# WILSON RESERVOIR REPLACEMENT PROJECT

## INITIAL STUDY AND PROPOSED MITIGATED NEGATIVE DECLARATION

**CITY OF SOUTH PASADENA**
CITY HALL
1414 MISSION STREET
SOUTH PASADENA, CA 91030-3298

*PREPARED BY:*
**WILLDAN**
13191 CROSSROADS PARKWAY NORTH
SUITE 405
INDUSTRY, CA 91746-3497

**APRIL 17, 2012**

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# ENVIRONMENTAL CHECKLIST FORM

| | | |
|---|---|---|
| 1. | **Project Title:** | Wilson Reservoir Replacement Project |
| 2. | **Lead Agency Name and Address:** | City of South Pasadena<br>1414 Mission Avenue<br>South Pasadena, California 91030 |
| 3. | **Contact Person and Phone Number:** | Shin Furukawa<br>Deputy Public Works Director<br>(626) 403-7246 |
| 4. | **Project Location:** | 545 Adelyn Drive, San Gabriel, CA 91775 (see Figures 1-3) |
| 5. | **Project Sponsor's Name and Address:** | City of South Pasadena<br>Public Works Department<br>1414 Mission Avenue<br>South Pasadena, California 91030 |
| 6. | **General Plan Designation:** | City of San Gabriel:<br>Low Density Residential (0-6 du/acre) |
| 7. | **Zoning:** | City of San Gabriel:<br>R-1 (Single Family Residence District) |

8. **Description of the Project:**

Background:

The Wilson Reservoir, owned and operated by the City of South Pasadena, is located at 545 West Adelyn Drive in the City of San Gabriel. Built in approximately 1920, the reservoir is constructed of concrete and is covered by a wood frame roof. Water comes from two wells located on-site and a third well located a short distance south of the site on Bradbury Drive. Pumping and water chlorination systems, as well as an operations building, are also located on the reservoir site. Treated water is pumped from the Wilson Reservoir through transmission pipelines to the Garfield Reservoir within the City of South Pasadena.

In recent years, the roof of the 90-year-old reservoir has begun to deteriorate and sag in areas. An inspection in early 2008 concluded that a severe roof collapse could occur at any time. Because of its age, the reservoir also does not meet current earthquake resistance standards. For these reasons, the inspection report recommended complete replacement of the reservoir.

**Figure 1: Regional Location Map**

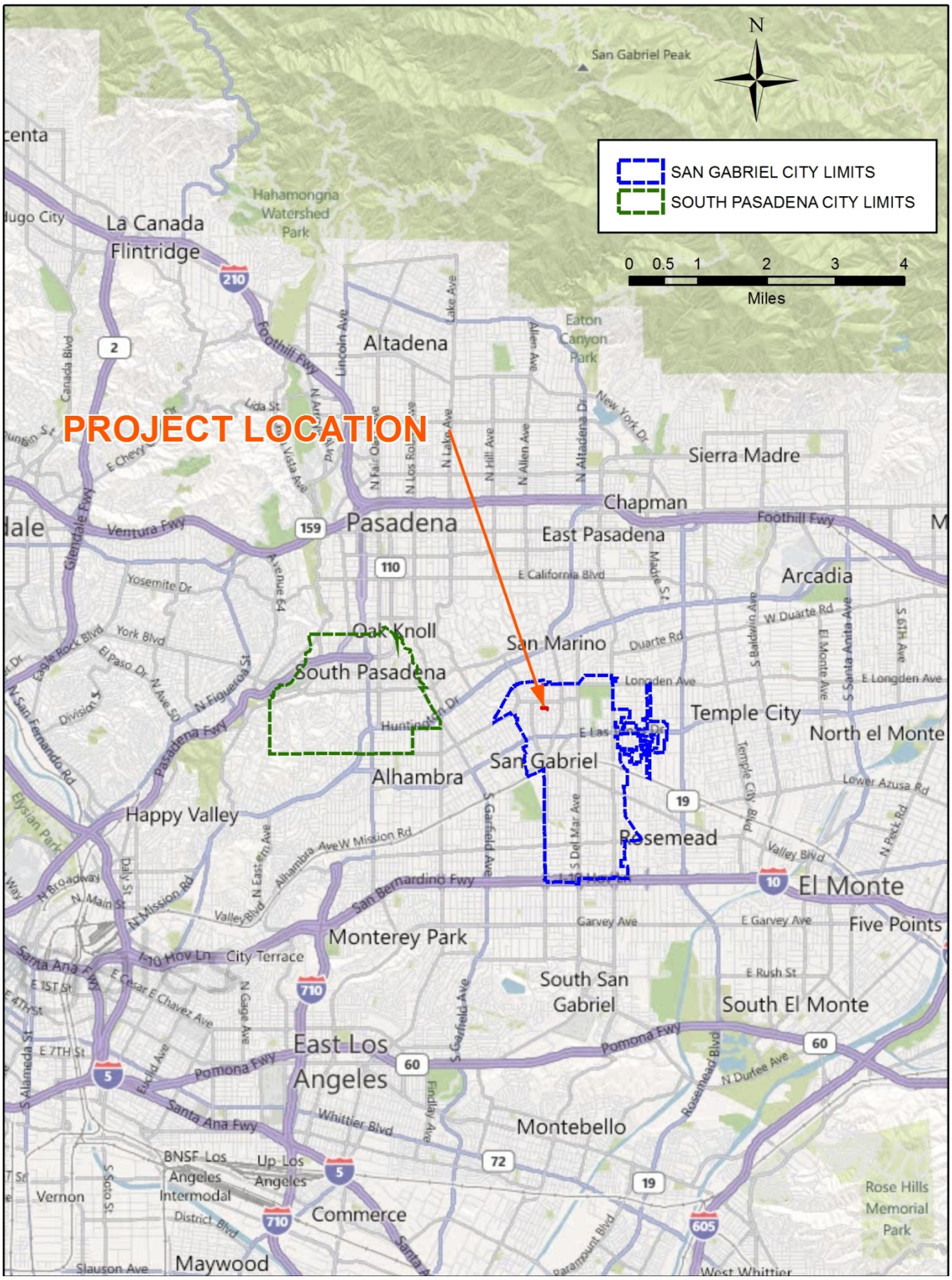


**Figure 2: Project Location Map**

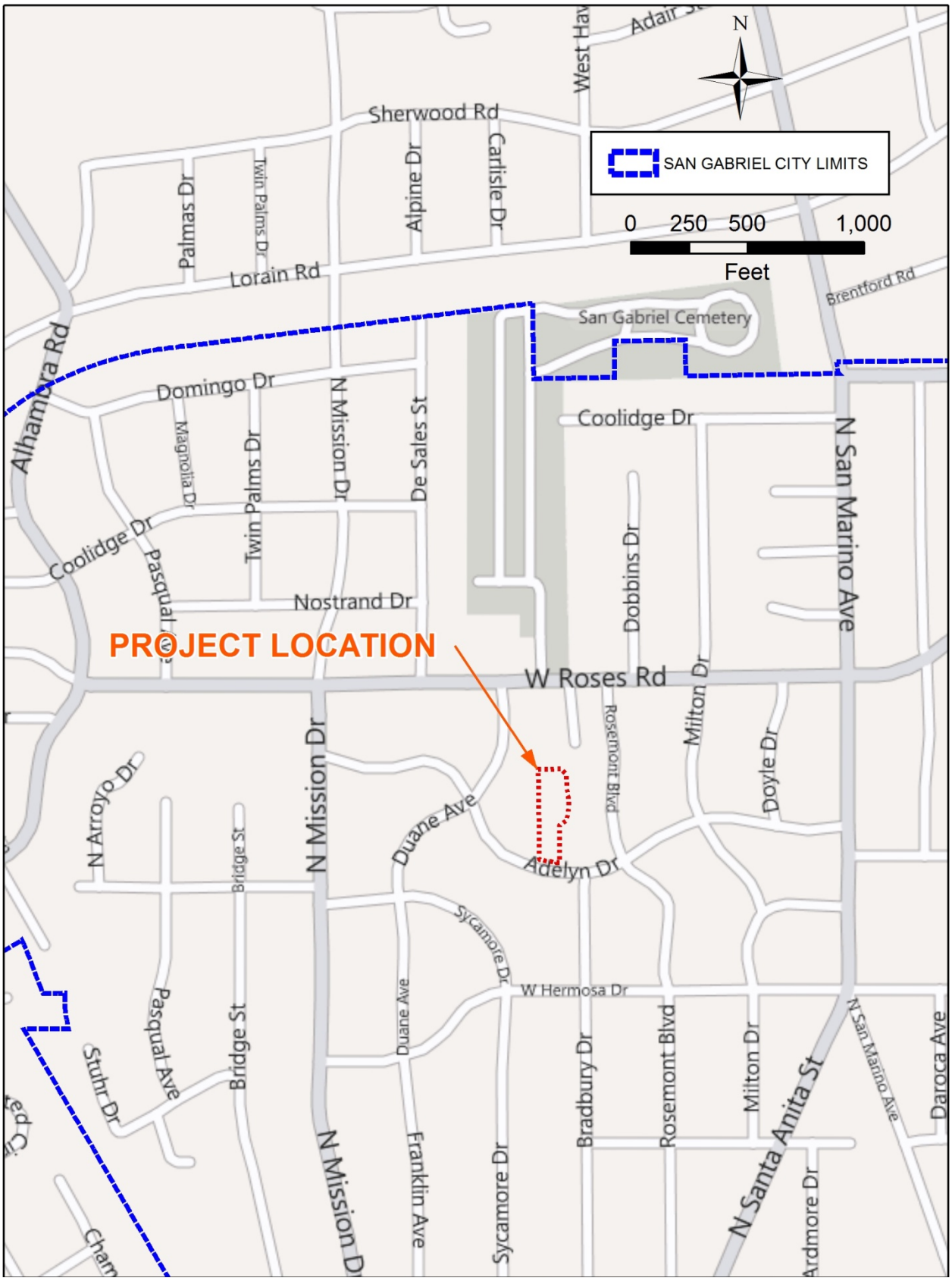


**Figure 3: Aerial Photograph of Project Site**

Project Components

The proposed Wilson Reservoir Replacement Project (Proposed Project) would include demolition of the existing approximately one million gallon (MG) concrete reservoir, pump house building, office building, valve vault, existing yard piping, site paving, and landscaping, and construction of a new 1.3 MG reservoir at the site with support facilities, including a pump house, operations building, and clearwell. The reservoir would be constructed of cast in place concrete, with a floor elevation of 483 feet above mean sea level (MSL), and an overflow elevation of 501 feet above MSL. The main reservoir would be partially buried with the top deck approximately 4 feet higher elevation as compared to the existing reservoir. The key components of the project include the following:

- Demolish and remove the existing reservoir and related structures;
- Construct a 1.3-million gallon reservoir that would be partially buried but which would be 4 feet taller than the existing reservoir;
- Construct new sound-attenuated pump house;
- Construct new operations building;
- Construct new clearwell[1];
- Provide onsite generation of sodium hypochlorite (safer than current storage of chlorine onsite[2]);
- Import approximately 1,917 cubic yards (cy) of fill for construction-related activities;
- Create approximately 10,262 cubic yards (cy) of excavated waste material generated from demolition of the existing structures with 3,262 cubic yards (cy) to be exported off-site; and
- Anticipate 24-month construction period.

Plans for the new replacement reservoir and adjacent structures and improvements are presented in Figures 4-7. A concept rendering of the project is presented in Figure 8.

Proposed Replacement Reservoir

The proposed replacement reservoir is a 1.3-million gallon (m.g.), oblong, irregularly shaped, concrete tank, that would be constructed at the rear (north) of the site in the same location as the existing reservoir. The replacement reservoir would be approximately 140 feet (ft.) by 90 ft., have a maximum of 21 ft. in height (measured from floor to roof), and constructed of cast in place concrete . The proposed above-grade reservoir walls are between 7 and 11 feet in height and would be connected to a concrete slab foundation/floor with a finished floor elevation of 483 ft. ASL. The roof of the proposed reservoir is a concrete slab.

[1] A clearwell is a vessel used to store water temporally before long-term storage or delivery of the water. The proposed clearwell would provide a blending point for the production water from the three wells before going into the main reservoir. The proposed clearwell can also serve as a forebay for the booster pumps when the reservoir is not in service for maintenance, etc., thus allowing the water wells to stay in service and avoid using MWD water during those times.

[2] See Section 9. Hazards and Hazardous Materials, part (a and b) for a discussion/explanation of the reduction in risks that would result from the proposed project.

At its highest point, the proposed reservoir would be 504 ft. above mean sea level (MSL), which would occur in the center of the structure atop the roof. For comparison, the top of the proposed reservoir would be approximately 4 feet higher than the existing reservoir. The top of the existing reservoir is approximately 500 ft. above MSL.

The proposed reservoir would be surrounded by an 8-10 ft. wide pathway (similar to the existing reservoir) which would be accessible from Adelyn Drive via a gated entry. Existing block walls and fencing surrounding the reservoir would remain in place. Access to the reservoir roof would be from a metal stairway located in front of and on the east side of the reservoir. Finished grade of the access pathways surrounding the reservoir would be approximately 495 ASL.

Pumping Station

A new 1,320-square foot ($ft^2$) booster pump station is proposed for the project. The new pumping station would perform the same function as the existing pumping station, which is to pump water from the Wilson Reservoir to the Garfield Reservoir in the City of South Pasadena. The proposed pump station would be located adjacent to the reservoir in the general location of the existing office and would consist of a single level split-face concrete block building with asphalt/composition shingle roof. The structure would be approximately 60 feet deep, 22 feet wide, and 19 feet tall. The southerly exterior elevations of the building would include Craftsman style architectural features such as a low-pitched roof line with rafter tails, overhanging eves, and a shingled façade. The building is sized for two 200 horsepower (HP) and one 150 HP vertical turbine pumps and associated piping, accessories, and electrical/control equipment, as well as a chlorination facility. The operating floor would be accessible from ground level. The pumping station would have a total installed capacity of 6,500 gallons per minute (gpm) (9.3 million gallons per day (MGD)) with two 2,500 gpm pumps and one 1,500 gpm pump, providing a firm capacity of 4,000 gpm (5.7 MGD).

Chlorination Facility

A new chlorination facility would be housed within the pumping station building. The chlorination facility would provide initial chlorine residual in the reservoir at prescribed levels for public health. The facility would generate sodium hypochlorite from a brine solution made with salt and water. Sodium hypochlorite would be generated at a solution strength of 0.8 percent. Sodium hypochlorite strength of less than 1.0 percent is not classified as a hazardous material. By comparison, household bleach has a solution strength of approximately 5 to 6 percent. The need for transporting hazardous bulk chlorine to the site would be eliminated as the facility uses only ordinary salt (sodium chloride), water, and electricity to generate sodium hypochlorite.

Other On-site Facilities

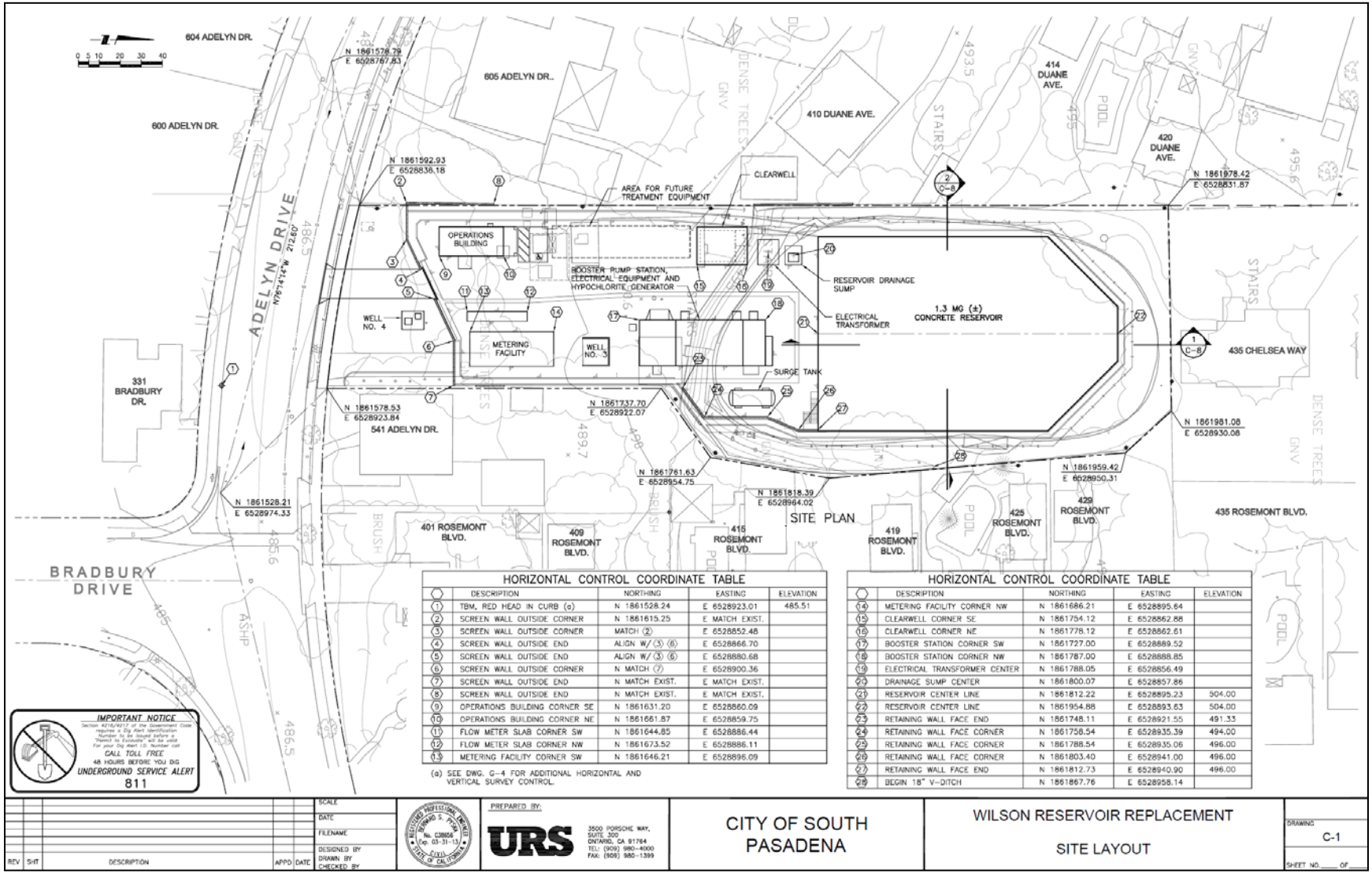
Additional new facilities proposed on the project site include an operations building, metering facility and clearwell. The operations building would be located at the front of the site (west side), directly behind a proposed 8-foot concrete masonry wall. The operations building would contain the operation center, equipment storage, records storage and restroom. The structure

would be approximately 31 feet deep (not including rear overhang patio area), 15 feet wide, and 13.5 feet tall. The exterior elevations of the building include Craftsman style architectural features such as a low-pitched roof line with rafter tails, overhanging eves, and tapered columns supporting the roof structure. The new metering facility would also be located at the front of the site (east side) and would consist of metering equipment for the reservoir. Finally, a new clearwell is proposed which would be located along the west property line behind the operations building and in front of the proposed replacement reservoir. The clearwell is a rectangular cast in place concrete tank structure that would be approximately 24 feet deep, 21 feet wide, and 18 feet 3 inches (18'-3") tall at the top of roofline. The exterior elevations of the clearwell would include craftsman style architectural features, such as a low-pitched roof with rafter tails and overhanging eaves. All of the proposed new on-site structures would include Craftsman-style design elements (pitched roofs, shingle siding, etc.) to make them more compatible with existing residential architecture in the project vicinity.

