Peck Reservoir Replacement Project

Initial Study
And Mitigated Negative Declaration

March 2019

Prepared by:

City of Manhattan Beach
Public Works Department
1400 Highland Avenue
Manhattan Beach, California 90266

Technical Assistance Provided by:

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Section 1
Project and Agency Information

1.1 PROJECT TITLE AND LEAD AGENCY

Project Title:	Peck Reservoir Replacement Project
Lead Agency Name:	City of Manhattan Beach, Public Works Department
Lead Agency Address:	1400 Highland Avenue Manhattan Beach, California 90266
Contact Person:	Mr. Gilbert Gamboa, Senior Civil Engineer
Contact Phone Number:	(310) 802-5356, ggamboa@citymb.info
Project Sponsor's Name:	Same as Lead Agency
Project Sponsor's Address:	Same as Lead Agency
Zoning:	City of Manhattan Beach, Public and Semi-Public (PS)

1.2 BACKGROUND AND OBJECTIVES

The City of Manhattan Beach, Public Works Department (the City) has prepared this Initial Study (IS) and Proposed Mitigated Negative Declaration (MND) to address the impacts of construction and operation of Peck Reservoir (proposed project). The IS serves to identify the site-specific environmental impacts, evaluate their potential significance, and determine the appropriate document needed to comply with the California Environmental Quality Act (CEQA).

1.2.1 Project Background

Originally constructed in 1957, the existing Peck Reservoir is a 7.5 million gallon (MG) cast-in-place concrete reservoir. Partially buried, the original reservoir had interior reinforced concrete columns, a cast-in-place reinforced concrete roof, and a 4-inch thick reinforced concrete floor. Ancillary facilities include an operations building, pump station, and several valve vaults within the fenced reservoir site. The existing pump station takes water from the Peck Reservoir and pumps into the potable water distribution system. A concrete masonry unit (CMU) block retaining wall with chain link fence is installed across the northern property line. A 10-foot-wide concrete access road surrounds the existing reservoir. The main entrance to the reservoir property is at the intersection of 18th Street and Peck Avenue; a second entrance is located on the east side of the facility.

To address deterioration of the facility, the original concrete roof was replaced in 2000 with an open web joist and standing seam metal roof system, and additional interior concrete structural supports were installed. Without a mechanical ventilation system to control condensation and temperature within the reservoir, the metal roof has corroded beyond repair. Corrosion has adversely impacted the disinfection residual of stored water and degraded metallic surfaces. Additionally, despite attempts to repair leaks, the reservoir continues to leak and cannot be filled beyond 15 feet of the 20 feet of available storage depth.

Based on the degraded structural condition of the facilities, the City has determined that the reservoir has exceeded its useful life and needs to be replaced.

1.2.2 Project Objective

The objective of the proposed project is to maintain potable water storage and delivery in the City of Manhattan Beach by removing the degraded Peck Reservoir, pumps, and ancillary facilities and replacing the existing structures with a new 8.0 MG reservoir, treatment system, pump station, office building, standby generator, and related ancillary facilities.

1.3 PROJECT LOCATION AND SETTING

1.3.1 Project Location

The proposed reservoir would be located in the City of Manhattan Beach, within the southwestern coastal portion of Los Angeles County (**Figure 1**). A beach community with approximately 2.1 miles of beachfront, the City is bounded on the north by El Segundo, on the east and south by Redondo Beach, on the south by Hermosa Beach, and on the west by the Pacific Ocean. The total land area of the City is 1,788 acres (3.88 square miles). The City is generally bound by Rosecrans Avenue on the north, Aviation Boulevard on the east, Artesia Boulevard on the south and the Pacific Ocean on the west. Sepulveda Boulevard (State Route 1) runs north-south through the middle of the City (**Figure 2**).

The project site is located at the southeast corner of North Peck Avenue and 19th Street (**Figure 3**). The reservoir property measures approximately 390 feet long by 300 feet wide. Coordinates for the approximate center of the project site are Latitude 33.891429 degrees N, Longitude -118.386761 degrees W. Photographs of the existing site are presented in **Figure 4** and **Figure 5**.

1.3.2 Surrounding Land Uses

The new reservoir would be located on the same site as the existing reservoir, which would be demolished. The site is adjacent to single family residential properties on three sides and a recreational sports field on the south (**Figure 3**). Polliwog Park and Manhattan Beach Middle School are adjacent to the reservoir site on the south. Access to the area is provided by Interstate 405, Interstate 105, and Sepulveda Boulevard. Other major roadways to the project site include Rosecrans Avenue, Marine Avenue, and Aviation Boulevard.

1.4 PROJECT DESCRIPTION

Proposed Replacement Reservoir

The proposed replacement reservoir would be an 8.0 MG, 270-feet long by 190-feet wide, single cell reservoir with 77 supporting concrete columns (7 rows of 11 columns each) (**Figure 6**). The structure will be sited in approximately the same footprint as the existing reservoir. The elevation of the roof of the replacement reservoir will be approximately 104.00 feet above mean sea level (amsl), this is approximately 1 foot higher than existing. Direct reservoir roof access will be provided via a pair of staircases located on the east and west walls of the reservoir. The east wall will be planted, on the residential side, with pigeon point (*Baccharis pilularis*). Cross-sectional design drawings of the proposed reservoir are provided in Appendix A.

Office Building

A new detached operations building (22 feet 8 inches by 42 feet 8 inches) located southwest of the reservoir will house office space, water quality laboratory, and an employee restroom. The office building would be constructed of CMUs with a metal-framed roof.

Southern California Edison (SCE) Transformer

Existing electrical transformers are mounted on power poles located immediately south of the operations building. The proposed project includes a new ground-level transformer (for easy access and maintenance) installed between the office building and the standby generator.

Standby Generator

A diesel standby generator will be installed on the south side of the reservoir, adjacent to the pump station. In the event of power loss at the pump station, the generator will start automatically and the 750 kilowatt (kW) unit will be capable of operating two pumps. It is anticipated that the generator will operate less than 200 hours a year. Generator features will include an environmental and sound attenuating enclosure, a diesel particulate filter, noise mufflers, and intake silencers. To attenuate noise, the generator enclosure will incorporate a combination of noise abatement panels, acoustic louvers, hollow metal doors, and potentially other noise reduction characteristics as needed to meet noise ordinance standards at adjacent residential properties.

Electrical Control and Pump Building

The Peck Booster Station was originally constructed in 1957 at the same time as Peck Reservoir. During periods of high demand, the pumps turn on to supplement the water entering the system from the Metropolitan Water District of Southern California (MWD) supply line and the wells. Currently, the pump station consists of four, three stage vertical turbine pumps. The electric motors are equipped with variable frequency drives (VFD). Each pump/motor location includes an automatic control valve. The pump station has a permanent standby diesel generator and automatic transfer switch. The City's water system is managed and monitored by a Rockwell Supervisory Control and Data Acquisition (SCADA) system.

The replacement pump station will contain four (three duty plus one standby) horizontal split case pumps. Each pump will require a 200 horsepower (hp) motor, however the maximum power draw is anticipated to be approximately 175 hp. At the low flow rate of 1,000 gallon per minute (gpm), the flow rate is achieved by operating one pump at the minimum recommended speed of 47 hertz (Hz). At the maximum flow rate of 5,500 gpm, the flow rate is achieved by operating three pumps at full speed.

The pump station will draw water from the reservoir through a new 24-inch diameter pipe connected to the drain sump in the reservoir. The pumps will discharge into a common 16-inch discharge header. The 16-inch discharge header will connect to an existing 16-inch pipeline that is connected to the water distribution system. Hosebibs will be provided in the interior of the pump station for washdown purposes.

Water Treatment

The water treatment facilities will consist of green sand filters, chlorine equipment, ammonia equipment, chemical building, backwash tank, and ancillary equipment. An estimated 5,500 gallons of sodium hypochlorite will be stored in a double contained tank, inside the chemical building. An estimated 500 gallons of ammonium sulfate will be stored in a double contained tank, inside the chemical building in a separate room from the chlorine storage. Treatment facilities will be located south of the reservoir, adjacent to the new electrical control and pump station building.

Well Pipeline Replacement

The existing 16" well water pipeline on Herron Ave that conveys water from the City's wells to the reservoir is currently unoperational due to a break in the pipeline. The broken portions of this pipeline will be replaced as part of the reservoir replacement project.

Chemical Dosing Line

Chemical (liquid sodium hypochlorite) must be dosed along the well water pipeline to achieve the desired treatment goals and avoid costly improvements at the reservoir site. Chemical will be stored on the reservoir site and pumped through a small diameter (less than 2") chemical dosing line within a containment pipe (likely 4" diameter PVC) running East on 18th St, North on Herrin Ave, and East on 19th St to the Aviation Blvd intersection where an injection vault will be located. The chemical dosing line and containment pipe will be constructed in the same trench as the 16" well water pipeline described above where feasible. The trench for the chemical dosing line will also contain a communication line for sensors and metering equipment.

Other Onsite Facilities

Additional onsite facilities will include:

- Perimeter service road, identical elevation as existing (99.0 feet amsl), asphalt paved
- Verdura® block retaining wall along the south property line, southern reservoir embankment, eastern reservoir embankments, and behind the sidewalk on the north side, and a ramp at southwest corner
- Site access gate (key/lock entry)
- Site lighting and motion sensor lighting
- Intrusion alarms on all access doors
- Intrusion alarms on all reservoir hatches
- Site cameras and video systems

1.4.1 Construction

The existing Peck Reservoir will be removed from service during the construction period for the replacement reservoir and related facilities. The construction period is estimated at 18 months, with the following approximate phasing:

- Site Preparation – 1 Month
- Demolition and Excavation – 4 Months
- Construction of New Facilities – 12 Months
- Startup and Commissioning – 1 Month

Demolition will include removal and disposal of the following existing structures:

- concrete reservoir
- reservoir drain pipe
- concrete paving surrounding the reservoir
- concrete drainage chute
- retaining wall, chain link fence and gates
- electrical building
- generator foundation
- pumps, piping, and associated mechanical/electrical equipment
- 16-inch MWD pipeline [Note: This will be replaced immediately to continue City Water Service.]
- Existing piping and vaults

During demolition, the following existing equipment will be protected in place:

- Watermain piping
- Stormdrain outlet

Demolition of the existing reservoir will generate an estimated 1,300 cubic yards of concrete debris. Since concrete debris can be repurposed and reused as crushed miscellaneous base, it is assumed that the construction contractor will remove the concrete debris from the project site and sell the material at a nearby gravel facility. Salvaged reinforcing bar (rebar) would also be recycled. The specific recycling/disposal facilities will be selected by the construction contractor, but suitable facilities are located in Long Beach. The construction contractor will prepare a construction debris Waste Management Plan for review by the City.

Once demolition is complete and debris removed, the site will be excavated. An estimated 31,000 cubic yards of soil will be excavated from the site, with an estimated 21,000 cubic yards filled and compacted on the reservoir site. The remaining 10,000 cubic yards would be stockpiled for reuse by the City or others. At this time, it is assumed that excess soils would be stockpiled immediately adjacent and south of the reservoir on North Peck Road (opposite the sports fields), on land owned by the City. Subsequent reuse of the soil could be for City park projects, school sport field repairs, or pickup by City residents for residential use. Soil stockpiles would be covered to limit wind and water erosion.

After excavation, the interior sump and outlet piping will be constructed, then a layer of gravel will be placed, and concrete work would commence (pouring of the concrete support columns and walls). At this time, the start date for construction is anticipated to be fall 2019.

1.5 PUBLIC AGENCY REVIEW AND/OR APPROVAL

The proposed project involves the following reviews and approvals:

- Use Permit from Planning Commission, City of Manhattan Beach
- City of Manhattan Beach, City Council – Approval of the project and execution of a contract for construction, review and approval of Construction Waste Management Plan, review and approval of Construction Traffic Management Plan
- City of Manhattan Beach - Design Review and Approval of the project, demolition permit, right-of-way permit, and traffic control permit
- California Department of Transportation, District 7 - Permits for transportation of heavy construction equipment and materials that require the use of oversized-transport vehicles on State highways
- South Coast Air Quality Management District (SCAQMD) - Compliance with Rule 403 (dust control) during construction activities; Compliance with Rule 1470 (stationary diesel-fueled internal combustion engines, Permit to Construct, Permit to Operate)
- State Water Resources Control Board (SWRCB) – Construction General Permit for storm water runoff (Order 2009-0009-DWQ)
- SWRCB / Los Angeles Regional Water Quality Control Board (RWQCB) – Division of Drinking Water (DDW) Permit
- State of California Division of Occupational Safety and Health Administration – Review of Trench Shoring System

1.6 PUBLIC MEETINGS

On March 13, 2018, the City of Manhattan Beach and project engineers (Stantec) facilitated a public meeting to present the project to the residents of the City of Manhattan Beach. At this meeting, attendees asked questions which were answered by staff from the City and Stantec. A summary of the questions, responses provided in March 2018, and updated information (as of December 2018) is presented below.

