled water meter charge in column G. We first derive the proposed recycled meter charge for the two inch meter by taking the meter revenue requirement in line 1 of **Table 7-3** and dividing by the total number of equivalent meters in line 6 of **Table 7-4**. For each meter size larger than two inches, we multiply by the hydraulic capacity ratio shown in column A of **Table 7-4** to yield the proposed fixed meter charge shown in column G. In column F of **Table 7-4**, we add the customer service charge – which is the cost of customer billing and collecting and is the same as the customer rate in line 14 of **Table 4-8**. The proposed charge in column G includes the customer service charge in column F.

Table 7-4: Derivation of Recycled Water Meter Charge

Line	Hydraulic Ratio [A]	Meter Size [B]	No. of Meters [C]	Equivalent Meters [D]=[A]*[C]	Current Recycled Meter Charge [E]	Recycled Customer Service Charge [F]	Proposed FY 2018 [G]
1	5.33	2"	26	139	\$53.70	\$3.16	\$80.63
2	11.67	3"	2	23	\$96.15	\$3.16	\$172.63
3	21.00	4"	13	273	\$142.37	\$3.16	\$308.21
4	43.33	6"	0	0	\$249.75	\$3.16	\$632.63
5	80.00	8"	0	0	\$344.66	\$3.16	\$1,165.27
6	Total		41	435			

Table 7-5 shows the current and proposed recycled water meter charge through FY 2022.

Table 7-5: Current and Proposed Recycled Water Bi-Monthly Meter Charge

Meter Size	Current	FY 2018 (Dec 1, 2017)	FY 2019 (July 1, 2018)	FY 2020 (July 1, 2019)	FY 2021 (July 1, 2020)	FY 2022 (July 1, 2021)
2"	\$53.70	\$80.64	\$83.87	\$87.23	\$90.72	\$94.35
3"	\$96.15	\$172.64	\$179.55	\$186.74	\$194.21	\$201.98
4"	\$142.37	\$308.23	\$320.56	\$333.39	\$346.73	\$360.60
6"	\$249.75	\$632.67	\$657.98	\$684.30	\$711.68	\$740.15
8"	\$344.66	\$1,165.33	\$1,211.95	\$1,260.43	\$1,310.85	\$1,363.29

The recycled water volumetric rate is calculated by dividing the annual volumetric revenue requirement in line 2 of **Table 7-3** by the forecasted recycled water usage in line 2 of **Table 7-1**. In addition to the proposed recycled water volumetric rates, **Table 7-6** includes the weighted average potable water volumetric rate (line 2) to compare the two rates. Note that the recycled volumetric rate exceeds the average potable rate in FY 2020 and beyond (line 3), based on our *estimated* recycled water expenses.

The City could choose to price recycled water based on a discount from potable water as shown in lines 4 and 5.

Table 7-6: Recycled Water Volumetric Rate (\$/hcf)

Line	Current	FY 2018 (Dec 1, 2017)	FY 2019 (July 1, 2018)	FY 2020 (July 1, 2019)	FY 2021 (July 1, 2020)	FY 2022 (July 1, 2021)
1 Cost of Service Volumetric Rate (\$/hcf)	\$1.86	\$2.74	\$2.95	\$3.16	\$3.40	\$3.65
2 Average Potable Rate (\$/hcf)		\$2.91	\$3.02	\$3.14	\$3.27	\$3.40
3 Difference (line 2 - line 1)		\$0.17	\$0.08	(\$0.02)	(\$0.13)	(\$0.25)
4 10% Discount		\$2.62	\$2.72	\$2.83	\$2.94	\$3.06
5 15% Discount		\$2.47	\$2.57	\$2.67	\$2.78	\$2.89

8 PRIVATE FIRE

The proposed private fire meter charges are developed in proportion to the potential flow through each size fire connection. In order to calculate private fire charges, we first allocate costs between private and public fire. **Table 8-1** shows the public fire demand units in column D. The demand factor in column C is a function of the quantity and diameter of the ports on public fire hydrants.