Off-Site Facilities

No new off-site facilities will be constructed in conjunction with the project.

**Figure 4: Proposed Project Site Plan**




HORIZONTAL CONTROL COORDINATE TABLE

| | DESCRIPTION | NORTHING | EASTING | ELEVATION |
|---|---|---|---|---|
| 1 | TBM, RED HEAD IN CURB (a) | N 1861528.24 | E 6528923.01 | 485.51 |
| 2 | SCREEN WALL OUTSIDE CORNER | N 1861615.25 | E MATCH EXIST. | |
| 3 | SCREEN WALL OUTSIDE CORNER | MATCH (2) | E 6528852.48 | |
| 4 | SCREEN WALL OUTSIDE END | ALIGN W/ (3) (6) | E 6528866.70 | |
| 5 | SCREEN WALL OUTSIDE END | ALIGN W/ (3) (6) | E 6528880.68 | |
| 6 | SCREEN WALL OUTSIDE CORNER | N MATCH (7) | E 6528900.36 | |
| 7 | SCREEN WALL OUTSIDE END | N MATCH EXIST. | E MATCH EXIST. | |
| 8 | SCREEN WALL OUTSIDE END | N MATCH EXIST. | E MATCH EXIST. | |
| 9 | OPERATIONS BUILDING CORNER SE | N 1861631.20 | E 6528860.09 | |
| 10 | OPERATIONS BUILDING CORNER NE | N 1861661.87 | E 6528859.75 | |
| 11 | FLOW METER SLAB CORNER SW | N 1861644.85 | E 6528886.44 | |
| 12 | FLOW METER SLAB CORNER NW | N 1861673.52 | E 6528886.11 | |
| 13 | METERING FACILITY CORNER SW | N 1861646.21 | E 6528896.09 | |

(a) SEE DWG. C-4 FOR ADDITIONAL HORIZONTAL AND VERTICAL SURVEY CONTROL.

HORIZONTAL CONTROL COORDINATE TABLE

| | DESCRIPTION | NORTHING | EASTING | ELEVATION |
|---|---|---|---|---|
| 14 | METERING FACILITY CORNER NW | N 1861686.21 | E 6528895.64 | |
| 15 | CLEARWELL CORNER SE | N 1861754.12 | E 6528862.88 | |
| 16 | CLEARWELL CORNER NE | N 1861778.12 | E 6528862.61 | |
| 17 | BOOSTER STATION CORNER SW | N 1861727.00 | E 6528889.52 | |
| 18 | BOOSTER STATION CORNER NW | N 1861787.00 | E 6528888.85 | |
| 19 | ELECTRICAL TRANSFORMER CENTER | N 1861788.05 | E 6528856.49 | |
| 20 | DRAINAGE SUMP CENTER | N 1861800.07 | E 6528857.86 | |
| 21 | RESERVOIR CENTER LINE | N 1861812.22 | E 6528895.23 | 504.00 |
| 22 | RESERVOIR CENTER LINE | N 1861954.88 | E 6528893.63 | 504.00 |
| 23 | RETAINING WALL FACE END | N 1861748.11 | E 6528921.55 | 491.33 |
| 24 | RETAINING WALL FACE CORNER | N 1861758.54 | E 6528935.39 | 494.00 |
| 25 | RETAINING WALL FACE CORNER | N 1861788.54 | E 6528935.06 | 496.00 |
| 26 | RETAINING WALL FACE CORNER | N 1861803.40 | E 6528941.00 | 496.00 |
| 27 | RETAINING WALL FACE END | N 1861812.73 | E 6528940.90 | 496.00 |
| 28 | BEGIN 18" V-DITCH | N 1861867.76 | E 6528958.14 | |