Community Question	City/Consultant Response (March 2018)	Updated Information (December 2018)
What is the existing reservoir size?	7.5 Million Gallons	--
How much water currently used? How much will be used in new design?	It varies based on time of year. The new reservoir will be 8.0 Million Gallons and is designed to meet demand and fire flow requirements.	--
What is the approach to managing sloshing?	There is 5 feet of freeboard to accommodate anticipated slosh	--

Community Question	City/Consultant Response (March 2018)	Updated Information (December 2018)
	volume. The reservoir is conservatively designed to handle worst-case seismic events and not sustain damage from sloshing.	
If there is a major leak in the new structure, how will it be addressed?	Monitoring equipment to detect leaks is incorporated in the design. There are sumps with pumps to collect and convey leakage away.	The water will be conveyed to the local stormwater system and will eventually end up in Pollywog Park.
Will solar panels be installed on the reservoir?	None incorporated in design, but the structure can support future solar panel installation.	--
What chemicals will be used on-site? Any different from existing?	Chorine, which is currently used.	Sodium hypochlorite and aqueous ammonia will be stored on-site and used for chloramination disinfection.
Where is groundwater pumped from?	Redondo Beach on Manhattan Beach Boulevard	--
What is the current groundwater usage?	Approximately 5% of total water supply currently with plans to increase to 20-30% depending on leasing/buying rights	--
Will plants be maintained?	Yes	On-site vegetation will be removed and new drought-tolerant native vegetation will be installed. Please see Figure 10.
Is new reservoir taller?	Yes, 6” to 12” taller	--
What is behind retaining wall?	Native soils	--
Will the retaining wall have plants?	Yes, it is a plantable retaining wall.	Pigeon point (aka coyote brush) (*Baccharis pilularis*) will be planted in portions of the retaining wall.
Where gravel is shown, is that final?	Not final, just a placeholder. These areas may be paved.	At this time, it is assumed that gravel will be used.
What are the tanks?	Greensand filter system	--
Is a screen wall being built?	This is an option, but design has not been finalized. The building may block view of the treatment system.	No screen wall is proposed.
How much excavation will take place?	Approximately 8 feet below the bottom of the existing reservoir.	--
How long will construction take?	Approximately 18 to 24 months	--
During construction, where will water be coming from?	Water sources will not change.	Manhattan Beach will continue to receive water from MWD which can be transmitted into the distribution system. System storage will be provided by the existing Block 35 tank and connections with neighboring cities.
How much of Peck Avenue will be excavated?	One sewer connection	--

Community Question	City/Consultant Response (March 2018)	Updated Information (December 2018)
Will residents be able to access their properties during construction?	Yes	--
Does local water come from Peck Reservoir or somewhere else?	Blend from the reservoirs and elevated tank	--
Where is the Block 35 reservoir?	The northeast corner of Rowell Avenue and 6th Street	--
How much of 19th St. will be impacted? Where will trucks be routed?	Portions of 19th Street will be impacted.	The haul route is included as Figure 11.
Will sound dampening be steel and fabric?	Possibly, storage building could also serve this purpose.	The project specifications will require the contractor to comply with the City noise ordinance.
Where will all soil go?	Most of the soil will be used on-site as backfill. Temporary storage will be provided during construction.	Temporary storage will be provided adjacent to the reservoir on North Peck Road (opposite the sports fields), on land owned by the City.
Will parking on Peck Avenue still be allowed?	Yes	--
Parking was already bad when work was being done on one house in the project area. I anticipate that this project will be much worse.	This project is much larger and will have better coordination. We have identified a location for the contractor's staff to park and carpool to the site.	The Contractor's staff will be required to park at the public lots on Aviation Boulevard and carpool to the site. This is intended to limit the number of vehicles parking in the project area.
Will there be a trench from 18th St to Herrin?	Open section of trench will be approximately 100 feet. This portion of project will take weeks, not months and traffic control will be provided.	To clarify the amount of open trench open at a time will be approximately 100 feet at a time and will be closed up at the end of each work day.
Will there be any major work on Peck Avenue?	Major work will be for Edison (power) and sewer. Trench work may take a few weeks.	--
Duration of demolition and impaction equipment?	Additional information needed to determine. Some portions could possibly be sawed. Roof will be removed and hauled off.	There will be approximately 6 to 8 weeks of demolition during the first stages of the work.
Will there be impacts to foundations? If we see damage what do we do?	Contact City Risk Manager. Contractor will also have insurance to cover things like this.	--
Will recycled water use be incorporated into this project?	This is a potable water project and we do not anticipate utilizing recycled water for either construction or operation of the facilities.	--
Is the water in reservoir non-potable?	No, water is currently potable and will remain so.	--

Community Question	City/Consultant Response (March 2018)	Updated Information (December 2018)
Will trucks come in on 19th St?	No. Trucks cannot come from the south. City will be reviewing hauling routes with School District.	The haul routes are included as Figure 11, Figure 12, and Figure 13.
How far is offsite parking?	The City has identified several potential locations including at the performing arts center. The City will encourage carpooling of the Contractor's staff.	The Contractor's off-site parking will be at the public lots on Aviation Boulevard.
How many people will be there?	It will vary depending on the trade of work at the time. It may be as many as18 for concrete, and as few as 4 for electrical.	--
Will presentation be on website?	If possible City will post.	--
What will be done at 3:00 in the afternoon?	In reference to schools, safe routes to schools will be provided. There are specific requirements for this.	The haul route is included as Figure 11.
Is hauling around 3PM allowed?	Yes	--
Will there be enough water supply?	Yes	--
Will there be a rubber seal inside? Epoxy? Has this type of tank been used in the past?	No but there is a finish, no epoxy, and yes this type of tank has been used.	--
Does current tank leak?	Yes	--
How will we know if new tank leaking?	There is an underdrain system and monitoring system. Contractor will have to meet specific requirements.	--
Are there incentives for finishing early or penalties for finishing late?	Liquidated damages can be applied when contract duration is exceeded per State Contractor Code.	--
How sure is the June 2020 completion date?	There is some cushion. If there is an incredible amount of rain, then the Contractor may need to be accommodated. The estimate of 18 months is reasonable for demolition and construction.	--
When are 30 day comments going to take place? When will next interaction with public be?	Once we have the environmental documents in place and ready for review, we will have another similar meeting like this in a few months, then take to City Council.	The CEQA review period will be 30 days from release of the Initial Study for public and agency review.
How can one get additional information?	City will reach out to the area and put an advertisement in Beach Reporter. Once project starts, City wants to have a website and hotline. Gil with City will try to make himself available.	A phone number and website address will be posted at the construction site.
Why was notice given yesterday?	There was an issue with the vendor.	--
Are there alternative nights/weekends for meetings?	City will look into this.	Upcoming meetings on the environmental documents will be scheduled.

Community Question	City/Consultant Response (March 2018)	Updated Information (December 2018)
Pets will not like the noise, is there any way to reduce noise and dust control? Specifically, reduce amount of jackhammering?	There are ways to mitigate sound and dust, but hard to promise anything. Impacts to residents will be minimized.	Noise and air quality mitigation measures have been identified and will be implemented during project construction. Please see Sections 2.3.3 and 2.2.12.
How long will demolition take?	3-4 months	--

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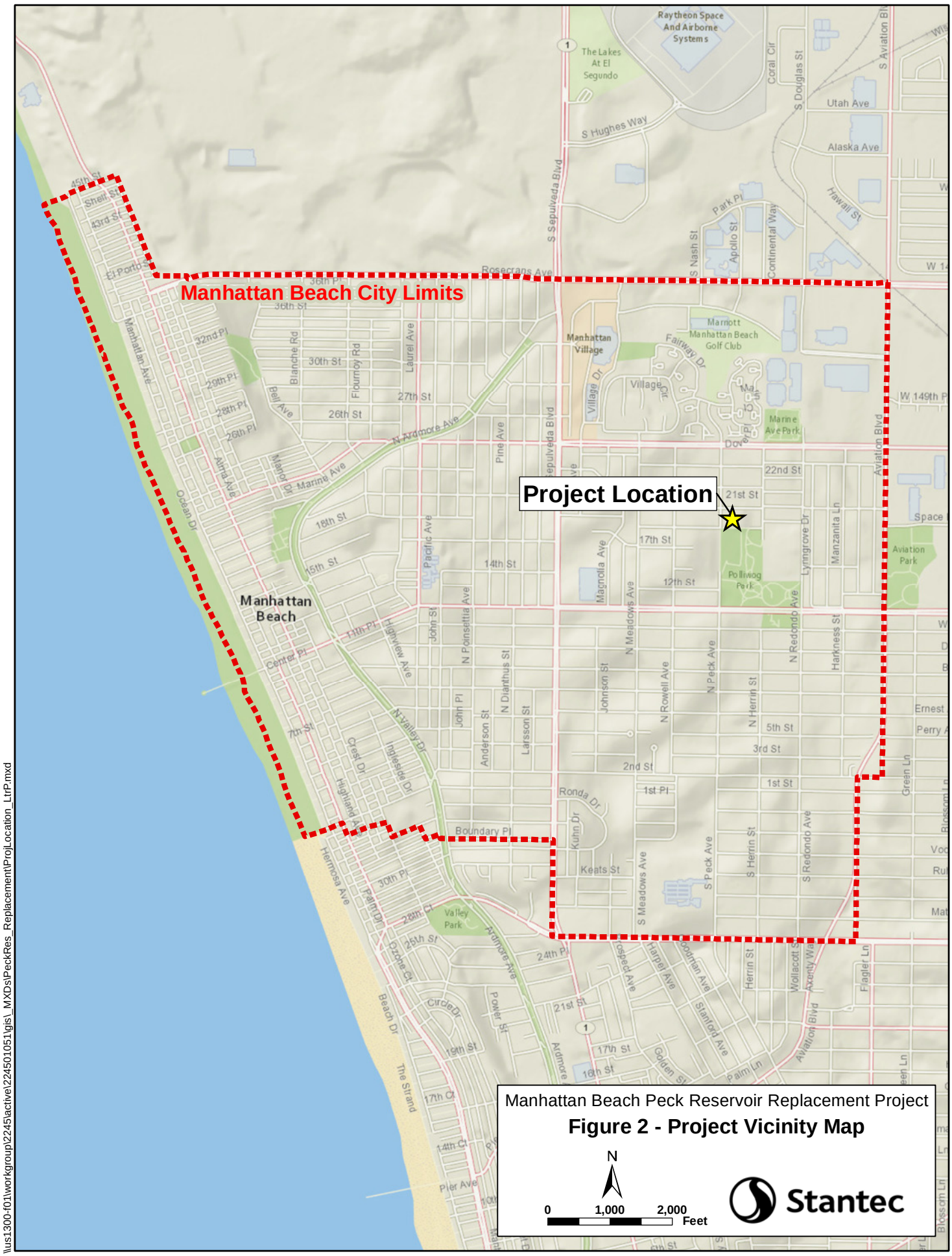

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Manhattan Beach Peck Reservoir Replacement Project

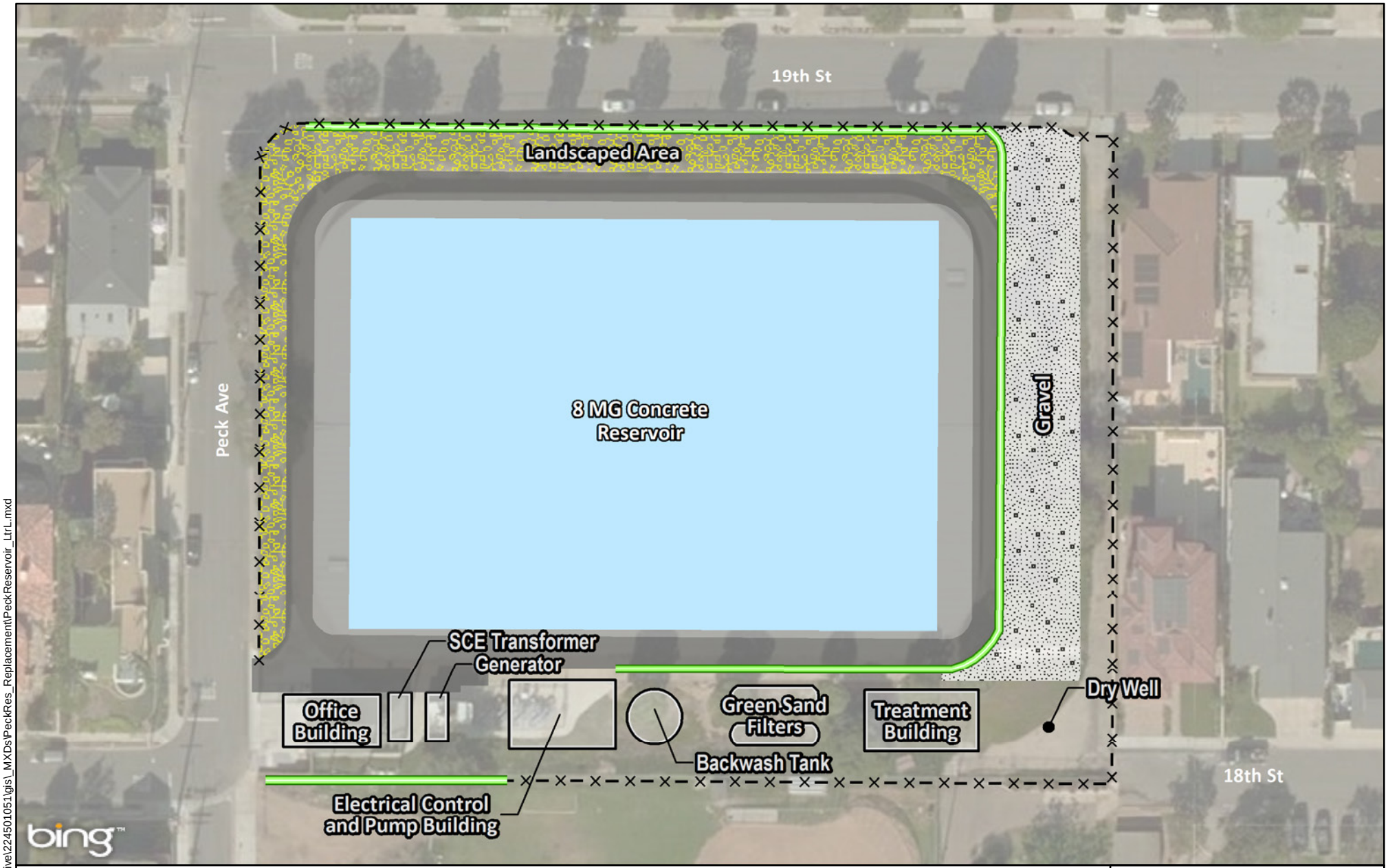
Figure 3 – Project Location Map

N

0 200 Feet

Stantec

Figures 4 and 5
Photographs of the Existing Peck Reservoir



Fence

Plantable MSE Retaining Wall

New Reservoir

N

0 25 50 100 Feet

TITLE: **Site Layout**

PROJECT: Manhattan Beach Peck Reservoir Replacement Project

REFERENCE(S): NAD 1983 StatePlane California V FIPS 0405 Feet

Stantec

FIGURE: 6

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This map has been designed to print size 8.5'' by 11''. Imagery Source: Bing Maps/ESRI Note: All features have been schematized and do not represent the actual location of the water system assets.

Section 2
Environmental Analysis

2.1 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.

☐ Aesthetics	☐ Geology and Soils	☒ Noise
☐ Agricultural Resources	☒ Hazards and Hazardous Materials	☐ Population and Housing
☐ Air Quality	☐ Hydrology and Water Quality	☐ Public Services
☒ Biological Resources	☐ Land Use and Planning	☐ Recreation
☒ Cultural Resources	☐ Mineral Resources	☒ Transportation and Traffic
	☐ Greenhouse Gas Emissions	☒ Utilities and Service Systems

2.2 AGENCY DETERMINATION

On the basis of this initial evaluation:

☐ I find that the project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the 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 applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact 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 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 project, nothing further is required.

Signature **Date**

Printed Name

Title

2.3 ENVIRONMENTAL CHECKLIST

2.3.1 Aesthetics

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Discussion:

a) **No Impact.** The coastline of Manhattan Beach provides numerous scenic vistas for residents and visitors. The Peck Reservoir project site sits inland, on a neutral point in the landscape, at an elevation of 97.5 feet amsl. Replacement of the existing reservoir with a new facility at a similar elevation would have no impact on scenic vistas in the City of Manhattan Beach.

b) **No Impact.** Since no designated or nominated State scenic highways are located in the vicinity of the project site (Caltrans, 2011), the project would not affect scenic views from any scenic highways. The closest eligible State scenic highway is Route 1 (Pacific Coast Highway), north of the project site. In addition, the project would not add new structures taller than existing facilities and would therefore not obstruct views from roadways. Because there are no rock outcroppings or historic buildings on the project site, none would be impacted. Trees removed during project construction would be replaced as described in Section 2.3.4. Therefore, the proposed project would have no impact on scenic resources.

c) **Less Than Significant Impact**. The project site is located in a residential area and is currently occupied by a water storage reservoir, pump station and ancillary facilities. During construction of the project, grading, materials transport and other construction activities would temporarily degrade the visual character and quality of the project site. Visual impacts during construction would be reduced in part by sound walls, curtains or blankets that would serve a dual function as visual screening (see Section 2.3.12 Mitigation Measure NOI-1). Overall, the impact of construction of the proposed project on the visual quality of the site would be temporary, and less than significant.