Table 8-1: Public Fire Protection Demand Units⁹

Line	Connection Size (in) [A]	Number in Demand			% of Total Fire Protection Cost [E]
		Service [B]	Factor [C]	Demand Units [D]=[B]x[C]	
1	1- 4" Port and 2 - 2.5" Port	1,073	60.6	65,006	
2		1,073			78.8%

The demand units for *private* fire are calculated in column D of **Table 8-2**. The demand factor in column C is the fire connection (pipeline) diameter raised to the power of 2.63 which is based on the Hazen-Williams equation for flow.

Table 8-2: Private Fire Demand Units¹⁰

Line	Connection Size (in) [A]	Number in			% of Total Fire Protection Cost [E]
		Service [B]	Demand Factor [C]=[A]^2.63	Demand Units [D]=[B]*[C]	
1	2"	0	6.2	0	
2	3"	1	18.0	18	
3	4"	31	38.3	1,188	
4	6"	60	111.3	6,679	
5	8"	37	237.2	8,777	
6	10"	2	426.6	853	
7	12"	0	689.0	0	
8	Total	131		17,514	21.2%
9	Total Public and Private	1,204		82,521	100%

The percentages in column E of **Table 8-1** and column E of **Table 8-2** are used to allocate the total public and private fire protection cost in line 1 of **Table 8-3** (same as line 6, column D of **Table 4-8**). The private fire cost in line 3 is divided by the private fire demand units in line 4, resulting in the annual cost per demand unit. Dividing line 5 by six bi-monthly periods per year results in the bi-monthly charge per demand unit in line 6.

⁹ The demand factor is the diameter of the connection raised to the power of 2.63 (Hazen-Williams equation for fluid flow) multiplied by the number of ports of each hydrant.

¹⁰ The demand factor is the diameter of the connection raised to the power of 2.63, based on the Hazen-Williams equation for fluid flow.

Table 8-3: Derivation of Private Fire Unit Cost

Line		
1	Total Public and Private Fire Protection Cost	\$712,573
2	Public Fire Protection Cost	\$561,335
3	Private Fire Protection Cost	\$151,238
4	Private Fire Demand Units	17,514
5	Annual Cost per Demand Unit	\$8.64
6	Bi-Monthly Charge per Demand Unit	\$1.44

The proposed bi-monthly charges in column B of **Table 8-4** are determined by multiplying the bi-monthly charge per demand unit in line 6 of **Table 8-3** by the demand factor by meter size in column C of **Table 8-2**. Column D of **Table 8-4** shows the dollar difference between the current and proposed fire meter charges. The total amount to be recovered for private fire charges is shown in line 16, column D of **Table 4-9**.

Table 8-4: Current and Proposed Bi-Monthly Private Fire Meter Charge

Line	Connection Size [A]	Proposed Bi-Monthly Charge [B]	Current Bi-Monthly Charge [C]	Difference, \$ [D]
1	2"	\$8.91	\$45.00	(\$36.09)
2	3"	\$25.88	\$56.25	(\$30.37)
3	4"	\$55.15	\$70.31	(\$15.16)
4	6"	\$160.20	\$87.89	\$72.31
5	8"	\$341.38	\$109.86	\$231.52
6	10"	\$613.92	\$137.33	\$476.59
7	12"	\$991.66	\$171.66	\$820.00

**D
I
V
I
D
E
R
S
H
E
E
T**

**CITY OF LAKEWOOD SUCCESSOR AGENCY - HOUSING
FUND SUMMARY 8/31/2017**

In accordance with section 2521 of the Lakewood Municipal Code there is presented herewith a summary of obligations to be paid by voucher 316 through 316. Each of the following demands has been audited by the Director of Administrative Services and approved by the City Manager.

3901	HOUSING SUCCESSOR AGENCY	32.00
		<hr/>
		32.00

Council Approval

_____ Date

_____ City Manager

Attest

_____ City Clerk

_____ Director of Administrative Services

**CITY OF LAKEWOOD SUCCESSOR AGENCY - HOUSING
SUMMARY CHECK REGISTER**

<u>CHECK #</u>	<u>CHECK DATE</u>	<u>VEND #</u>	<u>VENDOR NAME</u>	<u>GROSS</u>	<u>DISC.</u>	<u>CHECK AMOUNT</u>
316	08/31/2017	40572	CHICAGO TITLE CO	32.00	0.00	32.00
Totals:				<u>32.00</u>	<u>0.00</u>	<u>32.00</u>