REV | SHT | DESCRIPTION | APPD | DATE

SCALE
DATE
FILENAME
DESIGNED BY
DRAWN BY
CHECKED BY

PREPARED BY:
URS
3500 PORSCHE WAY, SUITE 300
ONTARIO, CA 91764
TEL: (909) 980-4900
FAX: (909) 980-1399

CITY OF SOUTH PASADENA

WILSON RESERVOIR REPLACEMENT

SITE LAYOUT

DRAWING C-1

SHEET NO. ___ OF ___

**Figure 5: Proposed Pump Station Exterior Elevations**

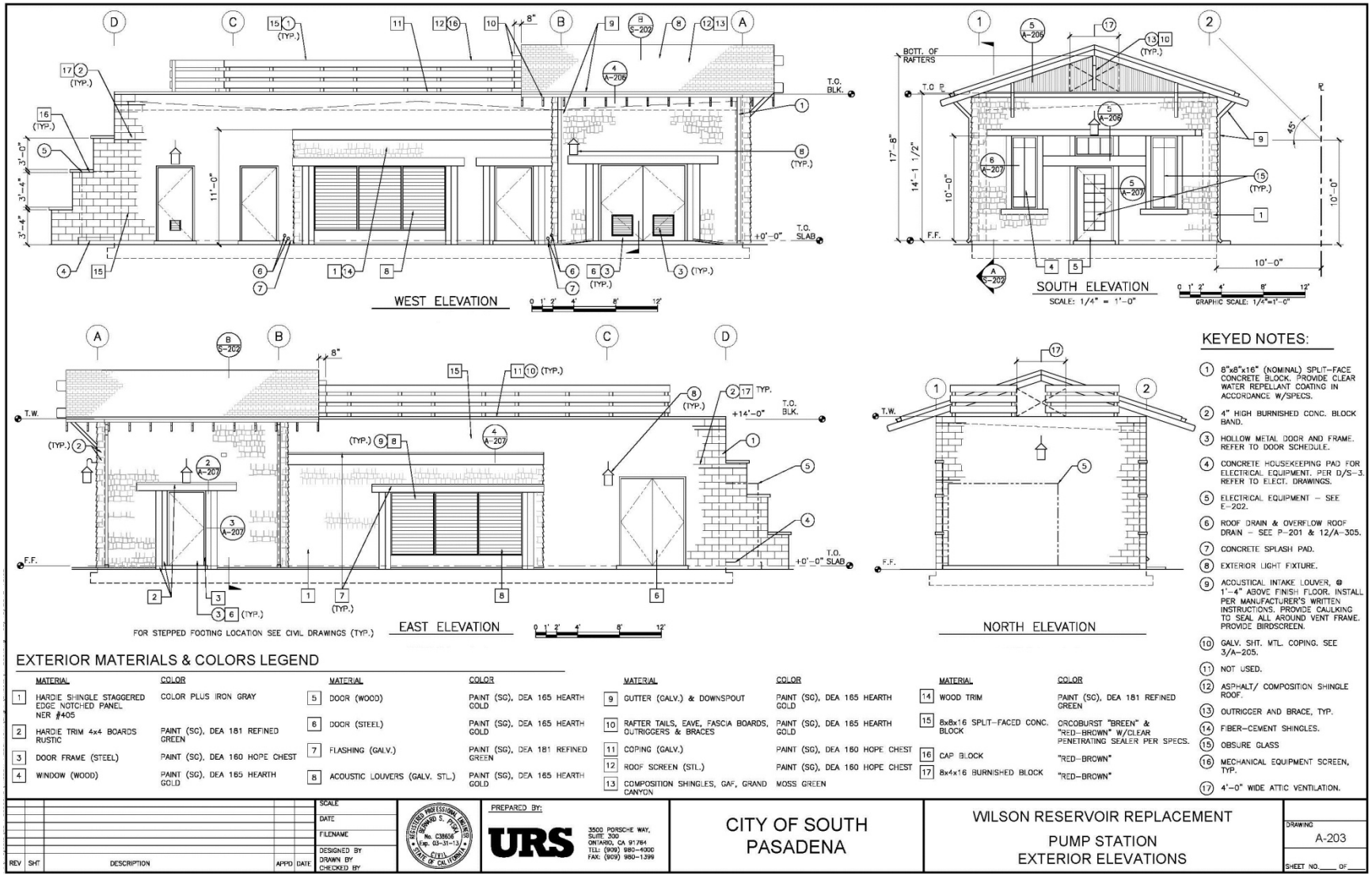


**Figure 6a: Proposed Operations Building Exterior Elevations (pg. 1)**

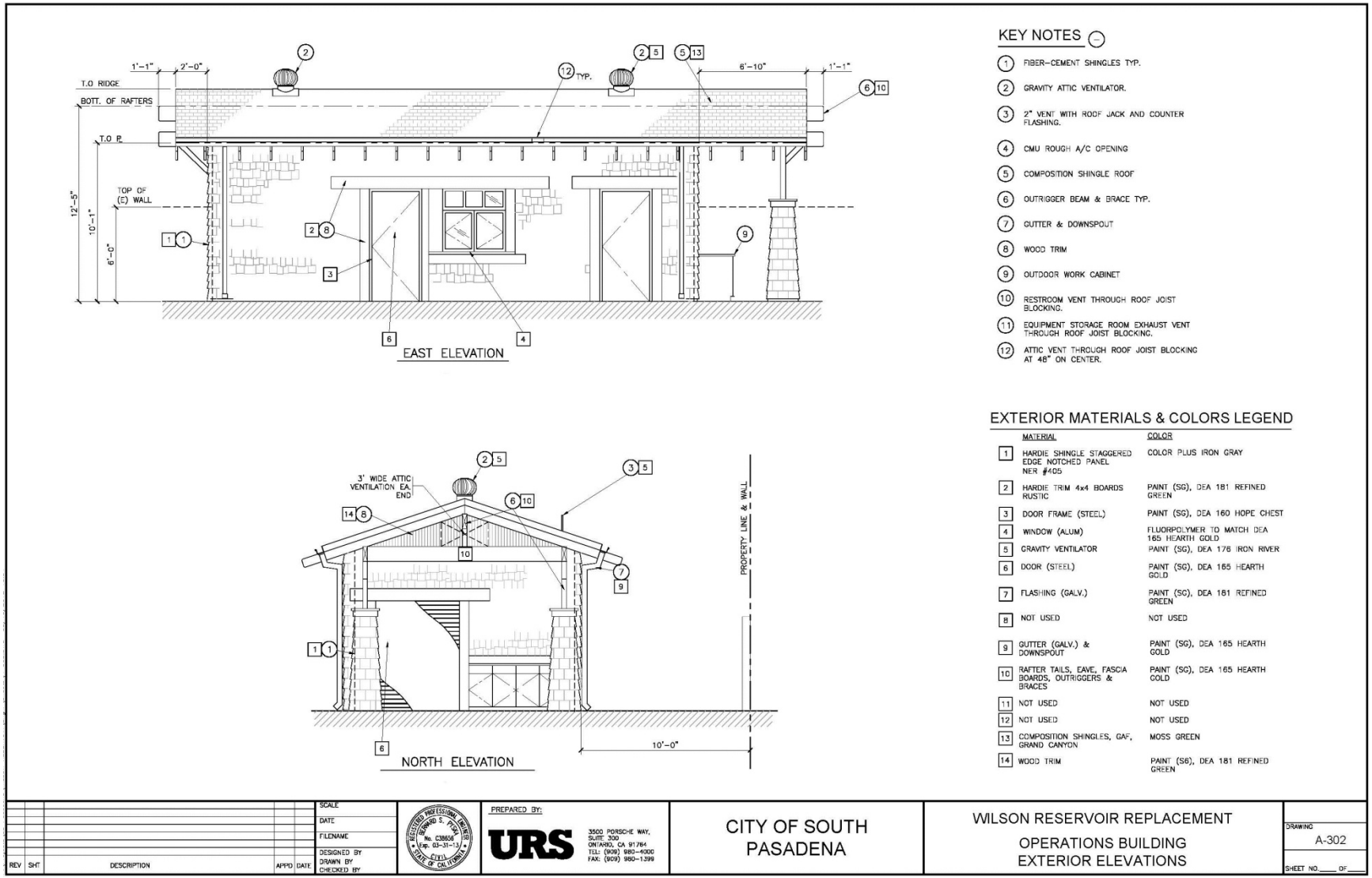


**Figure 6b: Proposed Operations Building Exterior Elevations (pg. 2)**

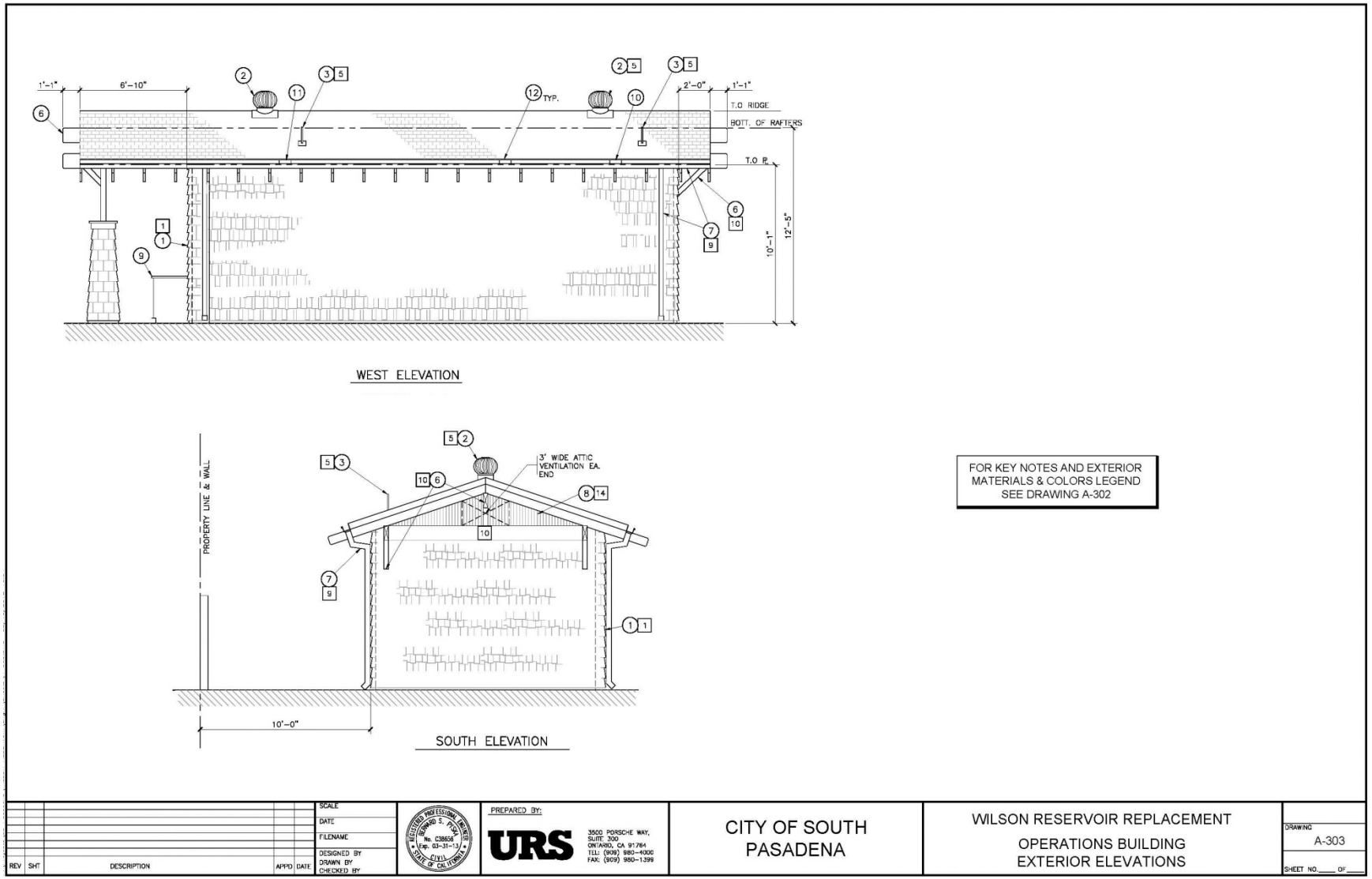


**Figure 7: Proposed Clearwell Structure Exterior Elevations**

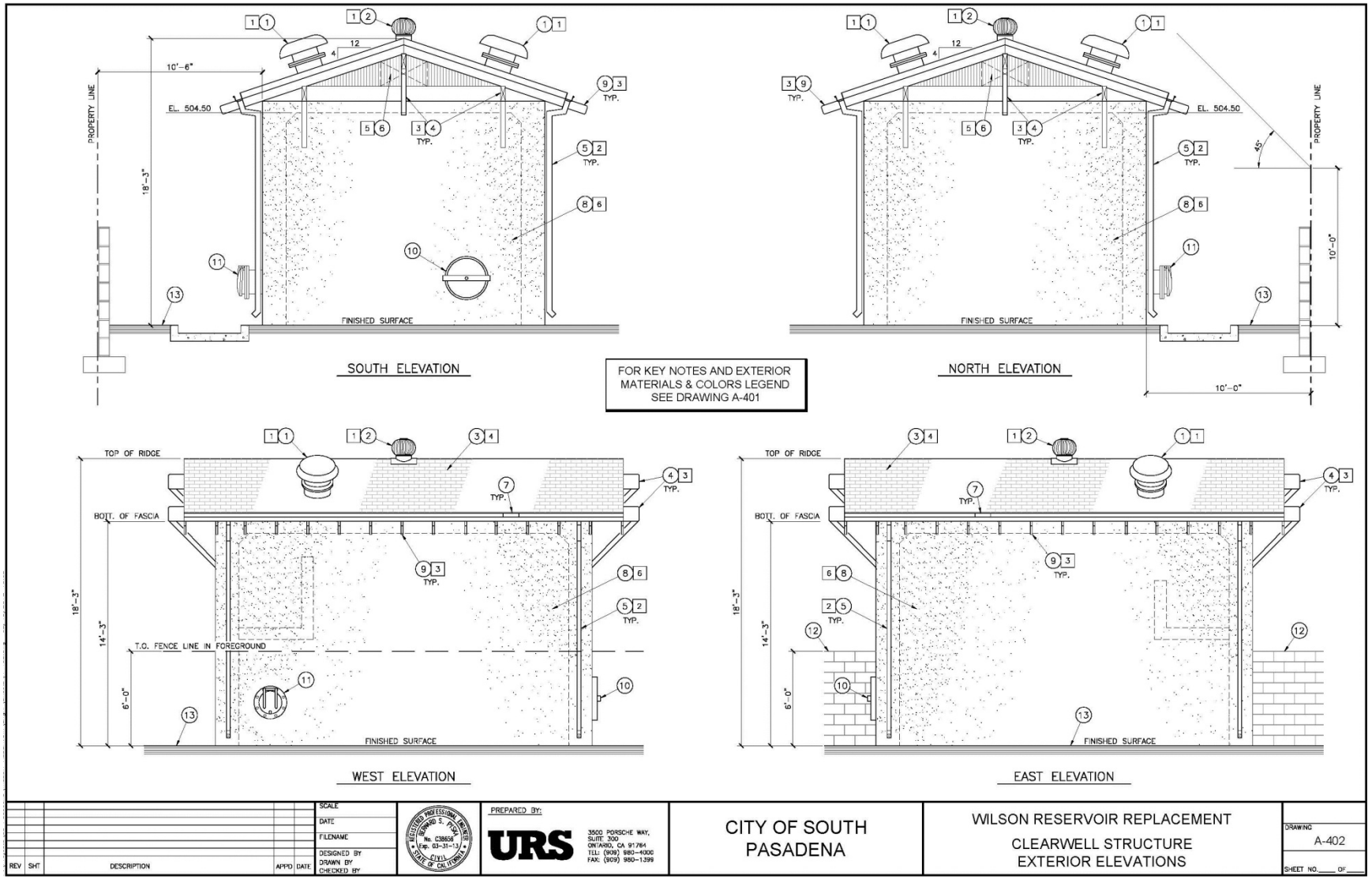
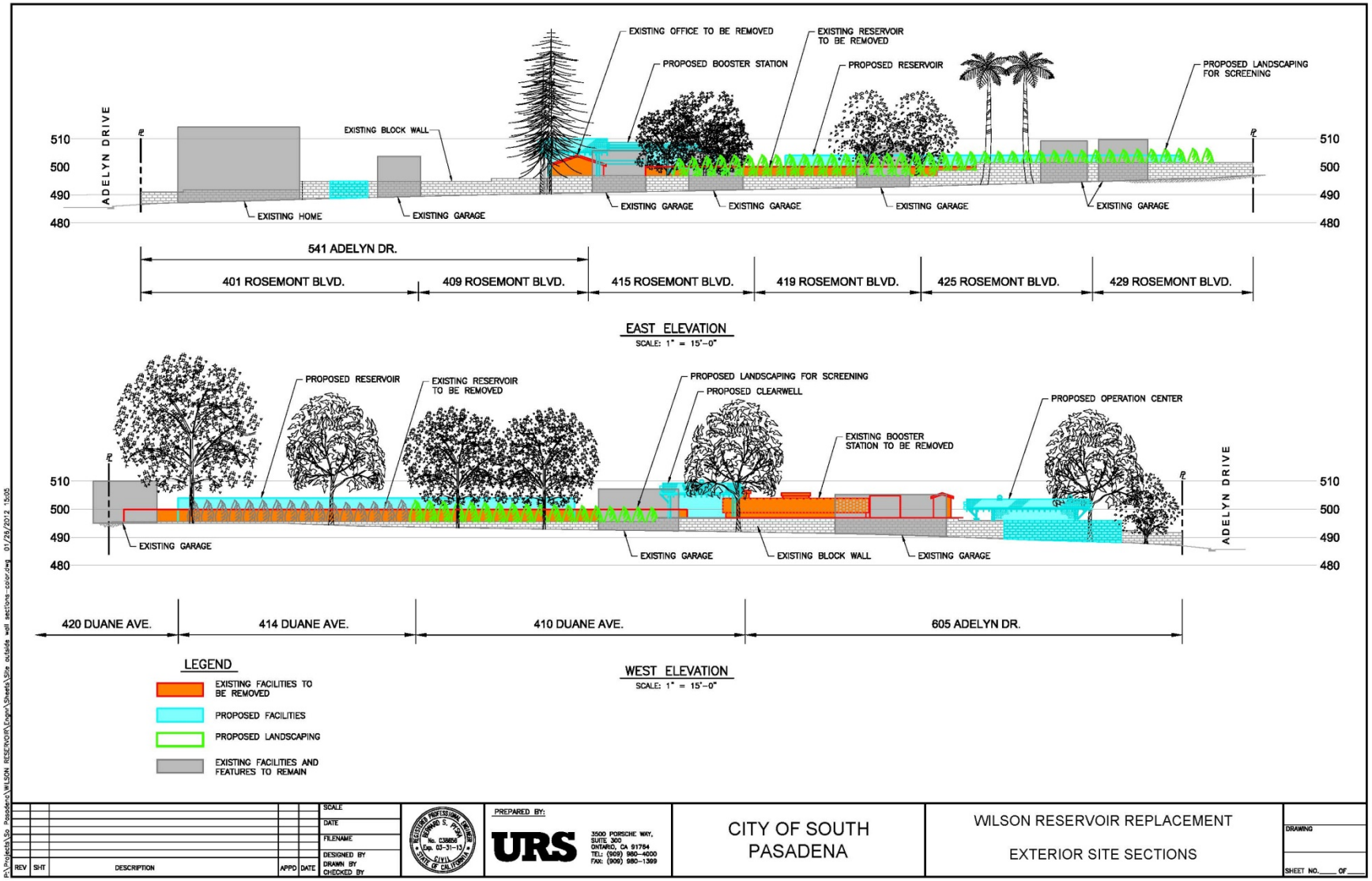


**Figure 8: Photosimulation of the Existing Facility as Viewed from Adelyn Drive**

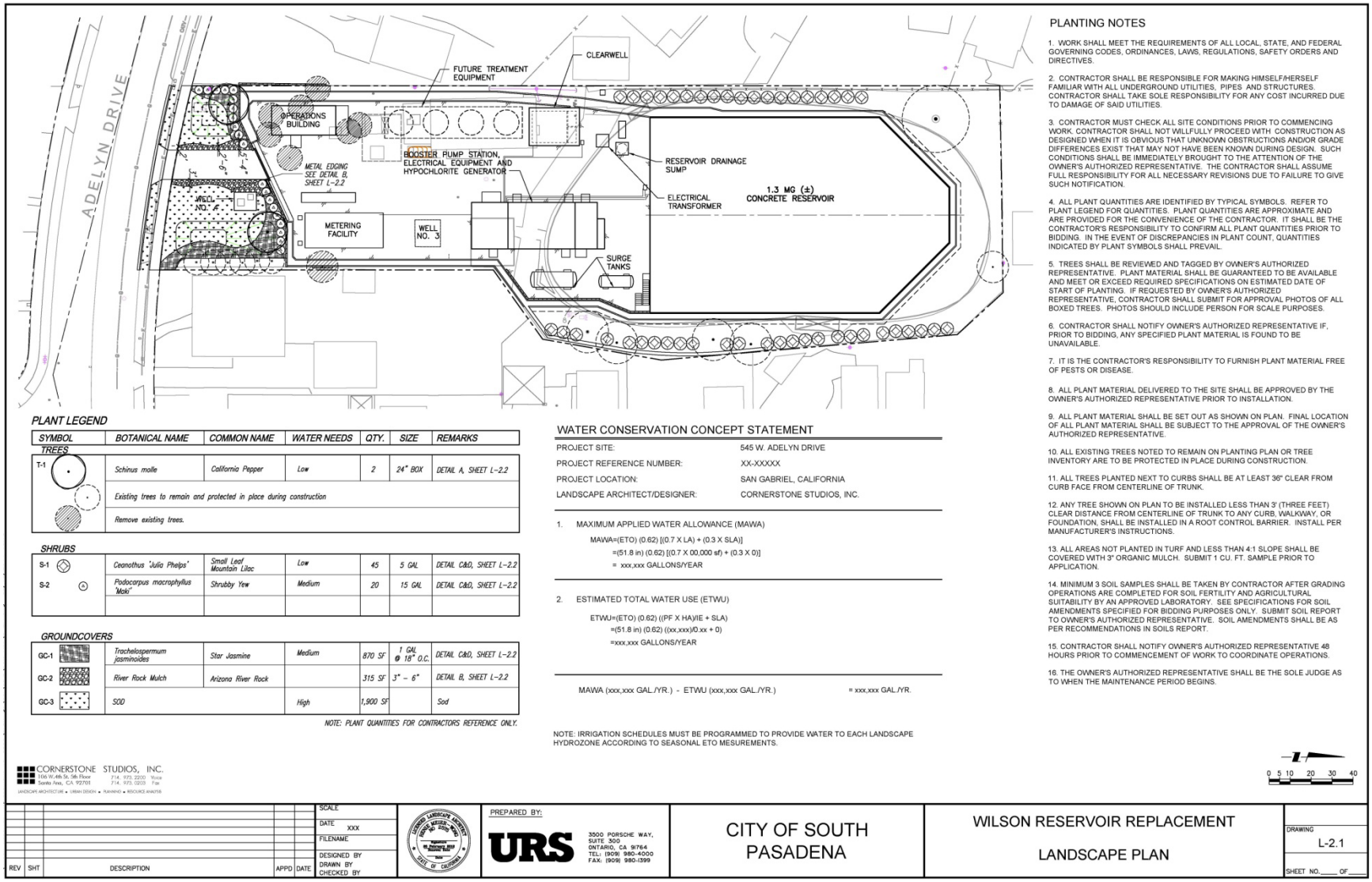
**Figure 8 (cont.): Photosimulation of the Proposed Facility as Viewed from Adelyn Drive**

**Figure 9 – Various Northerly Views of Project Area from Adelyn Drive**

**Figure 10 – Exterior Site Sections**



## Figure 11 – Landscape Plan




### PLANT LEGEND

| SYMBOL | BOTANICAL NAME | COMMON NAME | WATER NEEDS | QTY. | SIZE | REMARKS |
|---|---|---|---|---|---|---|
| **TREES** | | | | | | |
| T-1 | Schinus molle | California Pepper | Low | 2 | 24" BOX | DETAIL A, SHEET L-2.2 |
| | Existing trees to remain and protected in place during construction | | | | | |
| | Remove existing trees. | | | | | |
| **SHRUBS** | | | | | | |
| S-1 | Ceanothus 'Julia Phelps' | Small Leaf Mountain Lilac | Low | 45 | 5 GAL | DETAIL C&D, SHEET L-2.2 |
| S-2 | Podocarpus macrophyllus 'Maki' | Shrubby Yew | Medium | 20 | 15 GAL | DETAIL C&D, SHEET L-2.2 |
| **GROUNDCOVERS** | | | | | | |
| GC-1 | Trachelospermum jasminoides | Star Jasmine | Medium | 870 SF | 1 GAL @ 18" O.C. | DETAIL C&D, SHEET L-2.2 |
| GC-2 | River Rock Mulch | Arizona River Rock | | 315 SF | 3" – 6" | DETAIL B, SHEET L-2.2 |
| GC-3 | SOD | | High | 1,900 SF | | Sod |

NOTE: PLANT QUANTITIES FOR CONTRACTORS REFERENCE ONLY.

### WATER CONSERVATION CONCEPT STATEMENT

| | |
|---|---|
| PROJECT SITE: | 545 W. ADELYN DRIVE |
| PROJECT REFERENCE NUMBER: | XX-XXXXX |
| PROJECT LOCATION: | SAN GABRIEL, CALIFORNIA |
| LANDSCAPE ARCHITECT/DESIGNER: | CORNERSTONE STUDIOS, INC. |

1. MAXIMUM APPLIED WATER ALLOWANCE (MAWA)

MAWA=(ETO) (0.62) [(0.7 X LA) + (0.3 X SLA)]
=(51.8 in) (0.62) [(0.7 X 00,000 sf) + (0.3 X 0)]
= xxx,xxx GALLONS/YEAR

2. ESTIMATED TOTAL WATER USE (ETWU)

ETWU=(ETO) (0.62) ((PF X HA)/E + SLA)
=(51.8 in) (0.62) ((xx,xxx)/0.xx + 0)
=xxx,xxx GALLONS/YEAR

MAWA (xxx,xxx GAL./YR.) - ETWU (xxx,xxx GAL./YR.) = xxx,xxx GAL./YR.

NOTE: IRRIGATION SCHEDULES MUST BE PROGRAMMED TO PROVIDE WATER TO EACH LANDSCAPE HYDROZONE ACCORDING TO SEASONAL ETO MESUREMENTS.

### PLANTING NOTES

1. WORK SHALL MEET THE REQUIREMENTS OF ALL LOCAL, STATE, AND FEDERAL GOVERNING CODES, ORDINANCES, LAWS, REGULATIONS, SAFETY ORDERS AND DIRECTIVES.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HIMSELF/HERSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COST INCURRED DUE TO DAMAGE OF SAID UTILITIES.

3. CONTRACTOR MUST CHECK ALL SITE CONDITIONS PRIOR TO COMMENCING WORK. CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.

4. ALL PLANT QUANTITIES ARE IDENTIFIED BY TYPICAL SYMBOLS. REFER TO PLANT LEGEND FOR QUANTITIES. PLANT QUANTITIES ARE APPROXIMATE AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM ALL PLANT QUANTITIES PRIOR TO BIDDING. IN THE EVENT OF DISCREPANCIES IN PLANT COUNT, QUANTITIES INDICATED BY PLANT SYMBOLS SHALL PREVAIL.

5. TREES SHALL BE REVIEWED AND TAGGED BY OWNER'S AUTHORIZED REPRESENTATIVE. PLANT MATERIAL SHALL BE GUARANTEED TO BE AVAILABLE AND MEET OR EXCEED REQUIRED SPECIFICATIONS ON ESTIMATED DATE OF START OF PLANTING. IF REQUESTED BY OWNER'S AUTHORIZED REPRESENTATIVE, CONTRACTOR SHALL SUBMIT FOR APPROVAL PHOTOS OF ALL BOXED TREES. PHOTOS SHOULD INCLUDE PERSON FOR SCALE PURPOSES.

6. CONTRACTOR SHALL NOTIFY OWNER'S AUTHORIZED REPRESENTATIVE IF, PRIOR TO BIDDING, ANY SPECIFIED PLANT MATERIAL IS FOUND TO BE UNAVAILABLE.

7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FURNISH PLANT MATERIAL FREE OF PESTS OR DISEASE.

8. ALL PLANT MATERIAL DELIVERED TO THE SITE SHALL BE APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO INSTALLATION.

9. ALL PLANT MATERIAL SHALL BE SET OUT AS SHOWN ON PLAN. FINAL LOCATION OF ALL PLANT MATERIAL SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER'S AUTHORIZED REPRESENTATIVE.

10. ALL EXISTING TREES NOTED TO REMAIN ON PLANTING PLAN OR TREE INVENTORY ARE TO BE PROTECTED IN PLACE DURING CONSTRUCTION.

11. ALL TREES PLANTED NEXT TO CURBS SHALL BE AT LEAST 36" CLEAR FROM CURB FACE FROM CENTERLINE OF TRUNK.

12. ANY TREE SHOWN ON PLAN TO BE INSTALLED LESS THAN 3' (THREE FEET) CLEAR DISTANCE FROM CENTERLINE OF TRUNK TO ANY CURB, WALKWAY, OR FOUNDATION, SHALL BE INSTALLED IN A ROOT CONTROL BARRIER. INSTALL PER MANUFACTURER'S INSTRUCTIONS.

13. ALL AREAS NOT PLANTED IN TURF AND LESS THAN 4:1 SLOPE SHALL BE COVERED WITH 3" ORGANIC MULCH. SUBMIT 1 CU. FT. SAMPLE PRIOR TO APPLICATION.

14. MINIMUM 3 SOIL SAMPLES SHALL BE TAKEN BY CONTRACTOR AFTER GRADING OPERATIONS ARE COMPLETED FOR SOIL FERTILITY AND AGRICULTURAL SUITABILITY BY AN APPROVED LABORATORY. SEE SPECIFICATIONS FOR SOIL AMENDMENTS SPECIFIED FOR BIDDING PURPOSES ONLY. SUBMIT SOIL REPORT TO OWNER'S AUTHORIZED REPRESENTATIVE. SOIL AMENDMENTS SHALL BE AS PER RECOMMENDATIONS IN SOILS REPORT.

15. CONTRACTOR SHALL NOTIFY OWNER'S AUTHORIZED REPRESENTATIVE 48 HOURS PRIOR TO COMMENCEMENT OF WORK TO COORDINATE OPERATIONS.

16. THE OWNER'S AUTHORIZED REPRESENTATIVE SHALL BE THE SOLE JUDGE AS TO WHEN THE MAINTENANCE PERIOD BEGINS.

0 5 10 20 30 40

CORNERSTONE STUDIOS, INC.
106 W. 4th St., 5th Floor, Santa Ana, CA 92701
714. 973. 2200 Voice
714. 973. 0203 Fax
LANDSCAPE ARCHITECTURE • URBAN DESIGN • PLANNING • RESOURCE ANALYSIS

| REV | SHT | DESCRIPTION | APPD | DATE |
|---|---|---|---|---|

SCALE
DATE XXX
FILENAME
DESIGNED BY
DRAWN BY
CHECKED BY

PREPARED BY:
URS
3500 PORSCHE WAY, SUITE 300
ONTARIO, CA 91764
TEL: (909) 980-4000
FAX: (909) 980-1399

CITY OF SOUTH PASADENA

WILSON RESERVOIR REPLACEMENT

LANDSCAPE PLAN

DRAWING L-2.1

SHEET NO.____ OF____

9. **Surrounding Land Uses and Setting:**

The proposed project site is located within the City of San Gabriel and is surrounded to the north, east and west by low density residential land uses. Surrounding uses are zoned R-1, Single Family Residence District. The land use pattern is primarily residential with surrounding single-family homes located on single parcels.

10. **Other public agencies whose approval is required (e.g. permits, financing approval, or participation agreement):**

The proposed project involves the following approvals:

- City of South Pasadena, City Council – Approval of the project and execution of a contract for construction
- City of San Gabriel Community Development Director – Tree Removal Permit
- City of San Gabriel Design Review Commission – Design Review

**SUPPORTING DOCUMENTATION:**

a. California, State of, the Resources Agency, Department of Conservation, Division of Mines and Geology, Seismic Hazards Zone Map, El Monte Quadrangle, 1999.
b. California, State of, the Resources Agency, Department of Conservation, Division of Mines and Geology El Monte Quadrangle, Special Studies Zone Official Map, effective July 1,1986.
c. San Gabriel, City of, General Plan, 2004.
d. San Gabriel, City of, General Plan Environmental Evaluation, 2004.
e. San Gabriel, City of, Municipal Code.
f. United States Geological Survey (USGS). El Monte, California, 7.5-Minute Topographic Quadrangle. Photorevised 1981, Minor Revision 1994.

**ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:**

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Less than Significant with Mitigation" as indicated by the checklist on the following pages.

| | | | | | |
|---|---|---|---|---|---|
| | Land Use and Planning | X | Biological Resources | | Aesthetics |
| | Population and Housing | | Mineral Resources | X | Cultural Resources |
| | Geological Problems | X | Hazards and Hazardous Materials | | Recreation |
| | Hydrology and Water Quality | X | Noise | | Mandatory Findings of Significance |
| X | Air Quality | | Public Services | | |
| X | Transportation/Traffic | | Utilities and Service Systems | | |

**DETERMINATION:** (To be completed by the Lead Agency).

On the basis of this initial evaluation:

| | |
|---|---|
| I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. | |
| I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared. | X |
| I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. | |
| I find that the proposed project MAY have a significant effect(s) on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. | |
| I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required. | |

John Bellas
Signature

4-17-2012
Date

JOHN BELLAS
Printed Name

Consultant to City of South Pasadena
For

EVALUATION OF ENVIRONMENTAL IMPACTS:

| 1. **LAND USE AND PLANNING. Would the proposal:** | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Physically divide an established community? | | | | x |
| **No Impact.** The proposed project would not disrupt or divide the physical arrangement of an established community. The parcel which is the location of current Wilson Reservoir has been in continuous use as a reservoir since 1920. | | | | |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | | | x | |
| **Less than Significant Impact.** The proposed project would not conflict with environmental plans or policies as it would be a continuation of an existing land use previously established on the property. Local governmental agencies play limited roles in regulating water treatment and conveyance facilities. Such facilities are regulated under the Public Utilities Commission pursuant to Water Code Section (Section 6025-6031) of the State Public Utilities Code. Section 6026 of the PUC specifically states the following:<br><br>"No city or county has authority, by ordinance enacted by the legislative body thereof or adopted by the people under the initiative power, or otherwise, to regulate, supervise, or provide for the regulation or supervision of any dams or reservoirs in this state, or the construction, maintenance, or operation thereof, nor to limit the size of any dam or reservoir or the amount of water which may be stored therein."<br><br>Although the General Plan designation for this project site is Low-Density Residential and the corresponding zoning is R1 (Single Family Residence), the proposed project is a legally-established non-conforming use which seeks only to replace the existing reservoir and appurtenant facilities with safer and upgraded facilities without encroaching on to or encompassing additional parcels. All work will be limited to an upgrade of the existing reservoir use. The use of that facility is permitted by the City of San Gabriel. The project would not affect the surrounding land use designation or zoning as it would continue to operate as a water storage facility. The only land use procedures that are applicable to the project are the City of San Gabriel's tree removal and design review processes. | | | | |
| c) Conflict with an applicable habitat or conservation plan or natural community conservation plan? | | | | x |
| **No Impact.** The proposed project would not conflict with any applicable habitat conservation plan or natural community conservation plan. | | | | |

| 2. **POPULATION AND HOUSING. Would the proposal:** | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension or roads or other infrastructure)? | | | | x |
| **No Impact.** The proposed project is a reservoir and pumping station replacement project that would not increase the population of the City of San Gabriel or the City of South Pasadena. The project would not increase the demand for housing as it would serve the existing population. Therefore, the proposed project would not cause any impacts to local population projections, induce substantial growth, or displace existing housing. No impacts to population and housing would occur. | | | | |

| 2. **POPULATION AND HOUSING. Would the proposal:** | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | | | | x |
| **No Impact.** See answer to a), above | | | | |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | | | | x |
| **No Impact.** See answer to a), above. | | | | |

| 3. **GEOLOGIC PROBLEMS. Would the proposal result in or expose people to potential impacts involving:** | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | | |
| i) Rupture of known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of known fault? Refer to Divisions of Mines and Geology Special Publication 42. | | | | x |
| **No Impact.** According to the City of San Gabriel General Plan, the two closest active faults near the project site are the Raymond Hill Fault and the Sierra Madre Fault. As shown on the Division of Mines and Geology, Seismic Hazards Zone Map, El Monte Quadrangle, 1999 (Reference a). The project site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone. The closest active fault to the subject site is the Raymond Hill Fault, which is a left-lateral fault that branches from the San Andreas Fault in the San Gabriel Mountains. The Raymond Hill Fault underlies most of the City of South Pasadena, San Marino, and extends straight through the Santa Anita Racetrack, forming the hills of San Marino and Raymond Hills. Also, as shown on the El Monte Quadrangle, Special Studies Zone Official Map, effective July 1, 1986, this site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone. The project will not result in or expose people to rupture of a known earthquake fault. | | | | |
| ii) Strong seismic ground shaking? | | | x | |
| **Less than Significant Impact.** Ground shaking is the primary seismic hazard affecting the City of San Gabriel with its proximity to the San Andreas Fault, Raymond Hill Fault and Sierra Madre fault zones. Given the seismic activity in the region, the proposed facility will likely be subject to strong seismic ground shaking. However, the risks of earthquake damage can be minimized through proper engineering, design, and construction. The proposed facility is required to be built according to the Uniform Building Code and other applicable codes, and are subject to building inspection during and after construction. Conforming to these required standards will ensure the proposed project would not result in significant impacts due to strong seismic ground shaking. | | | | |
| iii) Seismic-related ground failure, including liquefaction? | | | | x |
| **No Impact.** The project area is generally geologically stable and suitable for development. As shown on both Figure 5-1 of the City of San Gabriel General Plan Safety Element and the Special Studies Zone Official Map for the El Monte Quadrangle (Division of Mines and Geology, 1999, Reference b), the project site is not within a liquefaction hazard area. Therefore, the project would have no impacts related seismic related ground failure. | | | | |
| iv) Landslides? | | | | x |
| **No Impact.** As shown on both Figure 5-1 of the City of San Gabriel General Plan Safety Element and the Special Studies Zone Official Map for the El Monte Quadrangle (Division of Mines and Geology, 1999, Reference b), the project site is not within an earthquake induced landslide hazard area. Furthermore, there are no unstable slopes on the project site. Therefore, the proposed project would not expose people or structures to potential adverse effects from landslides and would have no associated impacts. | | | | |

| 3. GEOLOGIC PROBLEMS. Would the proposal result in or expose people to potential impacts involving: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| b) Result in substantial soil erosion or the loss of topsoil? | | | x | |
| **Less Than Significant Impact.** The proposed project would involve soil in-filling of space around the new water storage tanks and minor re-grading of the site. Finish grades would closely approximately the exiting grades on the site. Construction activities may result in the potential for soil erosion. However, adherence to sediment control measures, including slope stabilization and erosion/sedimentation control devices, would be incorporated into the project design during construction, as required by the Clean Water Act and the South Coast Air Quality Management District (Rule 403). Operation of the proposed project would not result in the potential for substantial soil erosion or loss of topsoil. Therefore, the likelihood of project's impact on contributing to soil erosion is minimal. | | | | |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | | | | x |
| **No Impact.** The proposed project would not result in or expose people to a geologic unit or soil that is unstable, as discussed under 3(a)(i, iii, and iv). | | | | |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property. | | | x | |
| **Less Than Significant Impact.** The soils on-site have been historically sufficient to support the existing 1.0 MG water reservoir. Likewise, the same soils would be used to backfill around the concrete reservoir. Any necessary imported soil types would be carefully selected to avoid expansive soil types. Given the nature of the project and adherence to standard construction practices for ensuring proper type and compaction of soils during grading activities and reservoir construction, the risks to life or property as a result of soil expansion would be minimal. | | | | |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? | | | | x |
| **No Impact**. The proposed facility would be connected to the sanitary sewer system. Thus, the capability of soils to support the use of septic tanks or alternative wastewater disposal systems is not applicable in this case. | | | | |

| 4. HYDROLOGY AND WATER QUALITY. Would the proposal result in: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Violate any water quality standards or waste discharge requirements? | | | x | |
| **Less Than Significant Impact.** Section 303 of the federal Clean Water Act requires states to develop water quality standards to protect the beneficial uses of receiving waters. In accordance with California's Porter/Cologne Act, the Regional Water Quality Control Boards (RWQCBs) of the State Water Resources Control Board (SWRCB) are required to develop water quality objectives that ensure their region meets the requirements of Section 303 of the Clean Water Act.<br><br>San Gabriel is within the jurisdiction of the Los Angeles RWQCB. The Los Angeles RWQCB adopted water quality objectives in its Basin Plan. This Basin Plan is designed to ensure stormwater achieves compliance with receiving water limitations. Thus, stormwater generated by a development that complies with the Basin Plan does not exceed the limitations of receiving waters, and thus does not exceed water quality standards.<br><br>Compliance with the Basin Plan is ensured by Section 402 of the Clean Water Act, which is known as the National Pollutant Discharge Elimination System (NPDES). Under this section, municipalities are required to obtain permits for the water pollution generated by stormwater in their jurisdiction. These permits are known as Municipal Separate Storm Sewer Systems (MS4) permits. Los Angeles County and 85 incorporated Cities therein, including the City of San Gabriel, obtained an MS4 (Permit # 01-182) from | | | | |

| 4. HYDROLOGY AND WATER QUALITY. Would the proposal result in: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| the Los Angeles RWQCB, most recently in 2001. Under this MS4, each permitted municipality is required to implement the SQMP.<br><br>In addition, as required by the MS4 permit, the City of San Gabriel has adopted a Standard Urban Stormwater Mitigation Plan (SUSMP) ordinance to ensure new developments comply with SQMP. The City's SUSMP ordinance requires new developments to implement Best Management Practices (BMPs) that reduce water quality impacts, including erosion and siltation, to the maximum extent practicable. This ordinance also requires most new developments to submit a plan to the City that demonstrates how the project will comply with the City's SUSMP and identifies the project-specific BMP's that will be implemented.<br><br>The proposed replacement reservoir and associated facilities would not be point source generators of water pollutants and, thus, no quantifiable water quality standards apply to the project. The proposed project would generate typical, urban, nonpoint-source pollutants that could be collected by storm water runoff, such as trash, vehicle fluids, etc. However, the proposed project would not generate such pollutants in excess of existing conditions. As discussed, these pollutants are permitted by the County-wide MS4 permit, and would not exceed any receiving water limitations. Given the type and size of the project, the storm water pollutants generated onsite would be minimal and a project specific SUSMP compliance plan would not be required. Therefore, the proposed project would not violate any water quality standards or waste discharge requirements, and would have no related significant impacts. | | | | |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume of a lowering or the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | | | x | |
| **Less than Significant Impact.** The proposed project would not change the quantity of groundwater through addition or withdrawal of the underlying aquifer. The amount of water reaching the groundwater basins from the site is negligible given the interference of developed land and the fact that most of the flows would be directed into the existing and proposed storm water drain system. The change in pervious surfaces would remain essentially the same because the project is a replacement of an existing reservoir.<br><br>Development of the proposed replacement reservoir and appurtenant facilities would continue to the use of the City's Well No. 4 (located at the front of the property) and Well No. 3 (located behind the proposed metering facility), both of which would continue to extract water from the underlying groundwater. Well No. 4 is 973 feet deep and capable of producing approximately 1,100 gallons/minute. Well No. 3 is 984 feet deep and capable of producing approximately 2,060 gallons/minute. The continued use of these wells would withdraw water from the groundwater basin. However, the project would not result in an increase in the rate of withdrawal and this withdrawal would not substantially deplete the groundwater basin and is well within the City's existing water rights. Therefore, the continued use of Well Nos. 4 and 3 would not significantly deplete groundwater supply. | | | | |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site? | | | x | |
| **Less than Significant Impact.** The project would not change the existing absorption rates, drainage patterns or the rate and amount of surface runoff because the site has already been developed and the general drainage patterns would be maintained upon implementation of the proposed project. The proposed project would not focus or concentrate any storm water flows and would not direct storm water over exposed soils. Nevertheless, the proposed project is required to comply with the Los Angeles County National Pollutant Discharge Elimination System (NPDES) Permit (Permit # 01-182), as implemented by City ordinance. In accordance with this permit, construction of the proposed project must control potential pollutant sources at the construction site by, at a minimum, complying with the following requirements:<br><br>1. Sediments generated on the project site shall be retained using adequate Treatment Control or Structural BMPs;<br><br>2. Construction-related materials, wastes, spills or residues shall be retained at the project site to avoid discharge to streets, drainage facilities, receiving waters, or adjacent properties by wind or runoff; | | | | |

| 4. **HYDROLOGY AND WATER QUALITY. Would the proposal result in:** | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 3. Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained at the project site; and<br><br>4. Erosion from slopes and channels shall be controlled by implementing an effective combination of BMPs (as approved in Regional Board Resolution No. 99-03), such as the limiting of grading scheduled during the wet season; inspecting graded areas during rain events; planting and maintenance of vegetation on slopes; and covering erosion susceptible slopes.<br><br>Compliance with these requirements ensures that the construction of the proposed project would not result in substantial erosion or siltation. After construction, the proposed groundwater treatment system would have no affect on drainage or storm water flows. | | | | |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? | | | x | |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | | | x | |
| **(d and e) Less than Significant Impact.** The site is located within a suburban portion of San Gabriel, is effectively flat, and contains no streams, rivers, discernable drainages, or notable storm drain improvements. Storm drainage on the project sites is currently directed to the storm drain infrastructure in the surrounding streets (i.e., curb and gutter, storm drains, etc.). The project would not noticeably change the amount of stormwater runoff generated onsite, since the site is currently covered with impervious materials (e.g., asphalt, rooftops, the existing reservoir, etc.). Stormwater flows exiting the project site would continue to flow south across the site's lawn area toward Adelyn Drive, which conveys stormwater flows via curb and gutter. Since the project would not result in a measurable change in stormwater flows, the existing curb and gutter system is adequate to handle stormwater flows from the improved site. The project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site and would not cause an exceedance of the capacity of existing or planned stormwater drainage systems. Drainage impacts are, therefore, less than significant. | | | | |
| f) Otherwise, substantially degrade water quality? | | | | x |
| **No Impact.** See answer to 4(a) to 4(c), above. | | | | |
| g) Place housing within a 100-year flood hazard area as a mapped on a federal Flood Hazard Boundary or Floor Insurance Rate Map or other flood hazard delineation map? | | | | x |
| **No Impact.** The project is for the replacement of a concrete water reservoir with another of similar capacity and function. The project would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map. There are no special flood hazards areas in the City of San Gabriel, as described in the Safety Element of the City of San Gabriel General Plan. | | | | |
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? | | | | x |
| **No Impact**. See response to 4(g), above. | | | | |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure or a levee or dam? | | | x | |
| **Less than Significant Impact.** The project area is not located within a flood hazard zone nor is it located within a designated 100 year or 500 year flood zone. It is not in the vicinity of a levee or dam. Surrounding uses are developed, residential lots and no water bodies are immediately adjacent to the project area. The replacement reservoir would store up to 1.3 million gallons of water; and in | | | | |

| 4. HYDROLOGY AND WATER QUALITY. Would the proposal result in: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| the event the reservoir is damaged, water releases are possible. Given the topography of the surrounding area, flows would likely travel southward, towards Adelyn Drive. The possibility of flooding from rupture of the proposed reservoir is extremely remote given the distance of the reservoir from an active earthquake fault and the project's required adherence to standard seismic upgrade construction practices and a regular inspection program which would ensure that ruptures would be avoided. Furthermore, the proposed project would replace a deteriorating reservoir with a new reservoir built to current seismic standards, thereby reducing the risk of flooding as a result of rupture of the reservoir. | | | | |
| j) Inundation by seiche, tsunami, or mudflow? | | | | x |
| **No Impact.** The project is not near a known water body and thus would not result in or expose people to inundation by a seiche, tsunami or mudflow. | | | | |

| 5. AIR QUALITY & GREENHOUSE GAS EMISSIONS. Would the proposal: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Conflict with or obstruct implementation of the applicable air quality plan? | | | | x |

**No Impact:** The City of San Gabriel is within the South Coast Air Basin (SCAB), which is bounded by the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and the Pacific Ocean to the south and west. The air quality in the SCAB is managed by the South Coast Air Quality Management District (SCAQMD).

The SCAB has a history of recorded air quality violations and is an area where both state and federal ambient air quality standards are exceeded. Because of the violations of the California Ambient Air Quality Standards (CAAQS), the California Clean Air Act requires triennial preparation of an Air Quality Management Plan (AQMP). The AQMP analyzes air quality on a regional level and identifies region-wide attenuation methods to achieve the air quality standards. These region-wide attenuation methods include regulations for stationary-source polluters; facilitation of new transportation technologies, such as low-emission vehicles; and capital improvements, such as park-and-ride facilities and public transit improvements. The most recently adopted plan is the 2007 AQMP. This plan is the South Coast Air Basin's portion of the State Implementation Plan (SIP).

The SCAQMD's CEQA Handbook identifies two key indicators of consistency with the AQMP:

(1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP (except as provided for CO in Section 9.4 for relocating CO hot spots).

(2) Whether the project will exceed the assumptions in the AQMP in 2010 or increments based on the year of project buildout and phase.

Consistency criterion #1 pertains to long-term local air quality impacts, rather than regional emissions, as defined by the SCAQMD. The SCAQMD has identified carbon monoxide (CO) as the best indicator pollutant for determining whether air quality violations would occur, as CO hot-spots are the most likely cause of air quality violations from land use projects. However, the air basin is now in attainment for the CO standards and exceedances of the CO standards are not expected. Consequently, local air quality impact modeling is no longer performed. Regardless, since the project would not result in an increase in trip generation (other than during construction), the project would not affect long-term local CO concentrations. Furthermore, local CO concentrations would not be expected to exceed the ambient air quality concentration standards, with or without the project. Since the proposed project is not anticipated to impact the local air quality, the project is found to be consistent with the AQMP for the first criterion.

In regards to criterion #2, the assumptions used to develop the AQMP are based upon projections from local general plans. Consequently, conformity with the AQMP of land development projects is measured by the project's consistency with adopted land use plans, growth forecasts, and programs relative to population, housing, employment, and land use. Since the proposed project does

| 5. AIR QUALITY & GREENHOUSE GAS EMISSIONS. Would the proposal: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| not involve a change in land use, the project is consistent with the growth expectations for the region. The proposed project is therefore consistent with the AQMP, and would have no associated impacts. | | | | |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | | x | | |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | | x | | |

**(b and c) Less than Significant with Mitigation:** The City of San Gabriel is within the South Coast Air Basin (SCAB), which is an airshed that regularly exceeds both national and state ambient air quality standards (AAQS) – i.e., a non-attainment area. The SCAB is designated a non-attainment area for respirable particulate matter ($PM_{10}$), fine particulate matter ($PM_{2.5}$), and ozone ($O_3$). The SCAB is currently a designated attainment area for the remaining pollutants with established AAQS, which include carbon monoxide (CO), nitrogen dioxide ($NO_2$), sulfur dioxide ($SO_2$), lead, hydrogen sulfide, and vinyl chloride.

Operation of the proposed reservoir facility is not expected to cause a measurable increase in any air pollutant emissions. The facility will consume electricity. However, the SCAQMD recommends that electric consumption not be considered in regional emissions analyses since most of the electric generation occurs outside the air basin. Currently, there are three booster pumps and two well pumps on-site. Calendar year 2010 consumption of the existing facility was 3,963,001 KWH. The new facility will also house three booster pumps and two well pumps. The electrical consumption under the proposed project conditions is not known. However, future consumption should be less due to the installation of newer model equipment, which is expected to be more energy efficient than existing equipment. There are no other significant sources of air emissions associated with the facility. Changes to operational emissions are, therefore, expected to be insignificant if any.

The proposed project would generate air pollutants from construction activities. Construction of the proposed project would include demolition (including demolition of the existing reservoir); site preparation; grading; construction of the proposed reservoir, clearwell, pump house, and operations building; paving of the proposed driveway and other onsite vehicle access/parking areas; and architectural coatings (i.e., painting). These construction activities would generate air pollutants from equipment exhaust, earth disturbance, and off-gassing from asphalt and paints.

Mestre Greve Associates (MGA) prepared an *Air Quality Assessment* for the proposed project (revised February 2, 2012 and included as Appendix A of this Initial Study), which included quantifying the project's construction emissions using the California Emissions Estimator Model (CalEEMod version 2011.1.1). Table 5-1 identifies the resulting estimated construction emissions (before mitigation) and compares the project's emissions to the SCAQMD's regional significance thresholds.

**Table 5.1**
Estimated Construction Emissions Before Mitigation*
(lbs/day on the worst day)

| | ROG | NOx | CO | SOx | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|---|---|
| Unmitigated Construction Emissions | 12.7 | 60.5 | 44.2 | 0.01 | 20.7 | 4.8 |
| SCAQMD Regional Thresholds | 75 | 100 | 550 | 150 | 150 | 55 |
| Significant? | No | No | No | No | No | No |

*Note: Includes 61% PM reduction from watering exposed areas 3 times daily, per SCAQMD Rule 403
ROG = reactive organic gasses; NOx = oxides of nitrogen; CO = carbon monoxide; SOx = oxides of sulfer; PM = particulate matter

As shown in Table 5.1 construction of the proposed project would not generate air pollutants in excess of the SCAQMD's regional significance thresholds. Regardless, to reduce the project's construction emissions and comply with SCAQMD Rule 403, Mitigation Measure AQ-1 the construction site to be watered three times daily and Mitigation Measure AQ-2 requires the project to use equipment that meets "Tier IV" emission standards during the building construction phase. Table 5.2 identifies the resulting estimated construction emissions after mitigation (as calculated via the CalEEMod) and compares those emissions to the SCAQMD's

| 5. AIR QUALITY & GREENHOUSE GAS EMISSIONS. Would the proposal: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|

regional significance thresholds.