From the surrounding neighborhood (19th Street), existing views of the reservoir site are of a CMU retaining wall and chain-link fencing, perimeter trees, a partially vegetated slope,

and the top few feet of the concrete reservoir (**Figure 7**). Existing pumps and the existing generator are partially visible from North Peck Avenue.

The roof of the replacement reservoir will be approximated 104.00 feet amsl. The new reservoir roof will be exposed and the top elevation of the roof will be approximately 1-foot higher than existing. Reservoir visibility to the public would be the same as existing conditions. The project design includes installation of decorative Verdura® Block walls which will be partially vegetated (on the south, east, and north sides of the site), and planting of drought tolerant, native southern California landscaping. New metal fences would be installed on all four sides of the reservoir. The pump station would be enclosed in a building instead of the existing open facility. The tanks for the green sand filters may also be partially visible. Located on the south side of the reservoir, visibility of the pump station, treatment facilities, office building, and generator would be limited from any surrounding residences. Renderings of the proposed reservoir site are provided in **Figures 8** and **9**. Once installation of the reservoir is completed, and the landscaping has been installed, the overall appearance of the facility would be improved over existing conditions. Therefore, the impact of the project on the visual character of the surrounding area would be beneficial and less than significant.

d) **Less Than Significant Impact**. No project-related construction activities would require additional lighting because activities would be scheduled to take place during normal daylight hours. Once constructed, the new facilities would have low-intensity security lighting that would be shielded away from adjacent nearby residences. Wall mounted lights on the pump station and office building would operate by motion sensors. The new facilities would not have large expanses of glass or reflective materials that would create a new source of glare. Therefore, project-related impacts on light and glare would be less than significant.

Figure 7
View of Existing Peck Reservoir from 19th Street

Figure 8
Graphical Renderings of the New Peck Reservoir – Views from the West

Figure 9
Graphical Renderings of the New Peck Reservoir – Views from the East

2.3.2 Agricultural and Forest Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

Discussion:

a), b), c), d), e) **No Impact**. The proposed project site is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (CDC, 2017a). The project site is not associated with a Williamson Act contract (CDC, 2013). The project site is zoned for Public and Semi-Public (PS) land use, and not for agricultural use. Surrounding zoning is for single family residential, PS and open space. Therefore, the project would not impact Prime Farmland, Unique Farmland, Farmland of Statewide Importance, existing zoning for agricultural use, or a Williamson Act contract. In addition, the project does not contain any timberland zoned for Timberland Production as defined by Government Code section 51104(g). Moreover, the project actions would be limited to the existing reservoir site, which has no agriculture, forest or timber resources. Therefore, the project would not result in conversion of Farmland, timberland or forest land to other uses. The proposed project would have no impacts on agricultural or forest resources.

2.3.3 Air Quality

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
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)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Discussion:

The City of Manhattan Beach 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 climate is warm and temperate. The mild climate is occasionally disrupted by periods of hot weather, winter storm, and Santa Ana winds. The average annual temperature ranges from a high of 75° Fahrenheit (F) to a low annual average of 56°F. Average rainfall is approximately 15 inches, occurring primarily in the winter months (Current Results, 2017).

The Los Angeles County portion of the SCAB is regulated by the SCAQMD and is state-designated as a non-attainment area for ozone (8-hour), particulate matter 10 microns or less in diameter (PM_{10}), and particulate matter 2.5 microns or less in diameter ($PM_{2.5}$) (California Air Resources Board (CARB), 2017). Based on the federal standards, the SCAB is a non-attainment area for ozone (8-hour), attainment for PM_{10}, and nonattainment for the 24-hour $PM_{2.5}$ standard. The SCAB is state and federal-designated as in attainment for nitrogen dioxide (NO_2), sulfur dioxide (SO_2) and carbon monoxide (CO).

SCAQMD has established thresholds of significance for air quality impacts for construction and operation (**Table 1**). SCAQMD also publishes localized significance thresholds (LSTs) that are a function of a project's location, size, and sensitive receptor distance. Based on the project location within Southwest Coastal Los Angeles County (Source Receptor Area Zone 3), a project size of approximately 2 acres, and 25 meters to the nearest receptor, LSTs are listed in **Table 1**.

Table 1
SCAQMD Air Quality Significance Thresholds

Mass Daily Thresholds			
Pollutant	**Construction**	**Operation**	**Construction LST**
NOx	100 lbs/day	55 lbs/day	131
VOC	75 lbs/day	55 lbs/day	--
PM_{10}	150 lbs/day	150 lbs/day	8
$PM_{2.5}$	55 lbs/day	55 lbs/day	5
SOx	150 lbs/day	150 lbs/day	--
CO	550 lbs/day	550 lbs/day	967

NOx = Nitrogen oxide, VOC = Volatile Organic Compounds, PM_{10} = Particulate matter 10 microns or less in diameter, $PM_{2.5}$ = Particulate matter 2.5 microns or less in diameter, SOx = Sulfur oxides, CO = Carbon monoxide
LST = localized significance thresholds for Source Receptor Area 3 (Southwest Coastal LA County), project site of 2 acres and nearest receptor 25 meters (SCAQMD, 2009)
Source: SCAQMD CEQA Handbook (SCAQMD, 1993; revised 2006)

a) **No Impact**. The applicable air quality plan for the project area is the 2016 Air Quality Management Plan (AQMP), approved by the SCAQMD on March 3, 2017 (SCAQMD, 2017). The AQMP is designed to satisfy the planning requirements of both the federal and California Clean Air Acts. The AQMP outlines strategies and measures to achieve federal and state standards for healthful air quality for all areas under SCAQMD's jurisdiction. The 2016 AQMP demonstrates attainment of the 1-hr and 8-hr ozone National Ambient Air Quality Standards (NAAQS) as well as the latest 24-hr and annual $PM_{2.5}$ standards.

A project is deemed inconsistent with the applicable air quality plan if it would result in population and/or employment growth that exceeds growth estimated in the applicable air quality plan. Since the project does not include construction of homes or businesses, it would not directly impact population growth. Since the proposed project consists of the replacement of an existing potable water storage reservoir with a new reservoir of similar size, the project would not expand the existing potable water system or add connections to new users. Therefore, the proposed project would not significantly impact population growth or conflict with or obstruct the implementation of the AQMP. The project would have no impact on the relevant air quality plan.

b), c) **Less than Significant Impact.** Construction activities as well as operation of the proposed project would generate air pollutants.

Project Operation

Operation of the proposed reservoir would not cause an increase in air pollutant emissions. Currently, there are four booster pumps onsite. The new facility would also include four pumps (three duty and one standby) of similar size. Electric demand for the new facility is not specifically known; however, since newer, more energy efficient equipment would be installed, it is anticipated that demand would be reduced. Other emissions related to project

operation include vehicle emissions from maintenance staff visiting the site; these emissions would be the same as existing conditions. Overall, operational emissions would be less than existing conditions, a beneficial impact on air quality.

Project Construction

The proposed project would temporarily generate air pollutants from construction activities. Construction of the proposed project would include demolition of the existing reservoir; site preparation; excavation and grading; construction of the proposed reservoir, treatment facilities, pump station, and office; landscaping; fence installation; and paving of the driveway. Dump trucks would also be used to haul soil, initially to a staging area immediately south of the reservoir site. These construction activities would generate air pollutants from equipment exhaust, earth disturbance, and off-gassing from asphalt. **Table 2** summarizes estimated emissions based on estimated maximum day emissions during construction. The emissions were estimated based on the worst-case day occurring during earthwork activities. Additional particulate matter emissions would result from earthwork as summarized in **Table 3**.

Table 2
Estimated Peak Day Construction Air Pollutant Emissions

Emissions Source (on-road vehicles)	Vehicle Type	No.	Est Max miles per day	Emission Factor (lbs/mi) [1]						Est Peak Day Emissions (lbs/day)					
				VOC	CO	NOx	SOx	PM10	PM2.5	VOC	CO	NOx	SOx	PM10	PM2.5
Light Duty Truck	PV	2	20	0.0005	0.0047	0.0004	0.0000	0.0001	0.0001	0.02	0.19	0.02	0.00	0.00	0.00
Water Truck	HHDT	1	5	0.0012	0.0057	0.0139	0.0000	0.0007	0.0006	0.01	0.03	0.07	0.00	0.00	0.00
Dump Truck	HHDT	10	40	0.0012	0.0057	0.0139	0.0000	0.0007	0.0006	0.48	2.26	5.56	0.02	0.28	0.22
Workers Personal Vehicles	PV	8	100	0.0005	0.0047	0.0004	0.0000	0.0001	0.0001	0.44	3.77	0.35	0.01	0.08	0.05
Emissions Source (construction equipment)		**No.**	**Est Max hrs of use per day**	**Emissions Factor (lbs/hr) [2]**						**Est Peak Day Emissions (lbs/day)**					
				VOC	CO	NOx	SOx	PM10	PM2.5[3]	VOC	CO	NOx	SOx	PM10	PM 2.5
Backhoe (50 hp)		1	8	0.0448	0.2796	0.2257	0.0004	0.0103	0.0092	0.36	2.24	1.81	0.00	0.08	0.07
Excavator (250)		1	8	0.0878	0.3298	0.5187	0.0018	0.0176	0.0157	0.70	2.64	4.15	0.01	0.14	0.13
Front End Loader (500 hp)		1	8	0.1369	0.5126	0.9018	0.0023	0.0326	0.0290	1.10	4.10	7.21	0.02	0.26	0.23
Fugitive Dust from grading, material handling and truck travel for soil hauling (see Table 3)														4.22	3.57
Total										**3.1**	**15.2**	**19.2**	**0.1**	**5.1**	**4.3**

PV: passenger vehicles, HHDT: heavy-heavy-duty trucks, DT: delivery trucks
[1] SCAQMD. 2007a. EMFAC2007 v. 2.3 Emission Factors for On-Road PV & DT. Scenario Year 2019
[2] SCAQMD. 2007b. SCAB Fleet Average Emission Factors (Diesel). Scenario year 2019
[3] SCAQMD. 2006. Final –Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance

Table 3
Estimated Fugitive Dust Emissions

Emissions Type	Emissions Factor	Units	Source of Emission Factor	Graded Area (acres per day)	PM10 Emissions (lbs per day)	PM2.5 Emissions (lbs per day)
Grading	26.4	lbs/acre	SCAQMD, 1993	0.15	3.96	3.52
				Material Handled (tons per day)		
Material Handling	0.000449	lbs/ton	AP-42 13.2.4	430	0.193	
Material Handling	0.000068	lbs/ton	AP-42 13.2.4	430		0.029
				Miles per day		
Travel on paved roadways - haul truck	0.000627	lbs/VMT	AP-42 13.2.1	100	0.063	
Travel on paved roadways - haul truck	0.000154	lbs/VMT	AP-42 13.2.1	100		0.015
Totals					**4.22**	**3.57**

AP-42 Source: EPA, 1995

Table 4 compares the peak-day onsite construction emissions (before mitigation) to the relevant LSTs. Project-related emissions would not exceed the screening-level LSTs. However, with implementation of Mitigation Measure AQ-1 (site watering) to further reduce less than significant impacts, particulate matter emitted during the earthwork phase of project construction from grading and excavation would be reduced an estimated 61 percent (SCAQMD, 2007c). The project would have a less than significant impact on air quality.

Table 4
Localized Significance Threshold Analysis Before Mitigation

	CO	NOx	PM_{10}	$PM_{2.5}$
Unmitigated Construction Emissions	15.8	21.3	5.2	4.4
SCAQMD Localized Significance Threshold	967	131	8	5
Significant?	No	No	No	No

d) **Less than Significant Impact.** 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.

As described above, the proposed project would result in temporary dust emissions during construction below established SCAQMD thresholds. However, mitigation to reduce dust emissions during construction will be implemented. Project-related impacts on air quality, including impacts to sensitive receptors, would be less than significant. Operation of the proposed facilities would result in similar air pollutant emissions as under existing conditions.

In addition to the priority pollutants discussed in b) and c) above, toxic air emissions are of potential concern to sensitive receptors. The proposed project would generate emissions from construction equipment during construction activities, including emissions from diesel trucks and heavy construction equipment. CARB classifies diesel particulate emissions as a toxic air contaminant (TAC). Significant impacts associated with exposure to diesel particulate emissions are not expected because construction would occur 5 days per week for approximately 18 months. Quantitative cancer risk analyses are based on exposure of 70 years for residential exposures and 46 years for occupational exposures; exposure to project-related emissions will be for a much shorter period of time (i.e., during the construction phase). The maximum particulate emissions for diesel engines are estimated at approximately 1 pound per day during the peak construction phase. Based on the short exposure period and small amount of emissions, toxic air contaminant emissions would be less than significant during the construction phase. As discussed above, project operation would not result in substantial air pollutant emissions over existing conditions. Due to the limited duration of project construction, project related air quality impacts on sensitive receptors would be less than significant.

e) **Less than Significant Impact.** 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 would not result in the generation of odors. Therefore, the proposed project would not create objectionable odors affecting a substantial number of people, and project-related impacts related to odors would be less than significant.

Mitigation Measures

Incorporation of Mitigation Measures AQ-1, AQ-2, and AQ-3 would further reduce less than significant air quality impacts from project construction.

AQ-1 Site Watering. Disturbed areas of the project site shall be watered a minimum of three times per day during the demolition, excavation, grading and site preparation phases of project construction.

AQ-2 Cover Soil Stockpiles. Geotextile or plastic covers shall be installed on soils stockpiled during and after construction. Alternatively, non-toxic soil binders shall be applied to prevent off site migration of the stored soils by wind or water.

AQ-3 Street Sweeping. Street sweeping will be conducted at least twice per week along the haul route during excavation and earthwork for the reservoir.

2.3.4 Biological Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
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 wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
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?	☐	☐	☐	☒

Discussion:

a) **No Impact**. The project site lies within a suburbanized area of the City of Manhattan Beach. The site is currently occupied by the existing Peck Reservoir and related structures. Vegetation on the project site consists of ornamental landscaping (mature ivy and ice plant ground cover) and 24 mature trees (**Table 5**). The CDFW Natural Diversity Database (CNDDB) lists 96 sensitive plants and animals, and two terrestrial communities, for the general vicinity of the project site (the Venice USGS Quadrangle), including 46 bird species, 1 crustacean, 1 fish, 13 insects, 4 mammals, 1 mollusk, 6 reptiles, and 24 plants (CDFW, 2017a). The United States Fish and Wildlife Service (USFWS) lists four federally-sensitive birds (California Least Tern, Coastal California Gnatcatcher, Least Bell's Vireo, and Western Snowy Plover), and one insect (El Segundo Blue Butterfly) (USFWS, 2017a). However, since the proposed reservoir site is located in a residential community and landscaped with ornamental and non-native tree species, habitat to support the CNDDB-listed and USFWS-listed species is not present on the project site, or

immediately adjacent to the site. Therefore, construction and operation of the proposed project would not result in impacts to any species identified as candidate, sensitive, or special status.

b) and c) **No Impact**. The project site is devoid of natural hydrology, hydrophytic vegetation, and hydric soils. 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.). A review of the National Wetlands Inventory indicates that there are no on-site wetlands at the reservoir site (USFWS, 2017b). The closest wetland area is the freshwater pond in Polliwog Park. This pond will infrequently receive freshwater discharges from the reservoir, as under existing conditions. Therefore, the proposed project would have no adverse impact on riparian vegetation or wetlands.

d) **Less Than Significant Impact with Mitigation**. The site lies within a developed area and is surrounded by residential properties and sports fields. 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.