**Table 5.2**
Estimated Construction Emissions After Mitigation
(lbs/day on the worst day)

| | ROG | NOx | CO | SOx | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|---|---|
| Mitigated Construction Emissions | 12.7 | 60.5 | 43.9 | 0.01 | 17.6 | 1.7 |
| SCAQMD Regional Thresholds | 75 | 100 | 550 | 150 | 150 | 55 |
| Significant? | No | No | No | No | No | No |

*Note: Includes 61% PM reduction from watering exposed areas 3 times daily, per SCAQMD Rule 403
ROG = reactive organic gasses; NOx = oxides of nitrogen; CO = carbon monoxide; SOx = oxides of sulfer; $PM_{10}$ = particulate matter less than 10 microns in size (aerodynamic diameter); $PM_{2.5}$ = particulate matter less than 2.5 microns in size (aerodynamic diameter)

As shown in Table 5.2, construction of the proposed project would not generate air pollutants in excess of the SCAQMD's regional significance thresholds. Therefore, after mitigation, the proposed project would not cause or substantially contribute to an existing or projected air quality violation, would not generate pollutants in excess of SCAQMD standards, and would not result in a cumulative considerable net increase of any criteria pollutant.

**Mitigation Measure AQ-1:** Require that the site be watered three times a day during the demolition/excavation, grading, and site preparation phases.

**Mitigation Measure AQ-2:** Require all off-road diesel construction equipment during the building construction phase to meet "Tier IV" emission requirements.

| d) Expose sensitive receptor to substantial pollutant concentrations? | | x | | |
|---|---|---|---|---|

**Less than Significant with Mitigation:** Certain residents, such as the very young, the elderly and those suffering from certain illnesses or disabilities, are particularly sensitive to air pollution and are considered sensitive receptors. In addition, active park users, such as participants in sporting events, are sensitive air pollutant receptors due to increased respiratory rates. Land uses where sensitive air pollutant receptors congregate include schools, day care centers, parks, recreational areas, medical facilities, rest homes, and convalescent care facilities.

To assess a project's air quality impact on nearby sensitive receptors, the SCAQMD identifies localized significance thresholds (LST) for stationary pollutant sources and construction sites. Since the proposed project would not be a stationary pollutant source, only the construction LSTs apply to this project. The appropriate LSTs vary on a project-by-project basis depending on the project's location, the acreage of the construction site, and the distance to the nearest sensitive receptor. The proposed project is located in the West San Gabriel Valley (Source Receptor Area 8) on a site that is less than one acre, with sensitive receptors as close as 15 feet from the project site. These measurables were used to calculate the appropriate screening-level LSTs for the project, based on the SCAQMD's Mass Rate Look Up Tables.

The emissions from on-site project construction activities were calculated using the CalEEMod. (Offsite construction emissions are not relevant to the LST analysis since they do not affect the localized air quality conditions.) Table 5.3 compares the peak-day onsite construction emissions (before mitigation) to the relevant LSTs.

As shown in this table, while NOx and CO emissions are less than the screening-level LSTs, project-related $PM_{10}$ and $PM_{2.5}$ emissions exceed the screening-level LSTs. On-site construction activities during building construction and 24-hour concrete pours are estimated to generate 4.6 lbs/day of both $PM_{10}$ and $PM_{2.5}$. To reduce the project's construction emissions, Mitigation Measure AQ-1 requires the construction site to be watered three times daily (pursuant to SCAQMD Rule 403) and Mitigation Measure AQ-2 requires the project to use equipment that meets "Tier IV" emission standards. Table 5.4 identifies the resulting estimated construction emissions after mitigation (as calculated via the CalEEMod) and compares those emissions to the screening-level LSTs.

| 5. AIR QUALITY & GREENHOUSE GAS EMISSIONS. Would the proposal: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|

As shown in Table 5.4, with the incorporation of Mitigation Measures AQ-1 and AQ-2 construction of the proposed project would not generate air pollutants in excess of the LSTs. Therefore, after mitigation the proposed project's impact on local air quality is considered less than significant and the project would not significantly impact any sensitive receptors.

Table 5.3
Localized Significance Threshold Analysis Before Mitigation*
(lbs/day on the worst day for onsite construction activities only)

| | NOx | CO | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|
| Unmitigated Construction Emissions | 56.9 | 39.3 | 4.6 | 4.6 |
| SCAQMD Localized Significance Thresholds | 535 | 69 | 4 | 3 |
| Significant? | No | No | Yes | Yes |

*Note: Includes 61% PM reduction from watering exposed areas 3 times daily, per SCAQMD Rule 403
NOx = oxides of nitrogen; CO = carbon monoxide; $PM_{10}$ = particulate matter less than 10 microns in size (aerodynamic diameter); $PM_{2.5}$ = particulate matter less than 2.5 microns in size (aerodynamic diameter)

Table 5.4
Localized Significance Threshold Analysis After Mitigation
(lbs/day on the worst day for onsite construction activities only)

| | NOx | CO | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|
| Mitigated Construction Emissions | 53.8 | 39.0 | 2.3 | 2.3 |
| SCAQMD Localized Significance Thresholds | 535 | 69 | 4 | 3 |
| Significant? | No | No | No | No |

NOx = oxides of nitrogen; CO = carbon monoxide; $PM_{10}$ = particulate matter less than 10 microns in size (aerodynamic diameter); $PM_{2.5}$ = particulate matter less than 2.5 microns in size (aerodynamic diameter)

| | | | | | |
|---|---|---|---|---|---|
| e) | Create objectionable odors affecting a substantial number of people? | | | x | |

**Less than Significant:** During construction, equipment exhaust and certain construction materials (e.g., asphalt) may be mildly odorous. However, such odors would be limited to the immediate vicinity of the project site, would dissipate rapidly, and would cease at the end of construction. Operation of the reservoir includes the generation of sodium hypochlorite (chlorine) from a brine solution composed of salt and water to maintain the reservoir water at the required standard. This process may emit some mild odor; however, the re-chlorination equipment is enclosed in a structure and, thus, any odor emitted would most likely only be detected by workers servicing the equipment. Therefore, the proposed project would not create objectionable odors affecting a substantial number of people, and would have no associated significant impacts.

| | | | | | |
|---|---|---|---|---|---|
| f) | Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | | | x | |
| g) | Conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. | | | x | |

**(f and g) Less than Significant Impact:** "Greenhouse gases" (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as "global warming." These greenhouse gases contribute to an increase in the temperature of the earth's atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation. The principal greenhouse gases (GHGs) include carbon dioxide ($CO_2$), methane, and nitrous oxide. Collectively GHGs are measured as carbon dioxide equivalent ($CO_2e$).

Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of GHG emissions globally. Industrial and commercial sources

| 5. AIR QUALITY & GREENHOUSE GAS EMISSIONS. Would the proposal: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|

are the second largest contributors of GHG emissions with about one-fourth of total emissions.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statues and executive orders (EO) include Assembly Bill (AB) 32, Senate Bill (SB) 1368, Executive Order (EO) S-03-05, EO S-20-06 and EO S-01-07. AB 32, the California Global Warming Solutions Act of 2006, is one of the most significant pieces of environmental legislation that California has adopted. Most notably AB 32 mandates that by 2020, California's GHG emissions be reduced to 1990 levels.

The City of South Pasadena does not have any plans, policies, regulations, significance thresholds or laws addressing climate change at this time. The SCQAMD has adopted a "Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold". This document establishes a draft GHG Significance Threshold for projects where the SCAQMD is the lead agency. While the SCAQMD is not the lead agency for the proposed project, the SCAQMD's threshold is identified in this CEQA document as a reference for comparative purposes. The SCAQMD's draft GHG Significance Threshold establishes a 5-tier threshold flowchart, with Tier 3 identifying screening thresholds of 10,000 metric tons per year (MT/yr) of $CO_2e$ for stationary source industrial projects and 3,000 MT/yr of $CO_2e$ for commercial and residential projects. The proposed project is most closely related to the industrial stationary source identified by the SCAQMD.

In addition to the SCAQMD's draft GHG significance threshold, the City of San Gabriel has adopted a significance threshold of 1,100 metric tons per year (MT/year) of $CO_2e$ for land use development projects. Development projects would include residential, commercial, industrial, and public land uses and facilities. (This significant threshold was taken from the Bay Area Air Quality Management District pursuant to CEQA Guidelines, Section 15064.7). Additionally, a significance threshold of 10,000 MT/yr of $CO_2e$ was adopted for stationary-source projects. Stationary-source projects include land uses that would accommodate processes and equipment that emit GHG emissions and would require an Air District permit to operate. The project falls under the stationary project category, and therefore, the 10,000 MT/yr of $CO_2e$ significance threshold would be the most appropriate for the proposed project pursuant to the City of San Gabriel's thresholds.

The only GHG emissions attributable to the project would be those resulting from construction equipment, maintenance equipment/vehicles, and the electricity used on the facility, which primarily consists of powering the proposed booster pumps. Mestre Greve Associates (MGA) prepared a Greenhouse Gas Assessment for the proposed project (dated October 8, 2011), which is included as Appendix B to this Initial Study. MGA utilized the emissions factors from the CalEEMod to estimate the GHG emissions attributable to the proposed project, which are depicted in Table 5.5, with construction emissions amortized over a 30 year period per SCAQMD's guidelines.

**Table 5.5**
**Annual Project GHG Emissions**

| | |
|---|---|
| Construction GHG Emissions (amortized over 30 years) | 22 |
| Project Energy Consumption (kWh) | 3,963,001 |
| Project Energy Consumption GHG Emissions ($MTCO_2e$) | 1,160 |
| Total Project GHG Emissions ($MTCO_2e$) | 1,182 |

As shown in Table 5.5, the proposed facility would generate 1,184 MT/yr of $CO_2e$. Of note, the estimated GHG emissions are not the increase in emissions that would result from the project, but are rather the total GHG emissions that are expected to be generated per year by the facility. The project is expected to cause no measurable increase in GHG emissions. Therefore, there will be no adverse impact on climate change and the proposed project's contribution to global climate change caused by GHG emissions is not considerable.

| 6. TRANSPORTATION/TRAFFIC. Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? | | x | | |
| b) Exceed, either individually or cumulatively, a level or service standard established by the county congestion management agency for designated roads or highways? | | x | | |

**(a and b) Less than Significant with Mitigation:** The proposed project consists of replacing the existing Wilson Reservoir and accessory facilities. Since the project would not change the use of the site or increase the need for operation, maintenance, or service personnel to access the site, the project would not result in any long term increases in the amount of vehicle trips generated by the facility. However, during construction, the project would generate an increase in vehicle trips from construction workers accessing the site; haul trucks exporting demolished and excavated material; material deliveries; and concrete deliveries.

The traffic-related impacts of construction projects of this scale in an established residential community could certainly cause quality of life disturbances for the neighbors. To analyze such impacts, Willdan prepared a Construction Traffic Analysis Technical Report for the project in January 2012, which is contained in Appendix C of this Initial Study. The following subsections are based on this technical report.

Construction Trip Generation

During construction, there would be a large number of trips generated by construction activities, including working crews, debris hauling, deliveries, and other related work. To quantify the construction-related trips the proposed project would generate, Willdan estimated the construction phases, the expected quantities of material to be removed from and delivered to the project site, and the magnitude and type of work that will be necessary for the project. The trips generated by each construction activity were then calculated on a daily basis by using the expected duration for each activity as well as the proposed construction phasing and schedule. Table 6.1 summarizes the anticipated construction trips generated by the proposed project as well as the maximum number of expected daily trips. As indicated in the table, the proposed project is expected to result in a temporary increase of up to 70 construction trips on a typical weekday.

**Table 6.1**
**Construction Trip Generation**

| Construction Activity | Quantity | Trip Rate | Trip Metric | Trip Ends | Duration (Days) | Trips / Day |
|---|---|---|---|---|---|---|
| DEMOLITION | | | | | | |
| 1. Remove existing reservoir structure | 1,000 | 0.2 | per CY | **200** | 20 | **10** |
| 2. Excavate reservoir base material | 2,516 | 0.2 | per CY | **504** | 30 | **17** |
| 3. Remove existing pump/plant structures | 100 | 2 | per load | **200** | 40 | **5** |
| 4. Excavate pump/plant base material | 702 | 0.2 | per CY | **141** | 20 | **8** |
| 5. Miscellaneous excavation | 100 | 0.2 | per CY | **20** | 40 | **1** |
| RESERVOIR CONSTRUCTION | | | | | | |
| 6. Import base material | 980 | 0.3 | per CY | **294** | 10 | **30** |
| 7. Construct reservoir forms | 150 | 2 | per delivery | **300** | 40 | **8** |
| 8. Pour concrete reservoir | 1,455 | 0.2 | per CY | **291** | 10 | **30** |
| 9. Import pump/plant base material | 937 | 0.2 | per CY | **188** | 20 | **10** |
| 10. Pour building/station foundations | 469 | 0.2 | per CY | **94** | 20 | **5** |
| 11. Construct new pump station/plant | 200 | 2 | per load | **400** | 50 | **8** |

| 6. TRANSPORTATION/TRAFFIC. Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| SUBTOTAL | | | | **2,632** | 300 | **-** |
| 12. Construction workers (daily average) | 20 | 2 | per worker | **-** | - | **40** |
| Maximum Truck Trips Per Day | | | | | | **30** |
| Maximum Trips Per Day | | | | | | **40+30=70** |

Construction Trip Distribution

Construction trip distribution is mainly predicated on the origins and destination of materials, equipment and hauling needed for the project in relation to accessibility to the regional roadway network and designated truck routes in adjacent cities. The closest truck route access to the freeway system is along San Gabriel Boulevard to the I-10 or I-210 Freeways. The closest arterial streets that connect the project to designated truck routes are Las Tunas Drive and Del Mar Avenue. In comparing distances of these two roadways, Las Tunas Drive is 0.4 miles from the project site, while Del Mar Avenue is 0.5 miles away. In addition, Las Tunas Drive is a signalized corridor in a commercial area with four lanes, while Del Mar Avenue has two lanes with a combination of stop signs and signals in a residential area.

Several alternative construction haul routes were considered and evaluated to determine the preferred route. The evaluation criteria included such objective factors as distance along residential streets, number of affected homes, Level-of-Service at major turning points, and number of required stops or turns. This evaluation also included subjective factors such as directness, proximity to schools, and potential for disturbance to the traveling public. It was concluded that a construction haul route along Bradbury Drive to Las Tunas Drive minimized the potential for adverse factors, as follows:

- Shortest distance to arterial roadway network
- Fewest number of residences along route
- Fewer expected delays at intersections
- Fewer required stops and turns
- Most direct route to project site from major streets
- No schools on route
- Less potential for disturbing traveling public

Based on the above analysis, the preferred construction haul route was determined to be San Gabriel Boulevard to Las Tunas Drive to Bradbury Drive to Adelyn Drive to the project site with the outbound route to be the opposite. Passenger vehicles are not subject to the construction haul route.

Traffic Impact Analysis

Based on the number of construction trips forecast to be generated by the project, the existing roadway network is adequate to handle the anticipated construction traffic volumes. Specifically, a maximum of 70 trips per day are expected on a weekday. Since these trips are distributed throughout the day, peak hour trips would not exceed the minimum guideline for conducting a formal level-of-service traffic impact analysis, namely 50 trips in a peak hour at an intersection. In addition, the nature of this project and implementation of the recommended peak hour restrictions included in the construction management plan, as outlined in Mitigation Measure TRAF-1, would ensure that a significant number of peak hour trips would not be generated.

Construction related activities would generate truck traffic which is likely to disturb residents along the haul route for a period of 18-24 months. When the project-related trips are distributed on the roadway network, the local streets experience higher traffic volumes for the project duration. Distributing traffic on the route outlined in Mitigation Measure TRAF-2, the volume on Bradbury Drive would increase from 420 vehicles per day to a maximum of 490 vehicles per day, a 16.7% increase. This increase is well within the acceptable traffic volume for a local road as defined by the City of South Pasadena Street Segment significance criteria of 4,000 vehicles per day[3]. While most cities do not have a street segment significant impact threshold including the City of San Gabriel, a comparison to other local city criteria indicates that this increase is within acceptable thresholds for similar local road street segments

[3] Note the City of San Gabriel does not have street segment volume significance thresholds.

| 6. TRANSPORTATION/TRAFFIC. Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|

in Los Angeles, Culver City and San Marino (120 new daily trips) and in Santa Monica (25% increase). No detours or road closures are anticipated for the project, since all work would occur off of the street and loading would occur out of travel lanes. Therefore, public and emergency vehicle access will not be impacted. Lastly, the construction related trips would occur on a temporary basis for the duration of the project only. Therefore, there are no long-range traffic impacts expected as the result of this project.

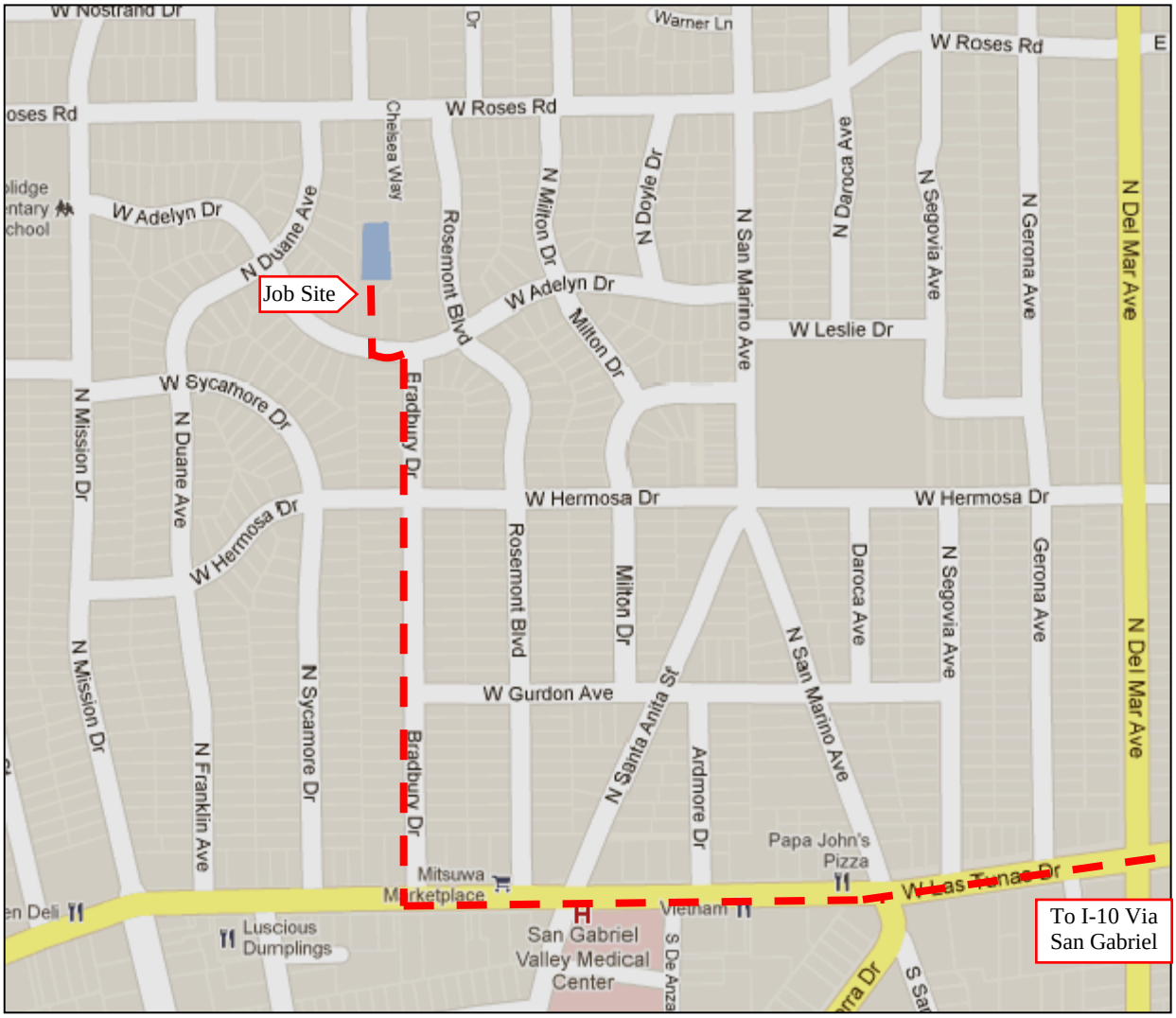
Based on this analysis, with the implementation of a construction management plan and establishment of a construction traffic route, as required by Mitigation Measures TRAF-1 and TRAF-2, the proposed project would not have a significant impact on the surrounding roadway network pursuant to the standards of the City of South Pasadena, the City of San Gabriel, or the Los Angeles County Congestion Management Plan.

**Mitigation Measure TRAF-1:** The City of South Pasadena shall require the contractor to prepare and implement a construction management plan to the satisfaction of the City. Specifically, the intent of this plan is to minimize disturbance to the neighborhood, identify those activities to be monitored, and make the contractor responsible for failure to adhere to the requirements. The elements of the construction management plan for this project shall include (but not be limited to) the following:

- Obtain approval for a Construction Management Plan from the cities of South Pasadena and San Gabriel,
- Require contractor to obtain all necessary hauling, traffic control and/or transportation permits,
- Require contractor to maintain a 24-hour hotline for complaints and questions from the public,
- Designation of a construction haul route along Las Tunas Drive to Bradbury Drive to Adelyn Drive,
- Require any large vehicles not classified as passenger vehicles or light trucks to use the haul route,
- Limitation of hauling to a maximum of 70 trips per day unless otherwise authorized by anapproved revision to this Plan,
- Allow hauling and deliveries between 8am and 4pm on weekdays only and no city holidays, unless otherwise authorized by an approved revision to this Plan,
- Require the contractor to photo-document the before and after conditions of the local streets along the haul route,
- Require all public streets and driveways to remain open at all times, or submit a traffic control plan for any temporary lane closures to be approved by respective cities,
- Prohibit obstruction of street traffic, sidewalks or access to adjacent residences at any time,
- Require loading of all exported materials and earthwork to be conducted on-site unless authorized by an approved revision to this Plan.
- Require removal of any delivered materials and delivery trucks from streets immediately upon delivery,
- Require contractor to notify hauling and delivery companies of construction haul route prior to such activities,
- Require notification to neighbors along haul route prior to the start of any large hauling operation or any construction activities outside of designated hours, as well as notification to residential properties located within 300 feet of any construction activities that occur outside of normal business hours or generate significant or sustained noise,
- Require notification to the San Gabriel Unified School District, Coolidge Elementary School, local police and public works departments prior to start of construction, prior to any lane closures, and prior to any hauling or deliveries outside of designated hours.
- Prohibit staging or queuing of trucks on any residential streets except directly in front of project site (radio-dispatch and/or approved remote staging locations may be used to accomplish this requirement). At no time shall construction vehicles, materials or equipment obstruct residential driveways.
- Require immediate clean-up of any spills, dirt or debris on public streets,
- Require submittal of a Standard Urban Storm Water Management Plan (SUSWMP) and follow all Best Management Practices (BMP) for the project,Require contractor to provide an off-street parking area for construction workers of not less than 10 spaces, unless otherwise approved. If a remote parking area is used, require contractor to provide personnel transportation service for workers to/from the project site. Any remote parking area shall be approved by the cities of South Pasadena and San Gabriel.
- Require construction vehicles to fully utilize off-street parking prior to using street parking,
- With City of San Gabriel approval, certain on-street parking areas may be designated for project related vehicles. Require the contractor to pose appropriate temporary parking signs to designate any approved street parking area or prohibitions near the construction site,

| 6. TRANSPORTATION/TRAFFIC. Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| • Encourage contractors and construction workers to carpool to the construction site,<br>• Specify penalties for failure to comply with Construction Management Plan.<br>• Provide for monitoring and enforcement of the Construction Management Plan to the satisfaction of the cities of South Pasadena and San Gabriel.<br>• The location of any construction trailers shall be subject to the approval of the cities of South Pasadena and San Gabriel.<br>• Provide for revisions to this Plan upon approval by both cities.<br><br>**Mitigation Measure TRAF-2:** All construction-related vehicle trips shall utilized the preferred construction haul route, which is San Gabriel Boulevard to Las Tunas Drive to Bradbury Drive to Adelyn Drive to the project site with the outbound route to be the opposite – see Figure 9. | | | | |
| c) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | | | | x |
| **No Impact:** All improvements related to the proposed Wilson Reservoir Improvement Project would be within the confines of the project site. The proposed project would not increase hazards in the area due to a design configuration, as no alterations would occur to the adjacent roadway, other than for the installation of the proposed driveway. | | | | |
| d) Result in inadequate emergency access? | | | | x |
| **No Impact:** The construction and operation of the proposed project would not place any permanent or temporary physical obstructions within the travel lanes of any public streets. During construction there is a potential for construction-related vehicles to be parked along the street and a potential for construction staging to occur along the street. However, all travel lanes would remain open throughout construction. Therefore, the proposed project would not create hazards or barriers for pedestrians or bicyclists, and the project would have no related impacts. | | | | |
| e) Result in inadequate parking capacity? | | x | | |
| **Less than Significant with Mitigation:** Construction parking is generally expected to be handled on-site, with a temporary off-street parking area recommended in the construction management plan – see Mitigation Measure TRAF-1. A parking area of 10 vehicles, along with remote parking if needed, as required by Mitigation Measure TRAF-1, is expected to accommodate construction parking demand on most days. The intention is to provide at least 10 total off-street parking spaces for construction vehicles with the project contractor determining if those 10 spaces will be provided on-site, off-site, or a combination of both. During some phases of the project, such as concrete placement and roof construction, approximately 20 workers are expected. During these times, sufficient street parking is available close to the project site to handle the short-term extra parking demand, while still providing ample parking for residents. Therefore, with the requirement of a 10-vehicle on-site parking area during construction as required by Mitigation Measure TRAF-1, the project would not result in significant parking impacts. No parking restrictions are anticipated to be needed, however, the option for either city to designate certain on-street parking areas for project related vehicles is included as a construction management plan requirement. | | | | |
| f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)? | | | | x |
| **No Impact:** The proposed project would not conflict with adopted policies, plans or programs supporting alternative transportation. The project is intended to improve water supply and will have no impact on transportation. | | | | |

**Figure 9: Construction Haul Route**



| 7. **BIOLOGICAL RESOURCES. Would the proposal result in:** | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. | | | | x |
| **No Impact:** The project site lies within a suburbanized area of the City of San Gabriel. The site is currently occupied by the existing Wilson Reservoir and accessory structures. The project site does not contain any vegetation that can be considered a natural community. The only vegetation onsite is landscaping, including three oaks and 17 other trees. (See the response to 7(e) below for a complete list of onsite trees.) The proposed project would remove seven non-native trees and would preserve 13 trees, including the three existing oaks. Given the absence of any natural communities on the site and the project's removal of only non-native trees, the proposed project would not impact any special-status species. | | | | |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | | | | x |
| **No Impact:** The project site is currently occupied by the existing Wilson Reservoir and accessory structures. Vegetation onsite is limited to landscaping, including three oaks and 17 other trees. (See response to 7(e) below for a complete list of onsite trees.) The project site does not contain any vegetation that can be considered a natural community and no riparian vegetation exists onsite. | | | | |
| c) Have a substantial adverse effect on federally protected wetlands as defined in Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | | | | x |
| **No Impact:** The proposed project site does not contain any federally protected wetlands as defined in Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.). The site is devoid of natural hydrology, hydrophytic vegetation, and hydric soils. Therefore, the proposed project would not have adverse effects on protected wetlands. | | | | |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | | | | x |
| **No Impact:** The site lies within a developed area and is surrounded by residential properties on all sides. This portion of the City does not support the dispersal of wildlife and the project site does not contribute to a wildlife corridor. Furthermore, since the site lies within a developed area and since the proposed project would not install any new physical barriers, the proposed project would not restrict wildlife migration or movement. Therefore, the proposed project would have no impact on the movement of fish or wildlife, wildlife corridors, or the use of wildlife nursery sites. | | | | |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | | x | | |
| **Less than Significant with Mitigation:** The only local ordinance protecting biological resources in the City of San Gabriel is the City's tree preservation ordinance (Chapter 95.20 of Title IX of the City of San Gabriel's Municipal Code). This ordinance requires permits for trimming and/or removal of certain trees. Trees afforded protection by the City of San Gabriel's tree preservation ordinance include:<br><br>• Mature Class I Trees: The ordinance identifies the following 28 "Class I" trees: 1) Alder (*Alnus*); 2) Ash (*Fraxinus*); 3) Beech (*Fagus*); 4) Birch (*Betula*); 5) Camphor (*Cinnamomum camphora*); 6) Carrot Wood (*Cupaniopsis anacardiopsis*); 7) Cedars (*Cedrus atlantica,* and *deodara*); 8) Chinese Flame tree (*Koelreuteria bipinnata*); 9) Coral tree (*Erythina*); 10) | | | | |

| 7. **BIOLOGICAL RESOURCES. Would the proposal result in:** | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|

Crape Myrtle (*Lagerstroemia indica*); 11) Fern Pine (*Podocarpus gracilor*); 12) Fig tree (*Fiscus rubiginosa*); 13) Floss Silk tree (*Chorisia*); 14) Ginkgo (*Ginkgo biloba*); 15) Jacaranda (*Jacaranda mimosifolia*); 16) Liquidamber (see "Sweetgum"); 17) Magnolia (*Magnolia grandiflora*); 18) Oaks, all (*Quercus*); 19) Olive (*Olea europaea*); 20) Pepper, "California" (*Schinus molle*); 21) Pine, "Canary Island" (*Pinus canariensis*); 22) Pine, "Italian Stone" (*Pinus pinea*); 23) Redwood, "Coast" (*Sequoia empervirens*); 24) Sequoia (*Sequoia giganteum*); 25) Strawberry tree (*Arbutus unedo*); 26) Sweetgum (*Liquidamber stryaciflua*); 27) Sycamore (*Platanus racemosa*); and 28) Tulip tree (*Liriodendron tulipifera*).[4]

The ordinance defines "mature" as "[a]ny Class I tree (except a palm or fruit tree) located in the front yards which exceeds 19 inches in circumference (6-inch diameter) or, if located in a side yard and rear yard, one which exceeds 30 inches in circumference (9.5-inch diameter) measured four feet above natural grade."[5]

- Landmark or Historically Significant: The ordinance defines "landmark or historically significant" as "[a]ny tree or stand of trees (except palm trees) that meet one of the following criteria:
  (1) A tree or stand of trees which have taken on an aura of historical value by virtue of age or location.
  (2) A tree which has a trunk with a 40-inch circumference (12.75-inch diameter) if located in the front yard or 60 inches in circumference (19-inch diameter) if located in the rear and side yards.

An arborist survey letter report was prepared for the project by West Coast Arborists, Inc. (WCA) on October 6, 2010 and is included in Appendix D of this Initial Study. This arborist survey identified 20 trees on the Wilson Reservoir site, which are detailed in Table 7.1, along with an additional private carob tree along the site's southern property line. As shown in Table 7.1, seven (7) trees would be removed as part of the proposed project, plus the private carob tree, which is in a hazardous condition. All of the trees to be removed are non-native (Victorian Box, Oriental Arborvitae, and the private Carob) and are not Class I Trees pursuant to the City's tree preservation ordinance. As such, these trees can be removed without a tree permit.

However, there are three (3) Coast Live Oaks on the site – Trees #14, #17, and #19. Two of these oaks qualify as Landmark Trees per the City's Ordinance (Trees #14 and #17) and the third qualifies as a Mature Class I Tree (Tree #19). Tree #14, the largest of the oaks onsite, is 10 feet from the concrete footing of the existing reservoir. With the proposed project, this tree would be preserved in place and would be 15 feet from the reservoir footing, increasing the space the tree has to grow. Tree #17 is five feet from the existing concrete footing and would have a similar configuration in the proposed condition. Per WCA, the project is expected to cause only minimal root loss to this tree. Tree #19 is 12 feet from the existing concrete footing and, per WCA, with the proper protective fencing the root system and trunk base would not be impacted by the project.

Mitigation Measure BIO-1 is incorporated to protect the trees onsite. In addition, given the potential for trimming and/or pruning of one or more of the oaks onsite to accommodate project construction activities, a tree permit from the City of San Gabriel will be required for the project.

In addition to the City's tree preservation ordinance, Chapter 8 of the San Gabriel General Plan, Environmental Resources, discusses greening, water quality and conservation, air quality, watercourses/flood control, and geologic hazards. In regards to greening, this Chapter includes Target 8.3.3, which states, "Require that all new construction include a landscape component that will increase the number of trees onsite". Mitigation Measure BIO-2 requires the proposed project to comply with this Target.

With the incorporation of the mitigation measures below and compliance with tree permit requirements, the proposed project would not cause any significant impacts related to local ordinances or policies protecting biological resources.

**Mitigation Measure BIO-1:** The City of South Pasadena shall employ the services of a Certified Arborist to implement the following tree protection measures:

- Identify a protection zone for each tree to be retained (providing adequate space around protected trees from the beginning to the end of construction). A minimum five-foot radius shall be maintained and a greater radius shall be provided for larger trees as dictated by the project Arborist.

[4] City of San Gabriel Municipal Code, Title IX, Section 95.21.
[5] Ibid.

| 7. BIOLOGICAL RESOURCES. Would the proposal result in: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|

- Install temporary fencing around the protection zone. Non construction activity shall be allowed within this area, including storage, dumping of excess material, soil, etc.
- Maintain a minimum distance of 10 feet from trunk bases for any mechanical excavation or a distance equal to 3.5 times the trunk diameter, whichever is greatest.
- Avoid open trenching in the root area if at all possible. Where not possible, trenching shall be restricted to only one side of the tree and at an appropriate distance as dictated by the project Arborist.
- Install temporary shoring where open trenching is necessary, being careful to disturb as few roots as possible.
- Consider minimum height requirements of construction equipment and appropriate prune any necessary branches under the supervision of the project Arborist.
- Provide supplemental irrigation in similar volumes and seasonal distribution as would normally occur at the site.
- Wood chips generated during the clearing of onsite vegetation shall be used as mulch under retained trees to help reduce loss of soil moisture, protect against compaction, and moderate soil temperate. Keep mulch from accumulating directly adjacent to the trunk base.
- Trees shall be monitored during and after construction on a regular basis by the project Arborist. Watch for signs of stress, such as small twig and branch dieback, leaf discoloration and loss, and general decline in tree health and/or vigor.

**Mitigation Measure BIO-2:** The landscape plan for the proposed project shall include the planting of at least nine (9) trees. Potential locations for tree plantings include, in the front yard area, in front of the proposed clearwell, and to the rear of the reservoir tank.

**Table 7.1**
**Trees on the Wilson Reservoir Site**

| Tree # | Common Name | DBH[1] (in.) | Height (ft.) | Protection Status[2] | Arborist Comments |
|---|---|---|---|---|---|
| 1 | Victorian Box | 13.3 | 30 | None | Tree to be removed. Declining canopy. |
| 2 | Victorian Box | 7.8 | 25 | None | Tree to be removed. Declining canopy. |
| 3 | Victorian Box | 13.0 | 20 | None | Tree to be removed. Declining canopy, poor vigor. |
| 4 | Victorian Box | 12.8 | 20 | None | Tree to be removed. Declining canopy, poor vigor, leaning. |
| 5 | Victorian Box | 11.0 | 12 | None | Tree to be removed. Broken and decayed main stem, poor vigor. |
| 6 | Oriental Arborvitae | 13.9 | 30 | None | Tree to be removed. Good vigor. |
| 7 | Oriental Arborvitae | 12.3 | 30 | None | Tree to be removed. Good vigor. |
| 8 | Bald Cypress | 11 | 45 | None | Tree to be retained. High vigor, new foliage and fruit production. |
| 9 | Bald Cypress | 9.4 | 40 | None | Tree to be retained. High vigor, new foliage and fruit production. |
| 10 | Bald Cypress | 8 | 40 | None | Tree to be retained. High vigor, new foliage and fruit production. |
| 11 | Bald Cypress | 10.0 | 40 | None | Tree to be retained. High vigor, new foliage and fruit production. |
| 12 | Bald Cypress | 11 | 50 | None | Tree to be retained. High vigor, new foliage and fruit production. |
| 13 | Bald Cypress | 14 | 35 | None | Tree to be retained. High vigor, new foliage and fruit production. |
| 14 | Coast Live Oak | 33 | 30 | Landmark | Tree to be retained. Mature, healthy tree with high vigor. |
| 15 | Edible Loquat | 5 | 12 | None | Declining, but not impacted by the project. |
| 16 | Siberian Elm | 12.2 | 20 | None | Tree to be retained, some canopy dieback, low-moderate vigor. |
| 17 | Coast Live Oak | 21 | 30 | Landmark | Tree to be retained, slight lean, some canopy dieback, moderate vigor. |
| 18 | Pecan | 12.3 | 30 | None | Tree to be retained, some canopy dieback, moderate vigor. |
| 19 | Coast Live Oak | 17 | 35 | Mature Class I | Tree to be retained, some canopy dieback, moderate-low vigor. |
| 20 | Avocado | 23.3 | 35 | None | Tree to be retained, high vigor. One stem leans heavily over the reservoir and may need to be removed in order to accommodate construction equipment. |

| 7. BIOLOGICAL RESOURCES. Would the proposal result in: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| Private | Carob | 56 | 45 | None | Huge trunk would, visible conks in the basal cavity, along main stem and on several lateral limbs. This tree is hazardous and coud fall at any time and cause injury to persons and property. |

Source: West Coast Arborists, Inc., Letter Report of October 6, 2010, RE: 545 W. Adelyn Drive-Wilson Reservoir.
[1] DBH = diameter at breast height
[2] Pursuant to the City of San Gabriel tree protection ordinance (Chapter 95.20 of Title IX of the City of San Gabriel's Municipal Code)

| | | | | | |
|---|---|---|---|---|---|
| f) | Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan? | | | | x |

**No Impact:** The project site is not within a Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan. Therefore, the project would not conflict with any adopted habitat conservation plans, and the project would have no related impacts.

| 8. MINERAL RESOURCES. Would the proposal: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | | | | x |

**No Impact.** No loss of known mineral resources that would be of value to the region and the residents of the state would occur as a result of the proposed project. The project site is not located in a mineral recovery area or zone.

| | | | | | |
|---|---|---|---|---|---|
| b) | Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | | | | x |

**No Impact.** The proposal will not result in loss of locally important mineral resources. The project site is not located in a mineral recovery area or zone.

| 9. HAZARDS and HAZARDOUS MATERIALS. Would the proposal involve: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials? | | x | | |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | | x | | |

**(a and b) Less Than Significant Impact with Mitigation.** The proposed project involves the demolition of the existing Wilson Reservoir and associated structures, and the installation of a replacement reservoir, new booster pump station, chlorination facility, operations building, metering facility and clearwell.

| 9. HAZARDS and HAZARDOUS MATERIALS. Would the proposal involve: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|

Operations

The operations of the new replacement reservoir and replacement facilities would not pose a risk of accidental explosion, release of hazardous substances, or other potential health hazards. The proposed re-chlorination facility, housed within the pumping station building, would maintain the chlorine residual in the reservoir tanks at prescribed levels for public health. The facility would generate sodium hypochlorite from a brine solution made with salt and water, which would yield a solution strength of 0.8 percent. By comparison, household bleach has solution strength of approximately 5 to 6 percent and, therefore, the substance is not classified as hazardous. As such, the potential hazards resulting from the project's utilization of hazardous materials is a less-than-significant impact. Furthermore, the proposed project would reduce the risk of upset and accident conditions involving the release of hazardous materials at the Wilson Reservoir Site by replacing the existing chlorine gas cylinder disinfection system with a sodium hypochlorite generation system. Chlorine gas is considered to be a greater potential hazard than sodium hypochlorite, because if released chlorine gas could affect human health through inhalation, whereas sodium hypochlorite would require physical contact or ingestion to affect human health.