Migratory bird species are protected by international treaty under the Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs or projects, except as allowed by implementing regulations (50 CFR 21). Sections 3503, 3503.5 and 3800 of the *California Fish and Game Code* prohibit the take, possession, or destruction of birds, their nests or eggs. USFWS lists 33 species of migratory birds that could potentially occur in the project vicinity. Nesting of birds subject to the MTBA is not specifically known for the project site. However, since 24 trees, a shrub and a hedge would be removed during project construction, impacts to MTBA species are possible. Implementation of Mitigation Measure **BIO-1** would reduce impacts on bird species subject to the MBTA to less than significant levels.

e) **Less than Significant Impact**. The City of Manhattan Beach Municipal Code section 7.32.030 states that the Public Works Director shall have final jurisdiction and control of the kind and type of planting, location, trimming, maintenance and removal of trees and shurbs on City property. The City General Plan also includes several goals regarding the preservation and enhancement of landscaping in the City (City of Manhattan Beach, 2003).

An arborist survey was conducted for the project by Ernest Area, City of Manhattan Beach Urban Forester (Memorandum dated September 12, 2018, Appendix B). Twenty-four trees (non-native), one shrub and a hedge were identified on the Peck Reservoir site (**Table 5**). The Brazilian peppertrees and the brushboxes have low leaf production and thinning branches. Based on the arborist's assessment, these trees have limited lifespan left. Construction for the new reservoir will require removal of the on-site groundcover, shrubs and trees. Replacement vegetation will be with native southern California plants with low water requirements. A figure depicting the anticipated plantings is included as **Figure 10**.

With replacement landscaping as proposed, the project would have a less than significant impact on local policies and ordinances protecting biological resources.

f) **No Impact**. The project site does not fall within the boundaries of any Habitat Conservation Plan or Natural Community Conservation Plan (CDFW, 2017b), so there would be no impact on conservation planning.

Table 5
Existing Onsite Trees and Shrubs

Section	Common Name	Genus species	Number	Comments
A N. Peck Avenue	Brazilian Peppertree	*Schinus terebinthefolius*	3	Approximately 3,075 sq. ft. of landscaping
	Brushbox	*Tristania conferta*	1	
	Privet Shrub	*Ligustrum*	1	
	Privet Hedge (approx. 200 linear feet)	*Ligustrum*	1	
B 19th Street	Brazilian Peppertree	*Schinus terebinthefolius*	1	Approximately 10,290 sq. ft. of landscaping
	Brushbox	*Tristania conferta*	7	
C East Side of Reservoir	Brazilian Peppertree	*Schinus terebinthefolius*	1	Approximately 9,400 sq. ft. of landscaping
	Brushbox	*Tristania conferta*	5	
D South Side of Reservoir	Allepo Pine	*Pinus halepensis*	1	Approximately 7,980 sq. ft. of landscaping
	Brushbox	*Tristania conferta*	5	

Source: E. Area, Urban Forester, City of Manhattan Beach, Memorandum dated September 12, 2018 (Appendix A)

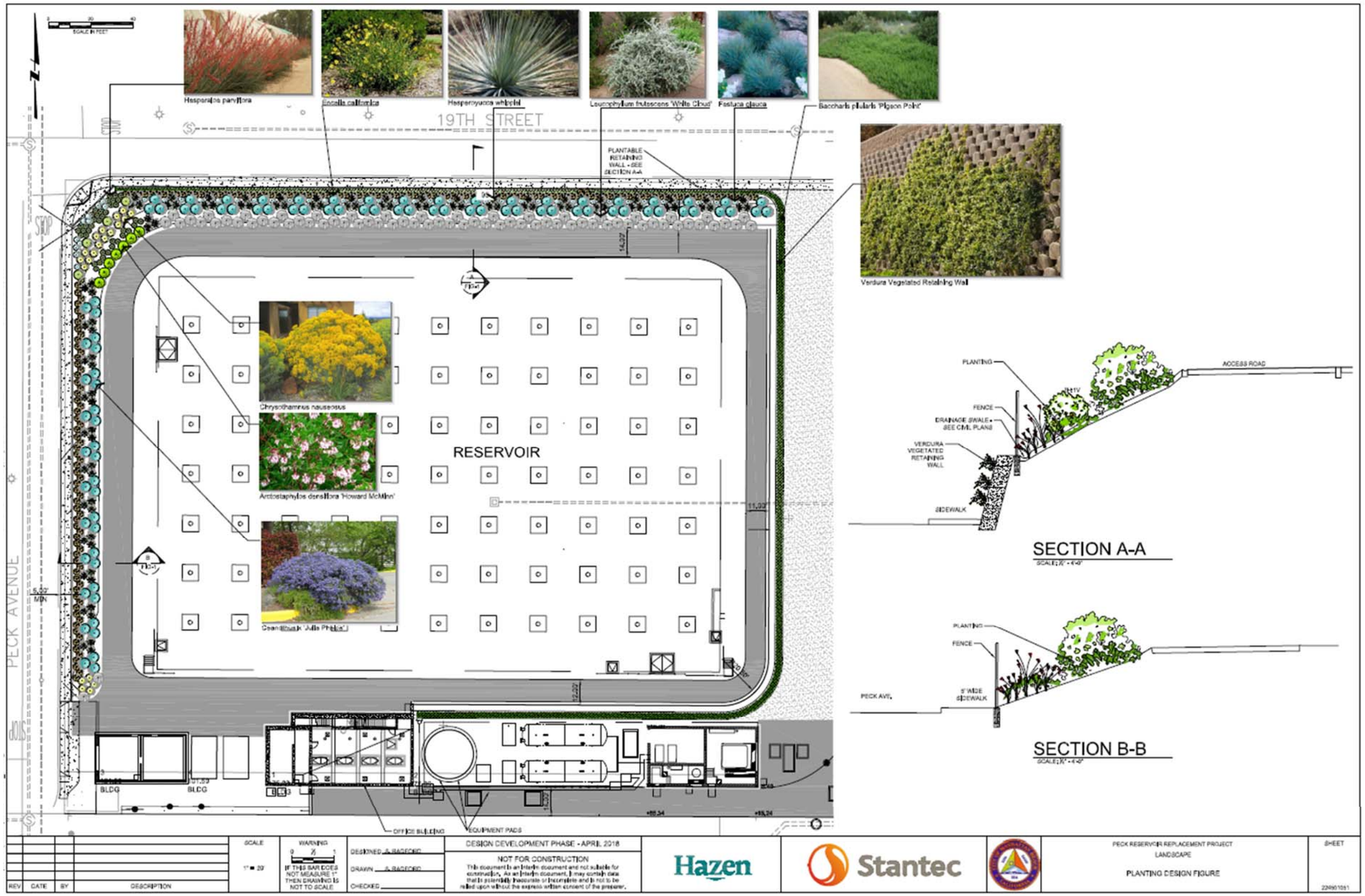
Mitigation Measure

With incorporation of Mitigation Measure **BIO-1**, impacts on biological resources would be reduced to a less than significant level.

BIO-1 Nesting Birds. For all construction-related activities that take place within the nesting season (February 1 through August 31), a preconstruction nesting-bird survey shall be conducted no more than 14 days prior to project initiation within the project area and a 500-foot buffer. If active nests are found for species subject to the MBTA, a no-disturbance buffer zone shall be established according to the biologist's assessment of the species' sensitivity to disturbance, generally 300 feet for smaller birds and 500 feet for raptors. Within this buffer zone, no construction shall take place until August 31, until the biologist

determines that the nest is no longer active, or unless an alternative method of avoiding nest disturbance is prepared by the biologist and approved by the relevant resource agencies.

Figure 10
Landscaping Plan



2.3.5 Cultural Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Discussion:

a) **No Impact**. The Peck Reservoir, constructed in 1957, is related to the continued development of adequate water supply for the City of Manhattan Beach. The concrete reservoir is of a standard design common during the early twentieth century throughout southern California. The reservoir and appurtenances have undergone various upgrades since its original installation. Therefore, there is no evidence that the structure is eligible for listing as a potential historic resource using the criteria described in 36 Code of Federal Regulations (CFR) 60.4 (eligibility criteria for listing in the National Register of Historic Places (NRHP)) and California CCR Title 14, Chapter 11.5, §4850 (eligibility criteria for listing in the California Register of Historical Resources (CRHR)).

Historical resources are not known for the project site. The closest known resource is the historic "Red House" in Polliwog Park. Built in 1907 and now home to the Manhattan Beach Historical Society, this structure received landmark status in 2010. The proposed project includes infrequent discharge of water to Polliwog Pond. Continuation of this existing practice would have no impact on the Red House or any other designated culturally significant landmark. Therefore, the project would have no impact to known historical resources.

b) **Less than Significant Impact with Mitigation Incorporated**. The project site is in an urbanized area that has been previously graded, excavated, and developed as a water reservoir. Intact archaeological resources are not anticipated since any surficial resources that may have been present at one time have been disturbed. However, excavation for the new reservoir may exceed the previous excavation for the existing reservoir, and therefore there is limited potential for project construction to unearth or otherwise adversely impact unidentified archaeological resources. With implementation of Mitigation Measure CR-1, impacts on unknown archaeological resources would be less than significant.

c) **Less than Significant Impact with Mitigation Incorporated**. As reported in the Geotechnical Report (Fugro, 2018), soils at the project site are artificial fill materials consisting of medium dense sand and silty sand likely derived from the native Old Sand Dune deposits and placed during the construction of the existing reservoir. The Old Sand Dune deposits underlying the artificial fill materials generally consist of medium dense to very dense, fine- to medium-grained, poorly graded sand and silty sand, extending to the ultimate depth explored of about 82 feet below the ground surface (elevation 20 feet amsl). Fossil localities are not known for the project site and intact paleontological resources are not anticipated since any resources that may have been present at one time have been disturbed. However, excavation for the new reservoir may exceed the previous excavation for the existing reservoir, and therefore there is limited potential for project construction to unearth or otherwise adversely impact unidentified paleontological resources. Native soils will be encountered at 16 feet below ground level. Berms and other fill on the site will be made up of artificial fill. With implementation of Mitigation Measure CR-2, impacts on unknown paleontological resources would be less than significant.

d) **Less than Significant Impact with Mitigation Incorporated.** No known human burials have been identified on the project site or in the vicinity of the project 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, Mitigation Measure CR-3 shall be implemented, and impacts from project site development on human remains would be less than significant.

Mitigation Measures

Impacts to cultural resources are not anticipated from the proposed project. However, the following mitigation measures shall be implemented to protect resources inadvertently discovered during project construction.

CR-1 Unexpected Cultural Discoveries. If during excavation or earth moving activities within the project site the construction contractor identifies potential historic or archaeological resources, all excavation and/or grading within 10 feet of the discovery area shall be halted immediately and work redirected until a qualified archaeologist has evaluated the nature and significance of the find.

The Archaeologist shall determine whether the resource is a "unique archaeological resource" pursuant to Section 21083.2(g) of the *California Public Resources Code* (PRC) or a "historical resource" pursuant to Section 15064.5(a) of the State CEQA Guidelines (14 *California CCR*). If the archaeological resource is determined to be a "unique archaeological resource" or a "historical resource", the Archaeologist shall formulate a mitigation plan in consultation with the Lead Agency that satisfies the requirements of the above-listed Sections and that reduces the adverse effects of the project to a less than significant level. If the Archaeologist determines that the archaeological resource is not a "unique archaeological resource" or "historical resource", s/he need only record the site and submit the recordation form to the South Central Coastal Information Center (SCCIC).

If archaeological resources are found to be significant, the Archaeologist shall determine appropriate actions, in cooperation with the Lead Agency and Contractor, for exploration and/or salvage. These actions, as well as final mitigation and disposition of the resources, shall be subject to the approval of the Lead Agency.

The Archaeologist shall then prepare a final technical report, following the guidelines of the California Office of Historic Preservation, which includes the monitoring results and any evaluation of resources. Copies of the report shall be submitted to the Lead Agency and to the California Historical Resources Information System (CHRIS) SCCIC. If prehistoric resources are identified, then a Native American monitor shall be invited to observe ground-disturbing activities.

CR-2 **Unexpected Paleontological Discoveries**. If any paleontological materials are encountered during ground disturbing activities, all excavation and/or grading within 10 feet of the discovery area shall be halted immediately and work redirected until a paleontologist has evaluated the nature and significance of the find.

CR-3 **Human Remains**. In the unexpected event that human remains are encountered during excavation activities, all work shall halt and the County Coroner shall be notified (California Public Resources Code §5097.98). The Coroner shall determine whether the remains are of forensic interest. If the Coroner, with the aid of the project Archaeologist, determines that the remains are prehistoric, s/he will contact the Native American Heritage Commission (NAHC). The NAHC will be responsible for designating the Most Likely Descendant (MLD), who will be responsible for the ultimate disposition of the remains, as required by Section 7050.5 of the California Health and Safety Code. The MLD shall make his/her recommendation within 48 hours of being granted access to the site. The recommendation of the MLD shall be followed if feasible, and may include scientific removal and non-destructive analysis. If the landowner rejects the recommendations of the MLD, the landowner shall rebury the remains with appropriate dignity on the property in a location that will not be subject to further subsurface disturbance (California Public Resources Code §5097.98).

2.3.6 Geology and Soils

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a 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 a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Discussion:

a)-i) **Less than Significant Impact**. The project site is located near several active or potentially active faults (**Table 6**). Surface rupture on local faults is also possible outside of the currently mapped active faults. The site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone as defined by the California Geologic Survey (CGS). No known active or potentially active faults cross or trend towards the project site; therefore, the probability of surface fault rupture within the project area appears low (Fugro, 2018). The seismic design procedures outlined in Section 1613 of the California Building Code (CBC) and designed to meet the requirements of ASCE 7 (American Society of Civil Engineers Minimum Design Loads for Buildings and Other Structures) were calculated for the project site. Design of the replacement reservoir is based on these values.