Demolition/Construction

The project has the potential to cause a hazard to the public and/or the environment with demolition activities on the project site potentially involving the release of hazardous materials into the environment. This includes asbestos-containing materials (ACM), lead-based paint (LBP), polychlorinated biphenyls (PCBs), and other hazardous materials as well as mold and fungi. As a consequence, a pre-demolition survey report was prepared for the project by URS in July 2011 (as contained in Appendix E) to determine the presence of these materials in existing structures on the site and to determine what types of mitigation or avoidance measures should be undertaken during the demolition phase of the project to prevent their release into the environment.[6]

The pre-demolition survey report prepared by URS surveyed the property for asbestos-containing materials (ACM), lead-based paint (LBP), polychlorinated biphenyls (PCBs), mold and fungi and other hazardous materials. The following paragraphs summarize the findings of this report.

**Asbestos Containing Materials (ACM):** In regards to ACM, bulk samples of friable and non-friable suspect ACM were collected for laboratory analysis. The survey determined the presence of ACM in vinyl floor tiles of the existing office structure and at other locations on the site. The sampling results are portrayed in Table 1 of the attached report (Appendix E) and the following building materials are considered ACM:

- 9-inch by 9-inch red/brown vinyl floor tiles located in the office;
- 9-inch by 9-inch red/brown vinyl floor tiles located in the above grade pump station;
- The black pipe wrapping material located at the rear of the above grade pump station;
- The black mastic located on the concrete roof over well #3;
- The green roofing material located on the wood frame roof covering the reservoir; and
- The black mastic located on the wood frame roof covering the reservoir.

Mitigation Measure HM-1 is included to ensure ACM would be properly managed and disposed of during constriction.

**Lead Based Paint (LBP):** The pre-demolition survey report found LBP in the existing structures. Detected levels of lead were found throughout the Wilson Reservoir buildings in concentrations ranging from 110 ppm to 49,000 ppm. The majority of the painted surfaces appeared to be in good condition and were not loose and flaking at the time of the survey. The report concluded that, if the LBP is removed from the building substrate, then testing of the lead should be performed prior to disposal. The report states that the presence of LBP does not necessarily mean that the health of the occupants or construction workers is endangered. If the LBP remains in good condition and is not disturbed, exposures to lead are expected to be negligible. However, when LBP deteriorates, is disturbed or damaged, such as during demolition operations, lead dust may be released, creating potential health hazards for building occupants and maintenance personnel. The following building components are considered to contain LBP:

- The tan paint located on the concrete wall of the reservoir;
- The tan paint located on the wood frame roof covering the reservoir;

[6] Pre-Demolition Survey Report, Wilson Reservoir Buildings, 545 W. Adelyn Drive, San Gabriel, California, URS, July 22, 1011.

| 9. **HAZARDS and HAZARDOUS MATERIALS. Would the proposal involve:** | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|

- The tan paint located on the exterior wall of the office building;
- The light brown trim paint located on the door, door frame and other trim items on the reservoir;
- The white paint located on the door frame and interior walls of the office building;
- The tan exterior wall paint located on the walls of the sampling house and related structures;
- The red paint located on the floor of the sampling house;
- The white paint located on the door and door trim of the sampling house and related structures;
- The light blue paint located on the cabinets in the sampling house;
- The tan paint located on the exterior structures of the below grade pumping station;
- The white paint located on the interior wall of the below grade pumping station;
- The gray paint located on the metal piping and pumps located inside the below grade pumping station;
- The blue/green paint located on the motor assemblies inside the below grade pumping station;
- The silver paint located on the metal ventilation ducting located inside the below grade pumping station;
- The blue/green paint located on the concrete floor of the below grade pumping station;
- The white paint located on the interior walls of Well #3;
- The green paint located on the metal electrical cabinets inside Well #3;
- The gray paint located on the metal piping inside Well #3;
- The red paint located concrete pump base's located inside Well #3;
- The blue paint located on the concrete floor of Well #3;
- The tan paint located on the metal ladder and pipe vents in Well #3;
- The tan paint located on the exterior of the above grade pumping station building;
- The tan paint located on the door frames and doors of the above grade pumping station;
- The white paint located on the interior walls of the above grade pumping station building;
- The dark blue paint located on the concrete floor of the above grade pumping station building;
- The light blue paint located on the concrete floor of the above grade pumping station building; and
- The gray paint located pump motors inside the above grade pumping station building.

Mitigation Measure HM-2 is included to ensure LBP would be properly managed and disposed of during constriction.

**Polychlorinated Biphenyls (PCBs), Mold and Fungi and Other Hazardous Materials:** Lighting ballasts were inspected for the appropriate PCB labels. Three of ten lighting ballasts that were inspected in the facility buildings did not have the "PCB-free" label. No visible mold or fungi were identified in the Wilson Reservoir buildings during the survey. However, the survey did not include destructive testing of the walls and ceiling, and hidden mold and fungi can be present in a building even with no observable signs of moisture damage. No other materials or chemicals of concern requiring special handling procedures were identified onsite. Mitigation Measure HM-3 requires that a qualified inspector be onsite during demolition to ensure any PCB-containing ballasts, mold and fungi, or other hazardous materials are identified and properly handled.

With the incorporation of the following mitigation measures, demolition/construction of the project would not create a significant hazard to the public or the environment.

**Mitigation Measure HM-1:** Because asbestos containing materials (ACM) will be disturbed as a result of the demolition of the existing reservoir and associated facilities, the following measures are required:

1. Remove and dispose of ACM prior to demolition using a licensed abatement contractor in accordance with Federal, State, and local regulations and ordinances.
2. Prepare bid documents and specifications for the demolition/construction project for project control and ensure lawful removal techniques are used.
3. Have a third party provide demolition oversight to document that the contractor complies with the specifications, proper protective equipment is used, and proper disposal procedures are followed.

In addition to the measures above, the following precautions shall be taken prior to any repair or maintenance activities involving less than 100 square feet of ACM:

1. Do not cut, sand, or drill materials containing asbestos.

| 9. HAZARDS and HAZARDOUS MATERIALS. Would the proposal involve: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 2. Prior to initiating demolition activities that would disturb the ACM, thoroughly wet the area to prevent possible release into the air.<br>3. Remove dust with a high-efficiency particulate air (HEPA) vacuum or wet wipe with disposable towels.<br>4. Follow Federal, State and local regulations for proper disposal of ACM.<br><br>**Mitigation Measure HM-2:** The following measures are required to prevent the release of lead based paint (LBP) which, if not properly managed, could result in a health hazard:<br>1. The LBP on the interior or exterior of the buildings that is in good condition does not need to be abated prior to demolition. However, any flaking LBP or peeling shall be removed by a licensed lead abatement contractor and disposed following Federal, State, and local regulations. LBP may be disposed as construction debris as long as it remains on the substrate.<br>2. The demolition contractor shall implement precautions to comply with OSHA 29 CFR 1926.62, Lead in Construction; and<br>3. Dispose of all painted building materials as construction debris and do not permit the demolition contractor to recycle the painted wood in accordance with Federal, State, and local regulations for the proper disposal of LBP.<br><br>In addition to the above-mentioned measures, the following precautions shall be taken prior to any demolition activities that would disturb LBP:<br>1. Do not cut, sand, or drill materials containing LBP;<br>2. Prior to initiating demolition activities that would disturb the LBP, wet the area to prevent possible release into the air;<br>3. Remove dust with HEPA vacuum or wet wipe with disposable towels; and<br>4. Follow Federal, State, and local regulations for proper disposal of LBP.<br><br>**Mitigation Measure HM-3:** To the satisfaction of the Cities of South Pasadena and San Gabriel, a qualified inspector shall be onsite to ensure any PCB-containing ballasts, mold and fungi, or other hazardous materials onsite are identified and properly handled in accordance with OSHA standards. | | | | |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | | x | | |
| **Less Than Significant Impact With Mitigation.** The project site is within ¼-mile of the Coolidge Elementary School and thus has the potential to expose school children to the emission of hazardous materials during the demolition phase of the project. However, implementation of Mitigation Measures **HM-1** and **HM-2**, described above, will reduce this potential exposure to a level of insignificance. | | | | |
| d) Be located on a site which is included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5 and, as a result, would it create an significant hazard to the public or the environment? | | | | x |
| **Less than Significant Impact.** The project site has been the site of the Wilson Reservoir since the 1920's. No known releases of any hazardous materials have occurred onsite. Furthermore, there are no records of any hazardous material incidents that have affected the property and the site is not listed in the California Department of Toxic Substances Control's (DTSC's) Envirostor database[7]. Therefore, the proposed project would have no impact related to hazardous material sites compiled pursuant to Government Code Section 65962.5. | | | | |
| e) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | | | | x |
| **No Impact.** The proposed project would not interfere with an emergency response plan as it is a continuation of an existing water | | | | |

[7] Department of Toxic Substances Control, Envirostor Database, web application <www.envirostor.dtsc.ca.gov>, accessed October 28, 2011.

| 9. HAZARDS and HAZARDOUS MATERIALS. Would the proposal involve: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| storage use. See also part 6(d), above. | | | | |
| f) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | | | | x |

**No Impact.** The project site is located in a residentially developed area with pockets of landscaping and trees. The threat of a wildland fire from project operations is virtually non-existent given that no expansive natural areas with high fuel loading exist within the vicinity of the project.

| 10. NOISE. Would the proposal result in: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | | x | | |

**Less Than Significant with Mitigation**: The San Gabriel Noise Element of the General Plan (Chapter 9, pages N-8 and N-9) establishes exterior and interior Noise Standards that protect residential areas. The Noise Standards are designed to control unnecessary, excessive and annoying sounds from noise sources on private property such as parking lots, mechanical equipment, and stationary sources from impacting adjacent residential areas. The Noise Standards cannot be applied to vehicles when traveling on public roadways. Federal and State laws preempt control of the mobile noise sources on public roads. Likewise, these Noise Standards are not thresholds of significant for short-term construction noise for this project. Construction noise is rather regulated by Section 150.003 of the San Gabriel Municipal Code (the City's Noise Ordinance).

The City of San Gabriel Noise Standards are presented in terms of the "A-weighted decibel," abbreviated dBA – see Table 10.1. The ordinance defines levels that cannot be exceeded for a certain period of time. In terms of a noise metric this represents the L(%) metric. The L(%) metric describes the noise level that is exceeded during a certain percentage of the measurement period. The lowest outdoor noise levels defined in the Noise Standards are the levels that cannot be exceeded for more than 30 minutes in an hour. This is equivalent to the L50 metric. Similarly the Noise Standards define a noise level that cannot be exceeded for more than 5 minutes per hour. This is the noise level exceeded 8.3% of the time and the L8.3 metric.

**Table 10.1**
**City of San Gabriel Noise Criteria at Adjacent Residential Properties**

| Maximum Time of Exposure | Noise Metric | Noise Level Not To Be Exceeded 7 a.m. to 10 p.m. (Daytime) | Noise Level Not To Be Exceeded 10 p.m. to 7 a.m. (Nighttime) |
|---|---|---|---|
| **EXTERIOR NOISE STANDARDS** | | | |
| 30 Minutes/Hour | L50 | 50 dBA | 45 dBA |
| 15 Minutes/Hour | L25 | 55 dBA | 50 dBA |
| 5 Minutes/Hour | L8.3 | 60 dBA | 55 dBA |
| 1 Minute/Hour | L1.7 | 65 dBA | 60 dBA |
| Any period of time | Lmax | 70 dBA | 65 dBA |
| **INTERIOR NOISE STANDARDS** | | | |
| 5 Minutes/Hour | L8.3 | 45 dBA | 40 dBA |
| 1 Minute/Hour | L1.7 | 50 dBA | 45 dBA |
| Any period of time | Lmax | 55 dBA | 50 dBA |

The proposed project would generate noise from temporary construction activities and from the proposed booster pumps. Mestre Greve Associates (MGA) prepared a *Noise Assessment* (dated revised February 8, 2012) for the proposed project that analyzes these

| 10. NOISE. Would the proposal result in: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|

potential noise impacts (see Appendix F). The subsections below summarize the results of the project's Noise Assessment.

Construction Noise - Onsite Activities

Construction noise represents a short-term impact on ambient noise levels. Noise generated by construction equipment, including trucks, graders, bulldozers, concrete mixers and portable generators can reach high levels. Demolition, excavation, grading, and building construction activities will have similar noise levels. The proposed construction would primarily consist of demolition and excavation of the existing pump station and concrete foundation, a concrete pour associated with the construction of the new concrete foundation, and construction of a new pump station and operation building.

Based on the construction trip schedule identified previously in Table 6.1, the demolition and excavation phase is anticipated to take 150 days, and involves approximately 5,302 tons of debris, with a maximum of 17 haul truck trips per day. The preparation/grading phase is next, and would include approximately 3,218 cubic yards of export and 1,917 cubic yards of import, with a maximum of 30 haul truck trips per day. The following phase would consist of concrete pours associated with the construction of the new concrete foundation, and would take approximately 10 days. Subsequently, a new pump station and operation building will be constructed; this phase is projected to take approximately 150 days. It is projected that the construction of the project would start in early 2012 and take about 18-24 months to complete.

Worst-case examples of construction noise at 50 feet are presented in Exhibit 8 of the project's Noise Assessment (see Appendix F). Typical equipment that might be employed for this type of project includes graders, scrapers, front loaders, trucks, concrete mixers and concrete pumps. The peak noise level for most of the equipment that will be used during the construction is 70 to 95 dBA at a distance of 50 feet. Noise levels at further distances would be less than this. For example, at 200 feet, the peak construction noise levels range from 58 to 83 dBA.

The nearest sensitive land uses are the existing single-family homes immediately east and west of the project site. Potential construction operations could occur as close as 10 feet from the nearest residential homes. Based on this distance, the worst-case unmitigated peak (Lmax) construction noise levels could be 97 dBA for very short periods. However, as the construction is moved towards the center of the project site, the noise levels would be significantly less. The average noise levels are typically 5 to 15 dB lower than the peak noise levels. Average noise levels (L50) at the nearest existing residential buildings could be in the range of 71 to 82 dBA (L50).

Construction noise is regulated by Section 150.003 of the San Gabriel Municipal Code (the City's Noise Ordinance), which limits construction to between 7 a.m. and 7 p.m. on Monday through Friday, and 8 a.m. and 4 p.m. on Saturday. Given the type of proposed construction, the proposed project is expected to comply with these time restrictions. The only possible exception would be during concrete pouring. Concrete would not be poured continuously for 24 hours, but for a project of this scale would typically be poured from dawn to dusk (as early as 6 a.m. and as late as 9 p.m.). During the concrete pour operations, the noise levels would be sufficiently high to cause speech interference and sleep disturbance during the nighttime (before 7 a.m.). As a result, mitigation is included to require the construction equipment, particularly concrete mixers, to be located towards the center of the project site, and far from the surrounding homes when possible. Also, a written permit from the City would be necessary if the concrete pour phase is to operate outside the allowable construction hours (7 a.m. and 7 p.m. Monday-Friday and 8 a.m. and 4 p.m. on Saturday). In addition, due to the duration of the construction (up to 24 months) and the proximity of residences to the site, mitigation in the form of a temporary noise barrier is required by Mitigation Measure NOI-1. Additional mitigation measures are included to clearly define construction hours and to require that construction equipment is fitted with proper mufflers. Compliance with these mitigation measures would reduce onsite construction noise impacts to a less than significant level.

> **Mitigation Measure NOI-1**: Prior to demolition of the existing reservoir, construct a temporary noise barrier along the west, north, and east sides of the project along the property line adjacent to the existing residences. The temporary construction barrier shall be at least 8 feet high and shall remain in-place through the duration of construction. Two construction barriers are commonly utilized and either is acceptable for this project. Plywood barriers can be used, but must incorporate a minimum of 1 inch thickness of wood. Sound curtains are also an acceptable noise barrier, however, any acoustic sound curtain must have a Sound Transmission Class (STC) rating of at least 20. The temporary noise barrier will reduce the noise levels by 6 to 10 dB, depending on the source and its location.

| 10. NOISE. Would the proposal result in: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|

**Mitigation Measure NOI-2:** Control of Construction Hours – Construction activities shall only be permitted to take place between the hours of 7 a.m. and 7 p.m. on Monday through Friday, and 8 a.m. and 4 p.m. on Saturday, except with the express written permission of the Administrative Authority of the City of San Gabriel, or in case of emergency. As long as the project operates within these hours, it will be in compliance with the Noise Ordinance.

**Mitigation Measure NOI-3:** If concrete pouring cannot be completed during normally allowable construction hours (between 7 a.m. and 7 p.m. Monday-Friday and 8 a.m. and 4 p.m. on Saturday), expressed written permission from the City of San Gabriel Community Development Director will be required to extend allowable construction hours. Such extended construction hours shall not allow construction before 6 a.m. or after 9 p.m. In addition, during concrete pours, construction equipment, specifically concrete mixers, shall be located towards the center of the project site, and as far from the surrounding homes as possible to the satisfaction of the City of South Pasadena Public Works Director.

**Mitigation Measure NOI-4:** During all phases of construction, the project contractors shall equip all construction equipment with properly operating and maintained mufflers consistent with manufacturers' standards.

Construction Noise - Offsite Activities (Hauling)

Haul trucks associated with the demolition/excavation and concrete pour phases would generate noise along public roadways. The trucks are expected to enter and exit the site via Bradbury Drive and West Las Tunas Drive. It is anticipated that there would be a maximum of 30 haul trucks per day and 40 vehicle worker trips per day. This would add up to 70 daily vehicle trips to the adjacent roadways. Given a maximum of 70 trips a day, the Community Noise Equivalent Level (CNEL) noise levels due to the haul trucks via Bradbury Drive would be approximately 56 dBA at 50 feet from the centerline. This is the closest distance to the nearest typical home. This noise level is below the City's 65 CNEL noise standard and would not be considered to be significant. Once the trucks are on West Las Tunas Drive, there is enough existing traffic on these roadways so that construction trucks would contribute little to the total noise level and there would not be any significant impact.

Booster Pump Noise

The proposed pump station would house three booster pumps, which are proposed with 150 horsepower (HP) and 250 HP WP1 motors. The noise rating for a WP1 motor (such as those manufactured by Teco Westinghouse) is typically 85 dBA at 3 feet for both 150 HP and 250 HP models. Based on this noise level, the combined noise generated from all three booster pumps is projected to be 89.8 dBA at 3 feet.

The pump station housing would be constructed of composite shingle attic spaced roof, fiber-cement shingles walls, metal doors, and 4 by 8 foot acoustical intake louvers. The facility would need to comply with the City of San Gabriel's more stringent nighttime noise limit of 45 dBA at the nearest residences. Based on the combined noise level of 89.8 dBA at 3 feet, the pump station building would need to achieve an inside-to-outside noise reduction of at least 44.8 dBA, in order to comply with the 45 dBA noise limit.

The indoor to outdoor noise reduction characteristics of a building are determined by combining the transmission loss of each of the building elements that make up the building. Each unique building element has a characteristic transmission loss. The critical building elements are typically the roof, walls, windows, doors, attic configuration and insulation. The total noise reduction achieved is dependent upon the transmission loss of each element, and the surface area of that element in relation to the total surface area of the room. Room absorption is the final factor used in determining the total noise reduction.