Table 6
Faults in the Project Vicinity

Fault	Distance (miles)	Maximum Earthquake Magnitude (Mw)
Palos Verdes	3.6	7.7
Newport Inglewood	4.8	7.5
Puente Hills	9.7	6.9
Santa Monica	10.6	7.4
Malibu Coast	12.4	6.9
Anacapa-Dume	13.0	7.2
Hollywood	13.3	6.6
Elysian Park (Upper)	14.9	6.6
Raymond	18.4	6.7

Source: Fugro, 2018 (from Petersen et al., 2008)

The facility will be designed per relevant building codes and damage to project facilities would be repaired as necessary. Therefore, impacts related to seismic events would be less than significant.

a)-ii) **Less Than Significant Impact**. Given the seismic activity in the region, the proposed facility would likely be subject to strong seismic ground shaking during its design life. However, the risks of earthquake damage will be minimized through proper engineering, design, and construction. It is required that the reservoir be built according to the Uniform Building Code and other applicable codes, and the facility would be subject to building inspection during and after construction. With conformance to these required standards, the impact of seismic ground shaking on the proposed reservoir would be less than significant.

a)-iii) **Less Than Significant Impact**. Liquefaction refers to loose, saturated sand or gravel deposits that lose their load supporting capability when subjected to intense shaking. The groundwater table was encountered over 70 feet below ground surface and Older Dune Sand deposits below a depth of approximately 25 to 35 feet are sufficiently dense to preclude liquefaction triggering (Fugro, 2018). Review of the State of California Seismic Hazard Zones Map for the Venice Beach Quadrangle (CDC, 1998) indicates that the liquefaction susceptibility of older alluvial, eolian, and marine deposits composed of dense to very dense sands and silty sands is low. The project area is generally geologically stable and suitable for development. Impacts related to ground failure or liquefaction would be less than significant.

a)-iv) **No Impact**. The State of California Seismic Hazard Zones Map for the Venice Quadrangle (CDC, 1998) indicates that the project site is not in an area susceptible to earthquake-induced landslides; therefore, there would be no impact.

b) **Less Than Significant Impact**. The proposed project would involve soil in-filling of space around the new reservoir and minor re-grading of the site. Finished grades would closely approximate the existing 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 SCAQMD (Rule 403). Operation of the proposed project would not result in substantial soil erosion or loss of topsoil. Therefore, project-related impacts on soil erosion would be less than significant.

c) **No Impact**. As discussed above in items a)-iii) and a)-iv), the site is not known for unstable soils related to liquefaction and/or landslides. Based on geotechnical investigation, seismic settlements at the site are unlikely to exceed about 0.5 inches (Fugro, 2018). Therefore, there would be no impact.

d) **No Impact**. The soils onsite have been historically sufficient to support the existing 7.5 MG reservoir, and no effects from expansive soils have been reported. Testing of onsite soils indicates little to no potential for hydroconsolidation of soils (Fugro, 2018), and these same soils would be used to backfill around the concrete reservoir. Since replacement of the reservoir would not create a substantial increase in risk to life or property due to expansive soils, there would be no impact.

e) **No Impact**. No septic tanks or alternative wastewater disposal systems would be required for the project. Therefore, no impacts would occur.

2.3.7 Greenhouse Gas Emissions

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion:

a) and b) **Less than Significant**. Greenhouse gases (GHGs) (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 GHGs include carbon dioxide (CO_2), methane, and nitrous oxide. Collectively GHGs are measured as carbon dioxide equivalents (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 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 (EO) regarding greenhouse gases. GHG statues and EOs include AB 32, Senate Bill (SB) 1368, 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 Manhattan Beach does not have plans, policies, regulations, significance thresholds or laws addressing climate change at this time. The SCAQMD has adopted an interim CEQA 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 CO2e 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.

The only GHG emissions attributable to the project would be those resulting from construction equipment, maintenance equipment/vehicles, and the electricity used at the

facility, primarily for powering the proposed booster pumps. Maintenance activities would be the same as existing conditions. And, since newer, more energy efficient pumps would be installed, it is anticipated that power demand would be reduced with implementation of the proposed project.

Tables 7 and **8** summarize anticipated GHG emissions from construction of the project based on worst-case assumptions for vehicles, equipment and personnel. Per SCAQMD guidance, predicted greenhouse gas emissions from construction can be amortized over 30 years, and added to the operations emissions to compare to the SCAQMD threshold of 10,000 MT CO_2e per year (SCAQMD, 2008). Since emissions from the proposed project would be substantially below this threshold, the impact on emissions of GHGs, and thus climate change, would be less than significant.

Table 7
Estimated Greenhouse Gas Emissions

Emissions Source (on-road vehicles and ATVs)	Vehicle Type	No.	Est Avg miles per yr	Emission Factor (lbs/mi) [1]									Estimated Project Emissions (lbs/yr)								
				VOC	CO	NOx	SOx	PM_{10}	$PM_{2.5}$	CO2	CH_4	N_2O	VOC	CO	NOx	SOx	PM_{10}	$PM_{2.5}$	CO2	CH_4	N_2O
Pickup Truck	PV	2	5200	0.0005	0.0047	0.0004	0.0000	0.0001	0.0001	1.104961	0.000047	0.000042	5.68	49.07	4.55	0.11	0.99	0.65	11491.59	0.49	0.43
Dump Truck	HHDT	10	2000	0.0012	0.0057	0.0139	0.0000	0.0007	0.0006	4.206378	0.000055	0.001320	24.05	113.09	277.82	0.81	14.04	11.22	84127.57	1.10	26.39
Haul Truck	HHDT	10	2800	0.0012	0.0057	0.0139	0.0000	0.0007	0.0006	4.206378	0.000055	0.001320	33.67	158.32	388.95	1.13	19.66	15.70	117778.59	1.54	36.95
Delivery Truck	DT	4	800	0.001306	0.008572	0.009002	0.000027	0.000374	0.000293	2.850602	0.000056	0.000855	4.18	27.43	28.81	0.09	1.20	0.94	9121.93	0.18	2.74
Water Truck	DT	1	1300	0.001306	0.008572	0.009002	0.000027	0.000374	0.000293	2.850602	0.000056	0.000855	1.70	11.14	11.70	0.04	0.49	0.38	3705.78	0.07	1.11
Workers Personal Vehicles [4]	PV	10	13000	0.0005	0.0047	0.0004	0.0000	0.0001	0.0001	1.104961	0.000047	0.000042	71.1	613.4	56.8	1.4	12.4	8.1	143644.9	6.17	5.40

Emissions Source (construction equipment)	No.	No. Days in use per yr	Est Avg hrs of use per day	Emissions Factor (lbs/hr) [2]									Estimated Project Emissions (lbs/yr)								
				VOC	CO	NOx	SOx	PM_{10}	$PM_{2.5}$ [3]	CO2	CH_4	N_2O	VOC	CO	NOx	SOx	PM_{10}	$PM_{2.5}$	CO2	CH_4	N_2O
Backhoe	1	90	8	0.0448	0.2796	0.2257	0.0004	0.0103	0.0092	30.3471	0.0040	0.0214	32.24	201.29	162.49	0.28	7.42	6.60	21849.91	2.91	15.44
Excavator	1	90	6	0.0878	0.3298	0.5187	0.0018	0.0176	0.0157	158.6827	0.0079	0.0493	47.41	178.08	280.08	0.96	9.52	8.47	85688.67	4.28	26.61
Front end Loader	1	90	6	0.1369	0.5126	0.9018	0.0023	0.0326	0.0290	237.0084	0.0124	0.0857	73.93	276.83	486.98	1.26	17.58	15.65	127984.53	6.67	46.26
Concrete Mixer	10	5	6	0.0074	0.0386	0.0461	0.0001	0.0018	0.0016	6.3202	0.0007	0.0044	2.21	11.58	13.82	0.03	0.54	0.48	1896.07	0.20	1.31
Roller Compactor	1	10	6	0.0600	0.2489	0.2103	0.0003	0.0143	0.0127	26.0	0.0054	0.019978	3.60	14.93	12.62	0.02	0.86	0.76	1558.99	0.33	1.20
Crane	1	120	6	0.0589	0.3465	0.3579	0.0006	0.0272	0.0243	50.1	0.0053	0.033997	42.43	249.50	257.66	0.42	19.62	17.46	36106.52	3.83	24.48
Aerial Lift	1	30	4	0.0288	0.1715	0.2002	0.0004	0.0104	0.0093	34.7	0.0026	0.019021	3.45	20.58	24.03	0.05	1.25	1.11	4166.60	0.31	2.28
Air Compressor	1	90	4	0.0526	0.3100	0.3577	0.0007	0.0213	0.0189	63.6	0.0047	0.033984	18.94	111.60	128.78	0.26	7.66	6.82	22898.63	1.71	12.23
Motor Grader	1	20	4	0.0796	0.5112	0.4929	0.0009	0.0353	0.0314	75.0	0.0072	0.046821	6.37	40.90	39.43	0.07	2.82	2.51	5997.19	0.57	3.75
Welder	1	30	4	0.0344	0.1843	0.1832	0.0003	0.0117	0.0104	25.6	0.0031	0.017408	4.12	22.11	21.99	0.04	1.40	1.24	3072.32	0.37	2.09
Generator	2	160	6	0.0431	0.2755	0.3483	0.0007	0.0169	0.0150	61.0	0.0039	0.033089	82.75	528.97	668.74	1.34	32.43	28.86	117105.96	7.47	63.53
Asphalt Paving Equipment	2	10	6	0.0806	0.4109	0.5172	0.0008	0.0344	0.0306	68.9	0.0073	0.049135	9.67	49.31	62.07	0.10	4.13	3.67	8272.77	0.87	5.90
Total													**467**	**2678**	**2927**	**8**	**154**	**131**	**806469**	**39**	**278**

PV: passenger vehicles, HHDT: heavy-heavy-duty trucks, DT: delivery trucks

[1] SCAQMD. 2007a. EMFAC2007 v. 2.3 Emission Factors for On-Road PV & DT. Scenario Year 2019

[2] SCAQMD. 2007b. SCAB Fleet Average Emission Factors (Diesel). Scenario year 2019

[3] SCAQMD. 2006. Final –Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance

Table 8
Estimated Annual GHG Emissions from Reservoir Construction

	Units	CO_2	CH_4	N_2O
Clearing, grading, excavation, tank installation, retaining wall improvements, piping, site paving and landscaping	lbs per year	806,469	39	278
Global Warming Potential		1	25	298
CO_2-Equivalent Construction-related Emissions	lbs per year	806,469	975	82,844
Total GHG Emissions	metric tons per year	404		
Amortized GHG Emissions	metric tons per year	13		

Global Warming Potential conversion to CO2e per USEPA, 2010

2.3.8 Hazards and Hazardous Materials

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
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?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Discussion:

a) and b) **Less Than Significant with Mitigation Incorporated**. The proposed project involves the demolition of the existing Peck Reservoir and associated structures, and the installation of a similar size replacement reservoir, pump station, chloramination facility, green sand filtration unit, and office building.

Operations

Operation of the replacement reservoir and associated facilities would not pose a risk of accidental explosion, release of hazardous substances, or other potential health hazards. Since sodium hypochlorite and aqueous ammonia for chloramination would be stored within

double-walled tanks with secondary containment and in a building, chemical storage would not pose a risk of accidental explosion, release of hazardous substances, or other potential health hazards. Storage for chlorine and ammonia will be located in separate rooms to avoid cross contamination and unwanted mixing of the chemicals. Chlorine solution will be pumped through steel containment piping to a point on Herrin Avenue to allow for breakpoint chlorination of ammonia and oxidation of manganese. Storage will be double contained. Operation of the proposed project would have a less than significant impact related to hazardous materials.

Demolition/Construction

ACM. Asbestos-containing materials (ACM) are not anticipated for the Peck Reservoir facilities. However, an asbestos survey will be conducted for the reservoir prior to demolition. If asbestos-containing materials are present at the site, the City would notify the SCAQMD, and an asbestos demolition notification form will be provided to Building and Safety personnel prior to the issuance of a demolition permit.

LBP. Similarly, lead-based paint (LBP) is not anticipated for the site. The presence of LBP does not necessarily mean that the health of the occupants or construction workers would be endangered. If the LBP remains in good condition and is not disturbed, exposures to lead would be 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. Sampling will be conducted prior to disposal of painted surfaces.

Other Hazardous Materials: No visible mold or fungi were identified in the Peck Reservoir buildings. No other materials or chemicals of concern requiring special handling procedures are identified.

Mitigation Measures HM-1 and HM-2 require proper handling and disposal of ACM and LBP. With the incorporation of HM-1 and HM-2, the risks of release of hazardous substances to the environment would be less than significant. At the time of construction, the contractor will be required to conduct supplemental investigations for hazardous materials. The results will be shared with the City and the design engineer.

c) **Less Than Significant with Mitigation Incorporated**. The project site is within ¼-mile of the Manhattan Beach Middle School (0.1 miles SE), Manhattan Beach Preschool (0.1 miles SW), and the Meadows Avenue Elementary School (0.2 miles SW). Thus, there is the potential to expose school children to the emission of hazardous materials such as ACM and LBP during the demolition phase of the project, in the event these materials are present. However, with implementation of Mitigation Measures HM-1 and HM-2, the potential for emissions of hazardous materials would be reduced and the impact would be less than significant.

d) **Less Than Significant Impact**. The Department of Toxic Substances Control (DTSC) maintains a Hazardous Waste and Substances Site List - Site Cleanup (Cortese List). This list tracks and monitors hazardous waste sites and deed restriction orders. The following data sources provide information on Cortese List sites:

- List of Hazardous Waste and Substances sites from DTSC EnviroStor database
- List of Leaking Underground Storage Tank (LUST) Sites by County and Fiscal Year from Water Board GeoTracker database
- List of solid waste disposal sites identified by Water Board with waste constituents above hazardous waste levels outside the waste management unit
- List of "active" Cease and Desist Orders (CDO) and Clean Up and Abatement Orders (CAO) from SWRCB
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC

Based on a 1,000 foot radius search surrounding the Peck Reservoir site, there are no active cleanup sites (Geotracker, SWRCB, 2017). Additionally, the project site has been the location of the Peck Reservoir since the 1950s. No known releases of any hazardous materials have occurred onsite. Therefore, the proposed project would have no impact related to hazardous material sites compiled pursuant to Government Code Section 65962.5.

e) and f) **No Impact**. Los Angeles International Airport (LAX) is located 4 miles north of Manhattan Beach, and Hawthorne Municipal Airport is approximately 7 miles northeast of the City. No airports or private airstrips are located within 2 miles of the project site. Additionally, the project does not propose new structures of a height sufficient to pose a safety risk to aircraft. Therefore, there would be no project-related impacts on airport safety.

g) **Less than Significant Impact**. Manhattan Beach Boulevard, Sepulveda Boulevard and Marine Avenue are designated evacuation routes in the City of Manhattan Beach. The project would require approximately 13 construction vehicles including materials delivery trucks and approximately 10 construction workers commuting to the project site. No road or lane closures, including closures on designated evacuation routes, would be required for project construction. The minor addition in traffic to the project area during the construction period would have a less than significant impact on emergency access and evacuation plans.

h) **No Impact**. The project site is located in a residentially developed area with limited landscaping including several trees. The project area is not in an area subject to wildland fires and habitable structures are not proposed for the project site. Therefore, the project would have no impact on wildland fires.

Mitigation Measures

With incorporation of Mitigation Measure HM-1 and HM-2, impacts from construction and operation of the proposed project related to hazardous materials would be reduced to a less than significant level.

HM-1 Asbestos Containing Materials. If ACM are identified during the survey conducted prior to demolition, the following measures shall be implemented:

- ACM shall be removed and disposed prior to demolition using a licensed abatement contractor in accordance with Federal, State, and local regulations and ordinances.

- Bid documents and specifications shall be prepared for the demolition/construction project to ensure lawful removal techniques are used.

- A third party shall 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:

- Materials containing asbestos shall not be cut, sanded, or drilled.

- Prior to initiating demolition activities that would disturb the ACM, the area shall be thoroughly wet to prevent possible release into the air.

- ACM dust shall be removed with a high-efficiency particulate air (HEPA) vacuum or wet wiped with disposable towels.

HM-2 Lead Based Paint. If areas of LBP are identified prior to demolition, the following measures shall be implemented:

- 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 or peeling LBP shall be removed by a licensed lead abatement contractor and waste shall be disposed as required by Federal, State, and local regulations. LBP may be disposed as construction debris as long as it remains on the substrate.

- The demolition contractor shall implement precautions to comply with OSHA 29 CFR 1926.62, Lead in Construction.

  The following precautions shall be taken prior to any demolition activities that would disturb LBP.

  - Materials containing LBP shall not be cut, sanded or drilled.

  - Prior to initiating demolition activities that would disturb LBP, the area shall be wet to prevent possible release into the air.

  - Dust shall be removed with a HEPA vacuum or wet wiped with disposable towels.

2.3.9 Hydrology and Water Quality

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of 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)?	☐	☐	☐	☒
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☐	☒
g) Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Discussion:

a) **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 RWQCBs of the SWRCB are required

to develop water quality objectives that ensure their region meets the requirements of Section 303 of the Clean Water Act.

Manhattan Beach is within the jurisdiction of the Los Angeles RWQCB. The Los Angeles RWQCB adopted water quality objectives in its Basin Plan (Los Angeles RWQCB, 1994). The 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.

Under Section 402 of the Clean Water Act, known as the National Pollutant Discharge Elimination System (NPDES), municipalities are required to obtain permits for the water pollution generated by stormwater in their jurisdiction. Los Angeles County and 85 incorporated Cities therein, including the City of Manhattan Beach, obtained a Municipal Separate Storm Sewer Systems (MS4; Permit # 01-182) from the Los Angeles RWQCB. Under the MS4, each permitted municipality is required to implement the Stormwater Quality Management Program (SQMP).

In addition, as required by the MS4 permit, the City of Manhattan Beach has adopted a Standard Urban Stormwater Mitigation Plan (SUSMP) ordinance to ensure new developments comply with the 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 BMPs that will be implemented. The proposed reservoir replacement is not one of the project categories identified in the Los Angeles County MS4 Permit as requiring a SUSMP.

During operation, infrequent discharges to Polliwog Pond in the adjacent Polliwog Park would occur, as under existing conditions. The proposed project would also generate typical, urban, nonpoint-source pollutants that could be collected by storm water runoff, such as trash, vehicle fluids, etc. Given the type and size of the project, the storm water pollutants generated onsite would be minimal and would be the same as existing conditions. Additionally, under the project, stormwater would be collected and percolated into the local aquifer using an onsite drywell. Therefore, the proposed project would not violate any water quality standards or waste discharge requirements, and impacts on water quality would be less than significant.

b) **No 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 since most of the flows would be directed into the existing stormwater drainage system. Since the project is a replacement of an existing reservoir, the extent of onsite impervious surfaces would remain essentially the same.

Water to fill the new reservoir would be from existing Wells 11A and 15, as under existing conditions. 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 proposed project would have no impact on groundwater supply or recharge.

c) 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 with implementation of the proposed project. The proposed project would not focus or concentrate any stormwater flows and would not direct stormwater over exposed soils. Under the project, stormwater would be collected and percolated using an onsite stormwater drywell. The existing stormwater collection system discharges into the City of Manhattan Beach stormwater system, whereas the proposed drywell will provide pre-treatment and percolate collected stormwater into the local aquifer. The drywell incorporates a large volume chamber where silt and heavy particles settle out of the flow stream and floatables are screened. The drywell is also equipped with an absorbent, hydrophobic sponge that collects petrochemicals, improving overall quality of groundwater recharge water.

During construction, the contractor would comply with the following requirements:

1. Sediments generated on the project site shall be retained using adequate Treatment Control or Structural BMPs.
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.
3. Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained at the project site.
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.

Compliance with these requirements would ensure that construction of the proposed project would not result in substantial erosion or siltation. The impact would be less than significant.

d) and e) **Less Than Significant Impact**. The site is located within a suburban portion of Manhattan Beach, and contains no streams, rivers, discernable drainages, or notable storm drain improvements. Storm drainage on the project site 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.). 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. Under the project, stormwater would be collected and percolated into the local aquifer using an onsite stormwater drywell. Drainage impacts would therefore be less than significant.

f) **No Impact**. See answers to (a) to (c), above.

g) **No Impact**. The project is the replacement of a concrete water reservoir with another of similar capacity and function. The project site is not located within a 100-year flood hazard area (FEMA, 2008), and no housing is proposed. There are no special flood hazard areas in the vicinity of the project. Therefore, the proposed project would have no impact on housing within a flood hazard area.

h) **No Impact**. See response to (g), above.

i) **Less Than Significant Impact**. The project area is not located within designated 100 or 500 year flood zones (FEMA, 2008). 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 8 MG of water. The possibility of flooding from rupture of the proposed reservoir would be reduced by adherence to standard seismic upgrade construction practices and the City's regular inspection and maintenance program. 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. The impact of the proposed project related to flooding would be less than significant.

j) **No Impact** The project area is not near a large water body or unstable hillside and thus would not result in or expose people to inundation by a seiche, tsunami or mudflow.

2.3.10 Land Use and Planning

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
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?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Discussion:

a) **No Impact.** The proposed project would not disrupt or divide the physical arrangement of an established community. The parcel has been in continuous use as a water storage reservoir since the 1950s. Therefore, there would be no impact on established communities.

b) **No Impact**. This project will require a Use Permit per City of Mannhattan Beach City Municipal Code 10.84. Mitigation measures identified in this document will become conditions for approval of the Use Permit. The proposed project would not conflict with environmental plans or policies. 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:

"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."

The project site is zoned PS – Public and Semi-Public. Surrounding properties are zoned PS, OS (Open Space), and RS (Residential, Single-Family) (City of Manhattan Beach, 2017). The proposed project is a legally-established use which seeks only to replace the existing reservoir and appurtenant facilities with safer and upgraded facilities without encroaching onto or encompassing additional parcels. All work would be limited to an upgrade of the existing reservoir use. This use is permitted by the City of Manhattan Beach, and the proposed project would be subject to the City's design review process. Therefore, the proposed project would have no impact on land use.

c) **No Impact**. The project site is not located within any critical habitat and/or habitat conservation plan area. Therefore, construction and operation of the proposed reservoir would have no impact on habitat or natural community conservation planning.

2.3.11 Mineral Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Discussion:

a) and b) **No Impact.** The project site is not located in the vicinity of an active mine (CDC, 2017b) or in a mineral recovery area or zone. Mineral resources required for the project would be limited to the raw materials necessary to make limited volumes of concrete. Recycling of the existing reservoir concrete is anticipated, and would conserve mineral resources. Therefore, the proposed project would not result in loss of locally important mineral resources, and would have no impact on mineral resources.

2.3.12 Noise

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
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?	☐	☒	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion:

a) **Less Than Significant with Mitigation Incorporated**. Noise standards are set forth in the Manhattan Beach Municipal Code. **Table 9** summarizes the exterior and interior noise standards for residential parcels.

However, construction activities are exempted from the provisions of this ordinance. Similarly, public works activities, City maintenance projects, city street projects and public utilities operating under the authority of the Public Utilities Commission are exempted from the provisions of the noise ordinance.

The proposed project would generate noise from temporary construction activities and from the proposed booster pumps. Infrequent noise would also be generated from the emergency backup generator, which would be exercised approximately once per week.

Table 9
Manhattan Beach Noise Standards

Standard which may not be exceeded for a cumulative period of more than:	Land Use	A-Weighted Noise Level (dB)	
	Residential Standard	10:00 P.M. to 7:00 A.M.	7:00 A.M. to 10:00 P.M.
30 minutes in any hour (L50)	Exterior	45	50
15 minutes in any hour (L25)	Exterior	50	55
5 minutes in any hour (L8)	Exterior	55	60
	Interior	40	45
1 minute in any hour (L1)	Exterior	60	65
	Interior	45	50
Any period of time (L0)	Exterior	70	65
	Interior	50	55

Source: Manhattan Beach, CA Code of Ordinances 5.48.160 and 5.48.160

Construction Noise - Onsite Activities

Construction noise represents a short-term impact on ambient noise levels. Noise from the proposed project would be generated by construction equipment including trucks, graders, bulldozers, concrete crushers, and concrete mixers. The peak noise level for most of the equipment that would be used during 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 would range from 58 to 83 dBA.

The nearest sensitive land uses are the existing single-family homes immediately adjacent the project site, and the schools located approximately 0.1 mile from the site. Potential construction operations could occur as close as 10 to 20 feet from the nearest residential homes. Based on this distance, the worst-case unmitigated peak (Lmax) construction noise levels could be on the order of 97 dBA for very short periods. However, as the construction moves towards the center of the project site, the noise levels would reduce at the boundary of the adjacent residences (in the range of 57 to 82 dBA). Without mitigation, exterior noise levels at the nearby schools (Manhattan Beach Middle School and Preschool) could intermittently reach 48 to 73 dBA, although noise experienced inside the buildings would be lower. Demolition of the existing reservoir (approximately 2 months) would generate the greatest noise during the construction period. Noise during the concrete pouring phase of the project would be generated primarily from concrete trucks. Additionally, once excavated, construction activity would be occurring below grade and would be less noticeable at neighboring properties.

The City of Manhattan Beach limits construction activities to between the hours of 7:30 a.m. and 6:00 p.m. on Monday through Friday and between 9:00 a.m. and 6:00 p.m. on Saturday (City Code 9.44.030). Construction activities are prohibited on Sundays and on six specified public holidays. The City Council or Public Works Director may modify construction hours. Given the type of proposed construction, the project would largely comply with these time restrictions, and routine Saturday work is unlikely. Concrete pouring activities will be limited to between 9:00 a.m. and 6:00 p.m. on work days. A permit from the City would be necessary if the concrete pour phase is to operate outside the allowable construction hours, but the City has stated that they will not allow concrete pouring outside of the previously stated limitations. In addition, due to the duration of the construction (approximately 18 months) and the proximity of residences to the site, mitigation in the form of a temporary noise barrier would be implemented (**NOI-1**). Additional mitigation measures (**NOI-2** through **NOI-4**) 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 less than significant levels.

Booster Pump Noise

The proposed pump station would house four (three active and one standby) 200 hp pumps. The facility would be designed to comply with the City of Manhattan Beach's more stringent nighttime 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. The critical building elements are typically the roof, walls, windows, doors, 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. Compliance with mitigation measure **NOI-5** would reduce noise impacts from operation of the proposed pump station to less than significant levels.

b) **Less than Significant Impact.** Operation of the proposed reservoir would neither generate, nor expose people to excessive groundborne vibrations. Construction of the project may temporarily generate vibrations, particularly during demolition of the existing reservoir and during compaction of fill material. However, no use of pile drivers would occur. Therefore, since demolition activities would be limited by the City's allowable construction hours and would be short-term, vibration impacts would be less than significant.

c) **Less than Significant With Mitigation Incorporated.** Operation of the proposed booster pumps and infrequent exercising of the emergency generator have the potential to affect ambient noise levels. However, with the pumps housed in an enclosed concrete structure and generator equipped with a noise attenuating enclosure as per Mitigation Measure **NOI-5**, noise impacts from operation of the project would be less than significant.

d) **Less than Significant With Mitigation Incorporated.** Construction of the proposed project would temporarily increase 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.

e) and f) **No Impact.** LAX is located 4 miles north of Manhattan Beach, and Hawthorne Municipal Airport is approximately 7 miles northeast of the City. No airports or private

airstrips are located within 2 miles of the project site. The proposed project is not located within an airport land use plan or within 2 miles of a public airport or private airstrip. In addition, the project does not include new habitable structures and would not change land use. Therefore, there would be no impact on airports.

Mitigation Measures

With incorporation of Mitigation Measure **NOI-1** through **NOI-5**, impacts from construction and operation of the proposed project related to noise would be reduced to less than significant levels.

NOI-1 Noise Mitigation Plan. Prior to the start of construction of the proposed reservoir, the construction contractor shall develop a noise mitigation plan based on an updated estimate of construction equipment and schedule. The objective of the mitigation plan shall be to reduce noise levels during project construction, if feasible to the limits as outlined in the City of Manhattan Beach municipal code. The mitigation plan shall detail measures to limit construction noise, including:

- Equip all construction equipment, fixed and mobile, with properly operating and maintained noise mufflers and intake silencers, consistent with manufacturers' standards.

- Place all stationary construction equipment as far as feasible from near-site residential receptors and situate them so that emitted noise is directed away from off-site sensitive receptors.

- Install temporary sound walls, curtains, or acoustic blankets on fences with a height as required to meet required noise standards to the extent feasible and to reduce the residents' view of the construction effort. The surface of the sound walls, curtains, or acoustic blankets shall present a solid face from top to bottom without any openings or cutouts.

NOI-2 Control of Construction Hours. Construction activities shall only be permitted to take place between the hours of 7:30 a.m. and 6 p.m. on Monday through Friday, and 9 a.m. and 6 p.m. on Saturday, except with the express written permission of the City of Manhattan Beach City Council or Public Works Director, or in case of emergency.

NOI-3 Equipment Mufflers. During all phases of construction, the project contractor shall equip applicable construction equipment with properly operating and maintained mufflers consistent with manufacturers' standards.

NOI-4 Notifications. Prior to the start of construction, surrounding properties within 500 feet of the reservoir, schools with ¼ mile, and police and fire offices shall be notified of the proposed project, including information about the anticipated construction schedule. The notification shall include a 24-hour project hotline and email address where residents can express a concern about the project or request additional information. The

contact person's name, phone number and email address shall also be posted at the construction site.

NOI-5 Pump Station Building and Generator. The pump station building and generator enclosure shall provide sufficient inside-to-outside building attenuation to reduce noise to acceptable levels as prescribed by the City Municipal Code. For the pump station building, this shall be achieved through a combination of concrete/concrete masonry unit (CMU) walls and roof, noise abatement panels, acoustic louvers, hollow metal doors, and potentially other noise reduction characteristics. The generator will be equipped with an environmental and sound attenuating enclosure. To attenuate noise, the generator enclosure will incorporate a combination of noise abatement panels, acoustic louvers, hollow metal doors, and potentially other noise reduction characteristics as needed to meet noise ordinance standards at adjacent residential properties.

2.3.13 Population and Housing

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion:

a) **No Impac**t. The proposed project does not involve construction of new homes or businesses. The proposed reservoir is a replacement of an existing structure of essentially the same size (7.5 MG existing and 8.0 MG replacement). Since the function of the new reservoir will be the same as the existing structure, the project is not potentially growth-inducing. The project would not increase the demand for housing as it would serve the existing population in the City's service area. Therefore, the proposed project would not cause any impacts to local population levels, induce substantial growth, or displace existing housing. No impacts to population and housing would occur.

b) **No Impac**t. No housing would be displaced by the proposed project. Therefore, no impacts would occur.

c) **No Impac**t. No individuals would be displaced by the proposed project. Therefore, no impacts would occur.