Based upon the construction details and the exterior wall noise rating (EWNR) values, the inside to outside noise reduction was calculated for the pump station building (see the project's Noise Assessment in Appendix F for details). Based on EWNR calculations, the pump housing would achieve noise reduction less than the required to comply with the 45 dBA noise limit. As a result, upgrades would be required for all acoustic louvers on the exterior walls to meet the 45 dBA. Mitigation Measure NOI-5 requires such upgrades. With the incorporation of this measure, the proposed booster pumps would not cause a significant impact due to exposure of persons to noise levels in excess of established standards.

**Mitigation Measure NOI-5:** The louvers on the proposed pump house shall be upgraded to high performance acoustic louvers that have a minimum exterior wall noise rating (EWNR) rating of 20 or a sound transmission class (STC) rating of

| **10. NOISE. Would the proposal result in:** | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| 23. An acceptable louver would be the Industrial Acoustics Company (IAC) Noishield Louvers Model 2R (www.industrialacoustics.com). Louvers with the same or higher noise performance are also acceptable. | | | | |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | | | x | |
| **Less Than Significant Impact**: There are no vibration standards established by either the City of San Gabriel or the City of South Pasadena. Regardless, the proposed project would neither generate, nor expose people to excessive groundborne vibrations or groundborne noise levels. Construction of the project may temporarily generate vibrations, particularly during demolition of the existing reservoir and during compaction of fill material. However, given the limitation of demolition activities to the City's allowing construction hours ( between 7 a.m. and 7 p.m. Monday-Friday and 8 a.m. and 4 p.m. on Saturday) and the short-term nature of demolition, vibration impacts are considered less than significant. | | | | |
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | | x | | |
| **Less than Significant Impact with Mitigation**: See the response to item 10(a), above. The proposed booster pumps have the potential to affect ambient noise levels. However, with the incorporation of Mitigation Measure NOI-5, noise impacts from the proposed booster pumps would be less than significant. | | | | |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | | x | | |
| **Less than Significant Impact with Mitigation**: See the response to item 10(a), above. Construction of the proposed project has the potential to result in a substantial temporary increase in ambient noise levels. However, with the incorporation of Mitigation Measures NOI-1 through NOI-4, noise impacts from construction of the proposed project would be less than significant. | | | | |

| **11. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:** | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Fire protection? | | | | x |
| **No Impact.** The closet Fire Station to the project site is the San Marino Fire Department station which is located 0.93 miles from the site. This station can provide fire suppression services in San Gabriel through a mutual aid agreement. Nearby stations can also provide support when necessary. This includes San Gabriel's main Fire Station located at 1303 S. Del Mar Boulevard. The proposed project would not alter any emergency access and would improve water supplies available for fighting fires. Therefore, the project would have no impact on fire protection services. | | | | |
| b) Police protection? | | | | x |
| **No Impact.** The City of San Gabriel Police Department provides police protection and law enforcement services in the City of San Gabriel. The proposed project would not alter any access routes, and, since there is no change in land use, would not change the need for police services. Therefore the project would have no impact on police services. | | | | |
| b) Schools? | | | | x |
| **No Impact.** The project involves the demolition and replacement of an existing reservoir on an existing reservoir site. The nearest | | | | |

| 11. **PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:** | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| school is Coolidge Elementary School located 0.2 mile west of the current project site at the southwest corner of West Roses Road and North Mission Drive. The construction of the reservoir and haul routes would avoid this area and would not create the need for additional services at the school site. No physical impact to the school from construction is anticipated. | | | | |
| d) Parks? | | | | x |
| **No Impact.** The proposed project involves the replacement of an existing reservoir and the installation of new treatment facilities. Construction of the proposed facilities would not encroach upon any recreational resources. Additionally, as discussed, the proposed project would not directly or indirectly cause population growth. Therefore, the proposed project would not displace any recreational resources or indirectly impact recreational resources by increasing their use. | | | | |
| e) Other public facilities? | | | x | |
| **No Impact.** The proposed project involves replacement of an existing reservoir and the installation of new water treatment facilities. Other than the existing water supply facilities, construction of the proposed reservoir would not encroach upon any public facilities. Additionally, as discussed, the proposed project would not directly or indirectly cause population growth. Therefore, the proposed project would have no impact on public facilities. | | | | |

| 12. **UTILITIES AND SERVICE SYSTEMS. Would the project:** | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | | | | x |
| **No Impact.** The proposed project involves the replacement of the Wilson Reservoir and the installation of a new reservoir and appurtenant water treatment facilities. Wastewater generated onsite would be only typical domestic sewage and occasional discharge of tested water. No unique contaminants or pollutants are proposed to be added to the wastewater. Therefore, the proposed project would not exceed the wastewater treatment requirements of the Los Angeles Regional Water Quality Control Board, and would have no associated impacts. | | | | |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | | | | x |
| **No Impact.** The proposed project involves the replacement of the Wilson Reservoir and the installation of a new reservoir and water treatment facilities. The objectives of the proposed facilities are to replace an aging reservoir, built in the 1920's, that needs upgrading to meet current seismic standards and address deterioration. The water need and wastewater generation of the proposed facilities would be negligible. Therefore, the proposed project would not require or result in the construction or expansion of offsite water or wastewater treatment facilities, and would have no associated impacts. | | | | |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts? | | | | x |
| **No Impact.** The proposed project would not require the construction or expansion of any other storm water drainage facilities, and would have no related significant impacts. | | | | |

| 12. UTILITIES AND SERVICE SYSTEMS. Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | | | | x |
| **No Impact.** The proposed project would increase the capacity of the Wilson Street Reservoir to 1.3 million gallons. In addition, the project includes a water treatment facility, which would sanitize the water from the on-site wells to maintain existing sources of drinkable water. As discussed, the proposed project would not increase the population of San Gabriel or South Pasadena, and thus, would not increase the demand for water. In addition, the project will increase the City of South Pasadena's water storage capacity. Therefore, the proposed project would have no adverse impact on the availability of water supplies. | | | | |
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to the provider's existing commitments? | | | | x |
| **No Impact.** The project involves the construction of a new water storage facility and pumping station, and would not necessitate or trigger the need for additional wastewater treatment facilities. The project serves as a replacement facility of the original reservoir. The newly installed tank would service the same population of City residents that the previous facility served. | | | | |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | | | x | |
| **Less Than Significant Impact.** The demolition of the existing reservoir and associated structures would generate approximately 1,300 cubic yards of inert waste material All waste removal from the project site construction, including transport to a landfill, is regulated by Chapter 50, Title V, San Gabriel Municipal Code. As such, the contractor will be required to adhere to the solid waste collection and recycling requirements of the Code. Adherence to the City's waste removal and recycling requirements (along with sufficient capacity within area landfills to accommodate waste generated by the project) results in less than significant solid waste impacts. | | | | |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | | | | x |
| **No Impact.** The project would comply with all federal, state, and local statutes and regulations related to solid wastes. | | | | |

| 13. AESTHETICS. Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Have a substantial adverse effect on a scenic vista? | | | x | |
| **Less Than Significant Impact.** The project site and existing Wilson Reservoir sit at a neutral point in the landscape, with an elevation of 500 feet above mean sea level (msl). The existing reservoir is partially sunken below ground. As a result, a substantial portion of the existing reservoir's height (25 feet) is located below grade on the property. Nevertheless, the current reservoir is partially visible to residential properties on the east, west, and north sides of the project site. The existing reservoir is only partially visible from Adelyn Drive because the tank is screened from street views by an existing fence and mature vegetation. Views of the Wilson Reservoir site are further restricted by the nearby one- and two-story residential structures and mature landscaping along Adelyn Drive (see the photographs presented in Figure 9. On a clear day, the San Gabriel Mountains are visible looking north above the reservoir property from the street. However, such views are obstructed by the existing Wilson Reservoir, property walls, and other structures onsite and in the vicinity. More prominent views of the San Gabriel Mountains are afforded on north-south oriented streets.<br><br>The proposed project would largely preserve north-facing views of the San Gabriel Mountains. The proposed replacement reservoir would be larger than the existing reservoir and four feet taller. However, similar to the existing reservoir, a majority of the new reservoir's height (25 feet) would be situated below grade. Although the replacement reservoir and other structures have the potential to impact current views to the north of the project site, including views of the San Gabriel Mountains, said impacts to | | | | |

| 13. AESTHETICS. Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|

northerly views would be less than significant as views of the San Gabriel Mountains from Adelyn Drive across the project site would be retained even with the new structures in place (See Figure 8 – Photosimulation of the Proposed Facility as Viewed from Adelyn Drive). It should also be noted that, similar to the existing reservoir, the new reservoir would be situated below grade and its visibility from Adelyn Drive would be obscured by the new structures proposed on the site as well as a screen wall, decorative gate, and landscaping along the front of the facility. Furthermore, as depicted in Figure 9, due to the setback of the reservoir site and the existing residential structures and mature landscaping in the project vicinity, views of the site from eastbound and westbound Adelyn are limited.

Views of the reservoir from adjoining residential properties to the east, and west would be somewhat similar to views of the existing reservoir and related facilities with screening provided by existing trees and block walls as well as by newly proposed landscaping. . (See Figure 10).

In addition to the reservoir, the project proposes the installation of a new clearwell structure, pump house, and operations building, portions of which will be visible from Adelyn Drive and adjacent residential properties. The tallest structure proposed is the clearwell tank. Plans indicate that the tank structure will be rectangular in shape with a maximum height of18-feet, 3-inches (measured at the roofline). Architectural treatment of the rectangular clearwell structure consists of a Craftsman-style treated concrete building with sloped roof, rafter tails, eaves, fascia boards, outriggers and braces. Surface finishes of the structure include composition shingles on the roof and wood trim on all four sides of the structure. The proposed pump house has a maximum height of approximately 19 feet and would consist of a single level split-face concrete block building with asphalt/composition shingle roof. The southerly and northerly exterior elevations of the building include Craftsman-style architectural features such as a low-pitched roof line with rafter tails, a shingled-façade, and overhanging eves. Finally, a proposed new operations building would be approximately 13.5 feet tall with the exterior elevations of the building to include Craftsman-style architectural features such as a low-pitched roof line with rafter tails, overhanging eves, a shingled-façade, and tapered columns supporting the roof structure. The designs of the clearwell tank structure, pump house, and operations building are consistent with and architecturally compatible with existing structures in the project vicinity. Given the relatively shallow height of the proposed structures, the limited views of the site and the San Gabriel Mountain backdrop, and the architectural details of the proposed structures, the proposed project would not significantly impact any scenic vistas.

| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state or scenic highway? | | | x | |
|---|---|---|---|---|

**Less than Significant Impact**. There are no state designated scenic highways in the City of San Gabriel. Likewise, the City of San Gabriel General Plan does not designate any scenic roadways in the City. The only potential scenic resources that the proposed project would impact are trees. As discussed in part 7(e) above, the project involves the removal of eight trees. However, thirteen trees would be preserved in place onsite, including all of the landmark and other protected trees that currently exist onsite. In addition, to replace any scenic value lost with the removal of trees, the project's landscape plan calls for a mix of trees, shrubs, and ground cover. The combination of the existing trees and proposed landscaping would provide substantial screening of the site (see Figures 8 and 11). Therefore, the proposed project would not impact any scenic roadways and would not significantly impact any scenic resources.

| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | | | x | |
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**Less Than Significant Impact.** See response to 13 (a), above. Potential degradation of the existing visual character or quality of the site and its surroundings has been mitigated through contextual designs of the clearwell structure, pump house, and operations building. All these structures incorporate Craftsman-style architectural features that make the structures visually compatible with buildings located in the general project site vicinity. It should also be noted that project landscaping plans indicate that thirteen mature trees currently located on the west and east sides of the reservoir tank would be retained and protected in place, including three mature oak trees. These trees provide significant amounts of screening of the reservoir and associated buildings from adjacent residential properties. Furthermore, the exiting trees would be supplemented by a mixture of new trees, shrubs, and ground cover. As shown in Figures 8 and 10, the proposed structures would be of a similar scale as the existing structures onsite, and views of the proposed facility would be largely screened by existing and proposed landscaping. Therefore, the proposed project would not

| 13. AESTHETICS. Would the project: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| significantly impact the visual character or quality of the site or its surroundings. | | | | |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | | | x | |

**No Impact.** The light-sensitive land uses in the project vicinity are the residential properties to the east, west, and north of the site and to the south across Adelyn Drive. The only major light sources in the vicinity of the proposed project site are the streetlights along Adelyn Drive which adjoins the project site to the south. Vehicle headlights and home security lighting are additional sources of light and glare in the project vicinity. The proposed project would involve the installation of exterior security lighting for the replacement reservoir and water treatment facilities, which would normally be off at night an only turned on as needed and in case of emergency. In addition, all lighting would be designed and installed to be either shielded or down-directed away from adjoining residential properties. These lighting fixtures would be directed onto the project site itself and would not spill onto any light-sensitive land uses. In addition, the residential properties which immediately adjoin the site are screened from the site by fencing and vegetation. Therefore, the proposed project would not adversely affect day or nighttime views in the area and would not result in significant impacts due to the creation of a new source of light or glare.

| 14. CULTURAL RESOURCES. Would the proposal: | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Cause a substantial adverse changed in the significant of a historical resource as defined in §15064.5? | | | x | |

**Less Than Significant Impact.** The existing reservoir was built in the 1920's. Since it is more than 50 years old the structure may potentially be considered a historic resource in accordance Section 15064.5 of the CEQA Guidelines. However, the reservoir is not included on the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR). In addition, city-wide surveys conducted by the City of San Gabriel did not identify the site as a local historical resources. Due to its lack of listing on national, state, or local lists of historic places or structures, the demolition and replacement of the Wilson Reservoir and accessory structures would not be considered a significant impact on historical resources.

| | | | | |
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| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | | x | | |

**Less Than Significant Impact with Mitigation.** Excavation, soil disruption, and other construction activities would occur in areas previously disturbed for the existing Wilson Reservoir and accessory structures. However, previously undisturbed soils may be graded during construction of the proposed project. Although archaeological resources have not been identified at the project site, excavation and grading activities may have the potential to expose undiscovered archaeological resources. Therefore, a mitigation measure is identified below, and when implemented, would reduce the potential for significant impacts to archaeological resources to below a level of significance.

**Mitigation Measures CULT-1:** Archaeological resources pursuant to § 15064.5 have not been identified on the project site. However, in the event that archaeological resources are unearthed during excavation activities, work shall be temporarily suspended, and the discovery shall be evaluated by a qualified archaeologist, pursuant to the procedures set forth at CEQA Section 15064.5.

| | | | | |
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| c) Directly or indirectly, destroy a unique paleontological resource, site, or unique geologic feature? | | x | | |

**Less Than Significant Impact with Mitigation.** Excavation, soil disruption, and other construction activities would occur in areas previously disturbed for the existing Wilson Reservoir and accessory structures. However, previously undisturbed soils may be graded during construction of the proposed project. Although there are no known paleontological resources present at the proposed project site, there is a potential for unearthing fossil shells or bones during excavation of the project. Therefore, a mitigation measure is identified below, and when implemented, would reduce the potential for significant impacts to paleontological resources to below

| **14. CULTURAL RESOURCES. Would the proposal:** | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a level of significance.<br><br>**Mitigation Measure CULT-2:** Paleontological resources have not been identified on the project site; however, if fossilized shells, plants or bones are discovered during construction of the project, work shall be temporarily suspended in the immediate vicinity of the finds, and the potential significance of the resource shall be evaluated and recorded by a qualified specialist to the satisfaction of the Natural History Museum of Los Angeles County. | | | | |
| d) Disturb any human remains, including those interred outside of formal cemeteries? | | | x | |
| **Less Than Significant Impact.** There are no known human remains on the site. The project site is not part of a formal cemetery and is not known to have been used for disposal of historic or prehistoric human remains. Thus, human remains are not expected to be encountered during construction of the proposed project. In the unlikely event that human remains are encountered during project construction, State Health and Safety Code Section 7050.5 requires the project to halt until the County Coroner has made the necessary findings as to the origin and disposition of the remains pursuant to Public Resources Code Section 5097.98. Compliance with these regulations would ensure the proposed project would not result in significant impacts due to disturbing human remains. | | | | |

| **15. RECREATION. Would the proposal:** | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | | | | x |
| **No Impact.** The proposed project involves the replacement of an existing reservoir and the installation of a water treatment facility. As discussed, the proposed project would not directly or indirectly cause population growth. Therefore, the proposed project would not increase the use of any neighborhood or regional parks or facilities, and would have no associated impacts. | | | | |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? | | | | x |
| **No Impact.** The proposed project involves the replacement of an existing reservoir and does not include the development any recreational facilities. In addition, the project would not lead to the need for the construction or expansion of any recreation facilities, and would have no related adverse physical impacts to the environment. | | | | |

| 16. MANDATORY FINDINGS OF SIGNIFICANCE | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | | | x | |
| **Less than Significant Impact:** The proposed project involves the on-site replacement of the existing Wilson Reservoir and the installation of new water treatment facilities. As discussed in Section 7 of this document, the project site is almost entirely human influenced and does not support natural communities or habitats. Therefore, the project does not have the potential to degrade the quality of the environment, affect the habitat or population of fish or wildlife species, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal. Also, as discussed in Section 14, the proposed project would demolish a structure that is more than 50 years old. However, it has been determined that the reservoir is not included on any state or national registers or listings of historic structures or places. In addition, the reservoir is not included on any local inventory of historical places or structures located in San Gabriel. Due to its lack of listing on national, state, or local registers of historic places or structures, the existing reservoir would likely be deemed ineligible for future registration and demolition of the structure would be considered a less than significant impact. Therefore, the proposed project would not result in a mandatory findings of significance due to degradation of the quality of the environment or elimination of impart examples of major periods of California history or prehistory. | | | | |
| b) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? | | | | X |
| **No Impact:** The proposed reservoir, along with the balance of the City of South Pasadena's water system, is designed to serve the anticipated water need of the City. Thus, the project would aid the City in meeting its long-term water supply goals. In addition, the proposed project would have limited environmental impacts once construction is complete and would not hinder the achievement of long-term environmental goals. | | | | |
| c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects). | | | x | |
| **Less than Significant Impact:** The proposed project involves the on-site replacement of the existing Wilson Reservoir and the installation of new water treatment facilities. Development of the project site would not contribute to the loss of open space and would not adversely affect public services. In addition, upon completion operation of the proposed reservoir would not generate any additional air pollution or traffic beyond what currently exists. Therefore, the proposed project would not have any impacts that are individually limited but cumulatively considerable. | | | | |
| a) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | | | x | |
| **Less than Significant Impact:** The proposed project would not cause adverse effects on human beings from traffic safety, air travel hazards, or floodplain hazards. Potential human exposure to on-site hazardous materials (such as asbestos and lead based paint) may occur during demolition activities. However, appropriate mitigation measures have been included in the project to reduce these impacts to a level of insignificance. Also, even though the proposed project would place an approximately 1.3-million gallon reservoir tank in the vicinity of nearby residences, rupture or leakage of the tank caused by seismic shaking would be remote. The new reservoir facility would be required to be designed in accordance with modern earthquake safety standards, thus substantially reducing the potential for the reservoir to be damaged or to rupture in the event of an earthquake. Therefore, the proposed project would not cause any significant environmental effects that could cause substantial adverse effects on human beings. It should be | | | | |

| 16. MANDATORY FINDINGS OF SIGNIFICANCE | Potentially Significant Impact | Less than Significant with Mitigation | Less than Significant Impact | No Impact |
|---|---|---|---|---|
| noted that the proposed project would improve the safety of the facility by eliminating an aging and deteriorating reservoir and by implementing a safer disinfection system that what is currently utilized. | | | | |