2.3.14 Public Services

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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:				
i) Fire protection?	☐	☐	☐	☒
ii) Police protection?	☐	☐	☐	☒
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☒	☐
v) Other public facilities?	☐	☐	☐	☒

Discussion:

a)-i) **No Impact.** The closest Fire Station to the project site is the Manhattan Beach Fire Station Number 2 located 0.3 miles southwest of the site, on Manhattan Beach Boulevard. The proposed project would not alter any emergency access to or from the fire station. Therefore, the project would have no impact on fire protection services.

a)-ii) **No Impact**. Police protection for the project area is provided by the Manhattan Beach Police Department; the police station is located 1.3 miles west of the reservoir site. As under existing conditions, the project is adequately served by existing resources of the City's Police Department, and would not require new or physically altered facilities for police protection. Therefore, the project would have no impact on police protection services.

a)-iii) **No Impact**. The project area is located in the Manhattan Beach Unified School District. The project would not result in an increase in residential area, or increased demand on existing schools. The project would not require new or physically altered school facilities. Therefore, the proposed project would have no impacts on school services.

a)-iv) **Less than Significant Impact**. The project does not include construction of new recreational facilities such as parks or trails. As under existing conditions, the new reservoir would infrequently discharge to Polliwog Pond in nearby Polliwog Park. No construction in the park is specifically planned. However, the project would result in excess soils requiring disposal. At this time, it is assumed that the City would stockpile excess soils on paved City-owned land just south of the reservoir on North Peck Avenue, for reuse in the City, potentially at existing parks. Since the project does not include construction of housing or employment centers and would not induce population growth, no parks would experience an increase in use. Therefore, the proposed project would have a less than significant impact on parks.

a)-v) **No Impact**. The project does not include construction of housing or employment centers and would not induce population growth. Aside from the improvement in potable water storage, the proposed project would have no impact on public facilities or services.

2.3.15 Recreation

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Discussion:

a) **No Impact**. The proposed project involves the demolition of an existing water reservoir and the installation of a new reservoir of similar size. 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 on recreational facilities.

b) **No Impact**. The proposed project involves the replacement of an existing water reservoir and does not include the development of 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.

2.3.16 Transportation and Traffic

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.	☐	☒	☐	☐
b) Conflict with an applicable congestion management program, including but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☒	☐	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☒	☐	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐

Discussion:

a) and b) **Less than Significant with Mitigation Incorporated**. The proposed project consists of replacing the existing Peck Reservoir, pump station and ancillary 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 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, concrete deliveries, and other material deliveries.

Pursuant to the 2010 Los Angeles County Congestion Management Plan "Guidelines for CMP Transportation Impact Analysis", projects that generate fewer than 50 peak hour trips are not required to conduct a detailed traffic impact analysis.

The number of construction trips forecast to be generated by this project is as follows: up to 20 trips/day for construction vehicles/delivery trucks and up to 10 trips/day for

construction workers commuting to the site. Specifically, a maximum of 30 trips/day are expected on a weekday. Since these trips would be distributed throughout the day, peak hour trips would be significantly less and would not exceed the minimum guideline for conducting a detailed traffic impact analysis of 50 trips in a peak hour.

The truck route for materials deliveries and materials refuse during normal operations is: 405 Freeway to Rosecrans Avenue to Aviation Boulevard to Marine Avenue to Peck Avenue (**Figure 11**). A separate route will be used for refuse hauling during impacted operations, such as large concrete pours for the reservoir or other structures on site. This route is: Peck Avenue to Manhattan Beach Boulevard to Inglewood Avenue to 405 Freeway (**Figure 12** and **Figure 13**).

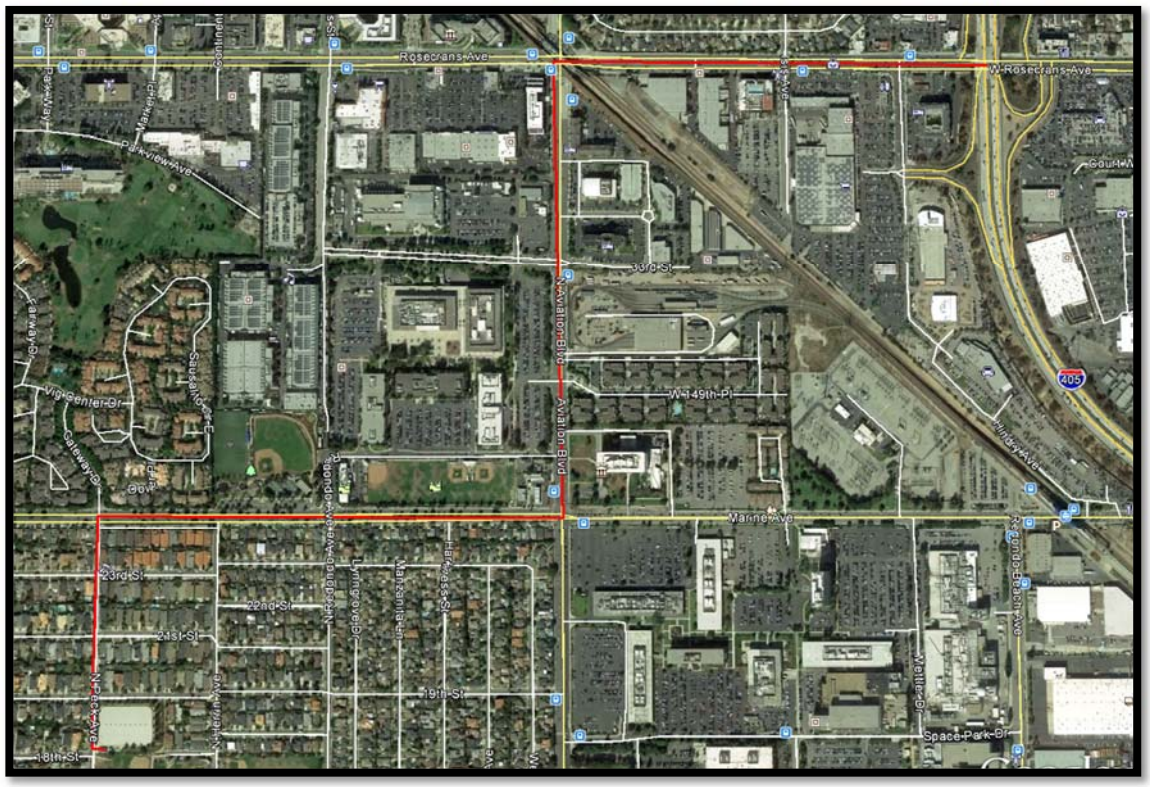


Figure 11. Truck Route to Peck Reservoir for Materials Deliveries and Refuse

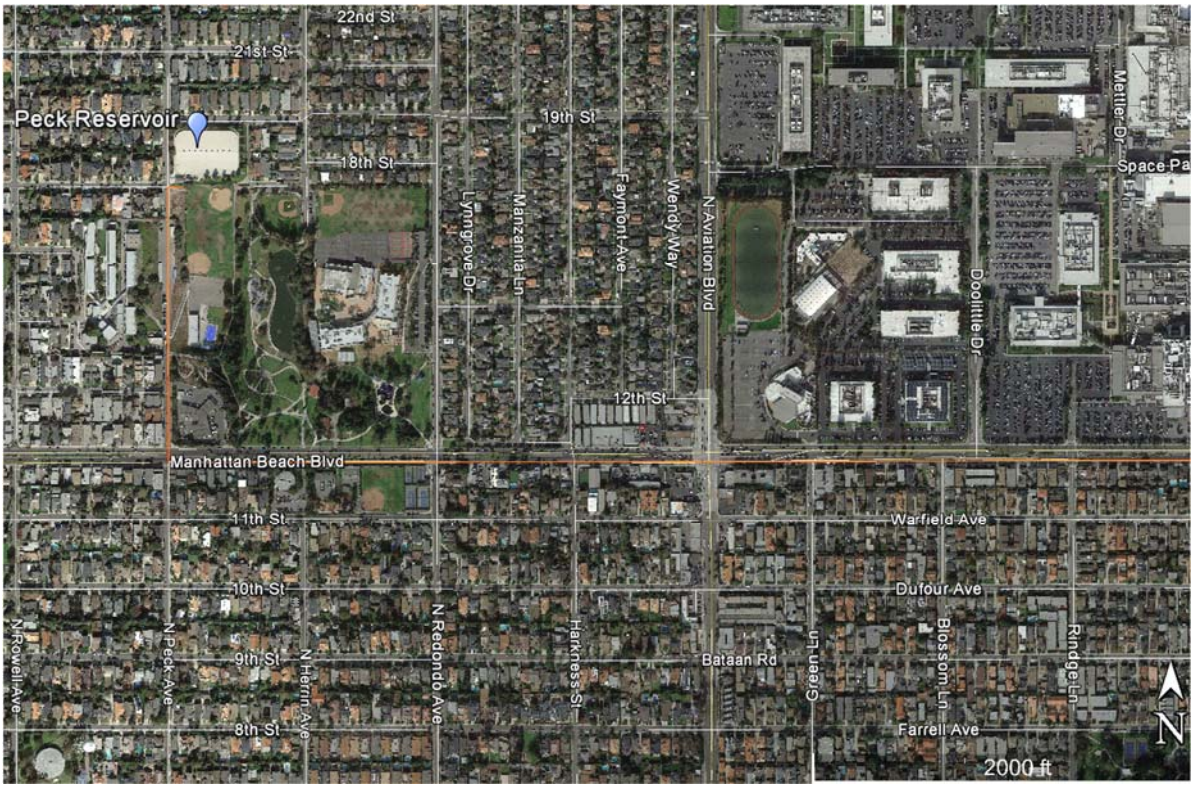


Figure 12. Truck Route for Refuse Materials During Impacted Conditions (1 of 2)

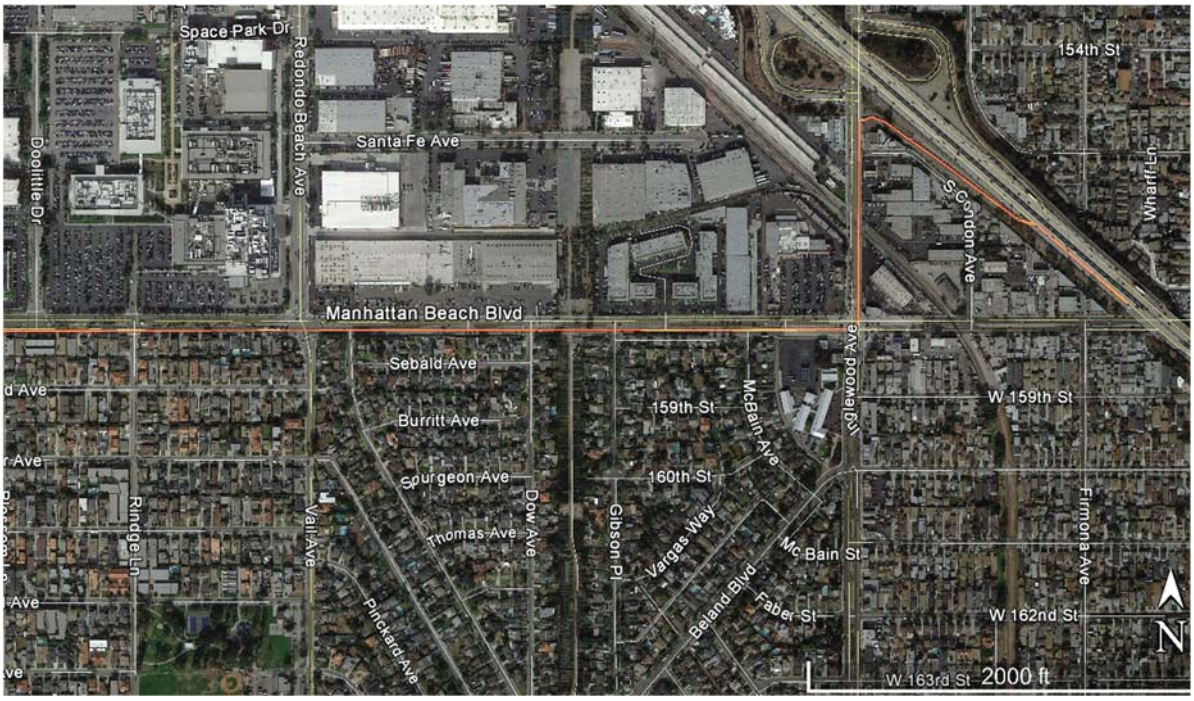


Figure 13. Truck Route for Refuse Materials During Impacted Conditions (2 of 2)

Implementation of the recommended peak hour restrictions included in the construction management plan, as outlined in Mitigation Measure **TR-1**, would ensure that a significant number of peak hour trips would not be generated.

No detours or road closures are anticipated for the project, since reservoir construction would occur off of the street and loading would occur out of travel lanes. One sewer connection will be constructed in Peck Avenue; lane closure during this construction is not anticipated. Staging area during the construction period, and area for soil stockpiles, is available on City-owned property on North Peck Avenue immediately south of the reservoir site. A gate is located at North Peck Avenue and 18th Street; the area of North Peck Avenue south of the gate would be used for construction staging. Therefore, public and emergency vehicle access would not be impacted. The construction related trips would occur on a temporary basis for the duration of the project. The proposed project would have no long-term traffic impacts.

With implementation of a Construction Management Plan, establishment of a construction traffic route, and repaving of Peck Avenue (if necessary), as required by Mitigation Measures **TR-1, TR-2**, and **TR-3**, the proposed project would have a less than significant impact on the surrounding roadway network.

c) **No Impact**. There are no public airports located in the immediate vicinity of the project area. Additionally, the project does not involve structures of significant height that would result in a change in air traffic location. The project would not result in any increase in air traffic levels. Therefore, no impacts would occur.

d) **No Impact**. All improvements related to the proposed Peck 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 adjacent roadways.

e) **Less than Significant with Mitigation Incorporated**. Construction and operation of the proposed project would not place any permanent 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. With implementation of mitigation measure **TR-1**, the impact on emergency access would be less than significant.

f) **Less Than Significant Impact.** The closest bike lane to the project site is a Class 3 Bike Route on North Redondo Boulevard, east of the project site (City of Manhattan Beach, 2014). If hauling during project construction occurred along North Redondo Boulevard, construction of the project could temporarily increase traffic on this roadway; the impact on alternative transportation would be less than significant. The proposed project would not conflict with adopted policies, plans or programs supporting alternative transportation. Operation of the project would have no impact on alternative transportation.

Mitigation Measures

TR-1 Construction Management Plan. The City of Manhattan Beach shall require the contractor to prepare and implement a Construction Management Plan. 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 shall include (but not be limited to) the following:

- 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.
- Designate a construction haul route.
- Require any large vehicles not classified as passenger vehicles or light trucks to use the haul route.
- Allow hauling and deliveries between 8 a.m. and 4 p.m. on weekdays only and no city holidays, unless otherwise authorized by an approved revision to the Construction Management Plan.
- 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 the City of Manhattan Beach.
- 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 onsite unless authorized by an approved revision to the Construction Management 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 working hours per **NOI-2** and that generate significant or sustained noise.
- Require notification to the Manhattan Beach Unified School District, local police and fire departments prior to start of construction, prior to any lane closures, and prior to any hauling or deliveries outside of designated hours per **NOI-2** and **NOI-4**.
- 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 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 City of Manhattan Beach.
- Require construction vehicles to fully utilize off-street parking prior to using street parking.
- With City of Manhattan Beach approval, certain on-street parking areas may be designated for project-related vehicles. Require the contractor to post appropriate

temporary parking signs to designate any approved street parking area or prohibitions near the construction site.

- Encourage contractors and construction workers to carpool to the construction site.
- Specify penalties for failure to comply with Construction Management Plan.
- Provide for monitoring and enforcement of the Construction Management Plan to the satisfaction of the City of Manhattan Beach.
- The location of any construction trailers shall be subject to the approval of the City of Manhattan Beach.
- Provide for revisions to the Construction Management Plan upon approval by the City of Manhattan Beach.

TR-2 Construction Haul Route. All construction-related vehicle trips shall utilized the preferred construction haul routes (**Figure 11, Figure 12,** and **Figure 13**) to the project site as approved by the applicable regulating authorities.

TR-3 Repaving. The Contractor shall conduct a pre-construction inspection, including the hauling routes, and document the results with a video file. If the City determines that Peck Avenue has been degraded due to the reservoir replacement project, the contractor shall repave, with slurry seal overlay, the portions of Peck Avenue determined by the City to be degraded as a result of the project.

2.3.17 Tribal Cultural Resources

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe	☐	☒	☐	☐

Discussion: Consultation with Native American organizations and individuals was conducted to satisfy the requirements of Assembly Bill (AB) 52. The Gabrieleno Band of Mission Indians – Kizh Nation, Soboba Band of Luiseno Indians, and San Ynez Band of Chumash Mission Indians tribes that are traditionally and culturally affiliated to the Manhattan Beach area have requested that the City provide notification of projects in the tribe's area of traditional and cultural affiliation. On May 11, 2018 letters were mailed to these Native American tribes, to request information regarding local knowledge about cultural resources, traditional gathering areas, or sacred lands in or near the project site. As of December 2018, one response has been received from the Gabrieleno Band of Mission Indians – Kizh Nation requesting consultation. No other response have been received. The City will comply with this request. The Gabrieleno Band of Mission Indians – Kizh Nation will be invited to public meetings for the environmental document for the project. Drawings and specifications for the project can also be provided, if requested. Cultural resources mitigation measures are described in 2.3.5 Cultural Resources.

a) i) and ii). **Less than Significant Impact with Mitigation Incorporated.** Replacement of the Peck reservoir would not disturb any area not previously disturbed for the installation of the existing Peck reservoir, paved access area, pump station, fencing and other ancillary facilities. No traditional cultural places have been identified for the project site, and no impacts to CRHR-listed or eligible resources are anticipated. However, in the unlikely event that cultural resources or human remains are discovered during project construction, mitigation measures CR-1 and CR-3 would be implemented to reduce impacts to less than significant levels. As mitigated, the proposed project would have a less than significant impact on tribal cultural resources.

2.3.18 Utilities and Service Systems

Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
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?	☐	☒	☐	☐
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
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 project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statues and regulations related to solid waste?	☐	☐	☐	☒

Discussion:

a) **Less than Significant Impact**. The proposed project involves the replacement of the Peck Reservoir and the installation of a new reservoir, pump station, treatment facilities, and other ancillary facilities. Overflow from the reservoir and the underdrain system will be discharged to Polliwog Pond, as under existing conditions. The park land is owned by Manhattan Beach Unified School District and leased to the City. The new treatment system would require the discharge of up to 80,000 gallons per day of low to 0 biochemical oxygen demand (BOD) wastewater. Since wastewater would be discharge to the sewer system for treatment at the Joint Water Pollution Control Plant (JWPCP) in Carson, the impact on wastewater systems would be less than significant.

b) **Less than Significant with Mitigation Incorporated**. The proposed project involves the replacement of the Peck Reservoir and the installation of a new reservoir, pump station, treatment facilities, and ancillary facilities. The objective of the project is to replace an aging reservoir, built in the 1950s, that needs upgrading to address deterioration. The treatment system will consist of on-site chloramination equipment and green sand filtration. Wastewater treatment would be at the JWPCP. As discussed in this Initial Study, potentially

significant environmental effects that could result from the construction of this new water facility have been mitigated to less than significant levels.

c) **Less than Significant Impact**. With installation of the new reservoir, drainage from the project site would not be substantially altered over existing conditions. All stormwater generated onsite will be collected and percolated to the local aquifer. The impact would be less than significant.

d) **No Impact**. The proposed project would replace the existing Peck Reservoir with a new reservoir of similar size (7.5 MG existing and 8.0 MG replacement). The proposed project would not increase the population of Manhattan Beach, and thus, would not increase the demand for water. In addition, the project would increase the reliability of Manhattan Beach's water storage system. Therefore, the proposed project would have no adverse impact on the availability of water supplies.

e) **Less than Significant Impact**. The project involves the construction of a new water storage reservoir, pump station, treatment facility, and other ancillary facilities. The proposed new office building will include an employee restroom, the same as the existing office. The new treatment system would require the discharge of up to 80,000 gallons per day of wastewater. Since the existing sewer system and the JWPCP have adequate capacity for this discharge, the impact on wastewater systems would be less than significant.

f) **Less Than Significant Impact**. The demolition of the existing reservoir and associated structures would generate approximately 1,300 cubic yards of inert waste material. Section 9.36.120 of the Manhattan Beach Municipal Code prescribes material conservation and resource efficiency. The construction contractor will recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition debris. Since concrete debris can be repurposed and reused as crushed miscellaneous base, it is assumed that the construction contractor will remove the concrete debris from the project site and sell the material at a nearby gravel facility. The specific facility will be selected by the construction contractor, but suitable facilities are located in Long Beach. With adherence to the City's waste removal and recycling requirements, the impact on solid waste would be less than significant.

g) **No Impact**. The project would comply with all federal, state, and local statutes and regulations related to solid wastes.

2.3.19 Mandatory Findings of Significance

	Issues and Supporting Information Sources	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	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?	☐	☒	☐	☐
b)	Does the project have the potential to achieve short-term, to the disadvantage 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 past projects, effects of other current projects, and the effects of probable future projects.)?	☐	☐	☒	☐
d)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion:

a) **Less than Significant with Mitigation Incorporated.** There are no sensitive biological resources present on the project site or in the immediate vicinity of the project. Impacts to nesting birds, if any, would be mitigated by implementation of mitigation measure **BIO-1**. Cultural resources are not known for the project site. Disturbance to currently unknown subsurface cultural resources during project construction would be mitigated to less than significant levels by implementation of measures **CR-1**, **CR-2** and **CR-3**.

b) **No Impact.** The goal of the project is to be part of the long-term solution for water storage in Manhattan Beach. There are no short-term goals related to the project that would be disadvantageous to this long-term goal.

c) **Less than Significant Impact.** Cumulatively with other potable water projects by Manhattan Beach and other water providers in the region, the project would be beneficial for water storage and supply. Since there are no other known construction projects planned in the immediately area of the reservoir, the cumulative construction-related effects would be less than significant.

d) **Less than Significant with Mitigation Incorporated.** Since the project site is in a residential neighborhood, noise generated during construction has the potential to impact nearby residential receptors. Mitigation measures **NOI-1** through **NOI-5** would reduce impacts on noise to less than significant levels. Impacts from temporary construction traffic

in the project area would be reduced to less than significant levels with implementation of measures **TR-1, TR-2** and **TR-3**. Overall, the goal of the project is to reliably store potable water - a beneficial effect on human beings.

Section 3
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3.2 PREPARERS OF THE INITIAL STUDY

PREPARED BY:

City of Manhattan Beach
Department of Public Works
1400 Highland Avenue
Manhattan Beach, California 90266

TECHNICAL ASSISTANCE PROVIDED BY:

Stantec Consulting Services Inc.
Christopher Mote, PE, Project Manager
Sarah Garber, PMP, CPP, Environmental Documentation
Chisa Whelan, GIS

3.3 ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ACM	Asbestos-containing Materials
AQMP	Air Quality Management Plan
ASCE	American Society of Civil Engineers
BMPs	Best Management Practices
BOD	Biochemical oxygen demand
Cal/EPA	California Environmental Protection Agency
CAO	Cleanup and Abatement Order
CARB	California Air Resources Board
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
CDO	Cease and Desist Order
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGS	California Geologic Survey
CHRIS	California Historical Resources Information System
CMU	Concrete Masonry Unit
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CO2e	carbon dioxide equivalent
CRHR	California Register of Historical Resources
dBA	Decibel, A-weighted scale
DTSC	Department of Toxic Substances Control
DWP	Drinking Water Permit
EIR	Environmental Impact Report
EO	Executive Order
F	Fahrenheit
Farmland	Prime Farmland, Unique Farmland, or Farmland of Statewide Importance
FEMA	Federal Emergency Management Agency
FMMP	Farmland Mapping and Monitoring Program

GHG	Greenhouse Gas
gpm	gallons per minute
HEPA	high-efficiency particulate air
hp	horsepower
Hwy	Highway
Hz	hertz
IS	Initial Study
JWPCP	Joint Water Pollution Control Plant
kW	kilowatt
LAX	Los Angeles International Airport
LBP	Lead-based Paint
LST	Localized Significance Threshold
LUST	Leaking Underground Storage Tank
MBTA	Migratory Bird Treaty Act
MG	million gallon
MLD	Most Likely Descendant
MND	Mitigated Negative Declaration
MS4	Municipal Separate Storm Sewer Systems
MT	metric tons
Mw	Maximum Earthquake Magnitude
MWD	The Metropolitan Water District of Southern California
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NO_3	nitrate
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OS	Open Space
PM10	particulate matter 10 microns or less in diameter
PM2.5	particulate matter 2.5 microns or less in diameter
PRC	Public Resources Code

PS	Public and Semi-Public
RS	Residential, Single-Family
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAB	South Coast Air Basin
SCADA	Supervisory Control and Data Acquisition
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison
SO_2	sulfur dioxide
SOx	sulfur oxides
SQMP	Stormwater Quality Management Program
SR	State Route
SUSMP	Standard Urban Stormwater Mitigation Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
USC	United States Code
USGS	United States Geological Survey
USFWS	United States Fish and Wildlife Service
VFD	Variable Frequency Drive
VOC	volatile organic compound

Appendix A

Cross-sectional Drawings of the Proposed Reservoir

19TH STREET

PECK AVENUE

CORNER EL 86.78

CORNER EL 86.00

CORNER EL 101.0

RETAINING WALL

GUARDRAIL

ACCESS HATCH

8 MG CONCRETE RESERVOIR
TOP OF ROOF EL 104.0

26.5'

46.6'

16.5'

44.2'

53'

79'

302.02'

SCE TRANSFORMER

GENERATOR

GREEN SAND
FILTERS

BACKWASH TANK
TOP EL 111.3

15.8'

68.5'

OFFICE BUILDING
TOP OF ROOF EL 114.5

ELECTRICAL CONTROL
AND PUMP BUILDING
TOP OF ROOF EL 101.5

TREATMENT AREA

TREATMENT BUILDING
TOP OF ROOF EL 96.0

DRY WELL

15.0'

36.9'

14.0'

112.1'

60.2'

METAL PICKET FENCE

389.03'

BEGG FIELD AND
POLLYWOG PARK

0 20 40
SCALE IN FEET

REV	DATE	BY	DESCRIPTION

SCALE: 1" = 30'

WARNING: 0 ½ 1 — IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE

DESIGNED R RUCKER
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DESIGN DEVELOPMENT PHASE - APRIL 2018

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This document is an interim document and not suitable for construction. As an interim document, it may contain data that is potentially inaccurate or incomplete and is not to be relied upon without the express written consent of the preparer.

Hazen

Stantec

PECK RESERVOIR REPLACEMENT PROJECT
CIVIL

OVERALL SITE PLAN

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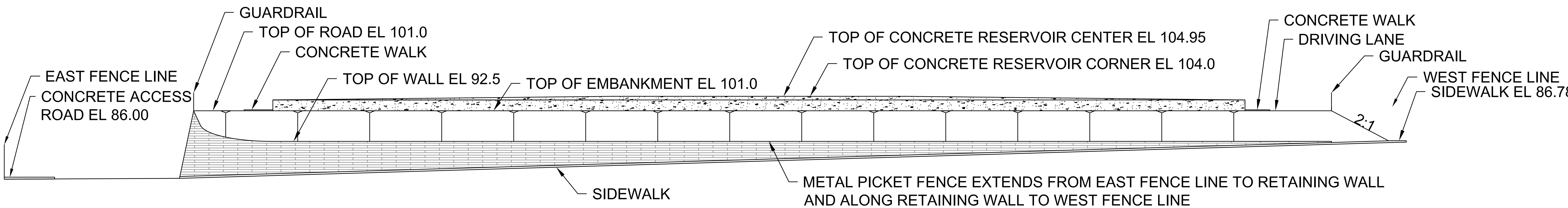
C-1
224501051



NORTH ELEVATION (VIEW FROM 19TH STREET)

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Hazen

Stantec

PECK RESERVOIR REPLACEMENT PROJECT

SHEET

224501051

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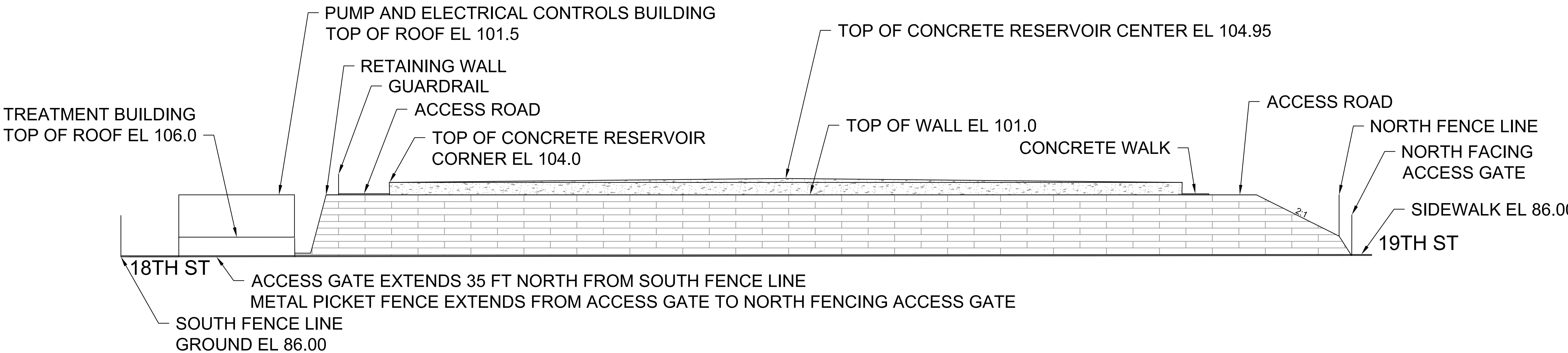

EAST ELEVATION (VIEW FROM HOUSES ON 18TH ST, 19TH ST, AND HERRIN AVE)

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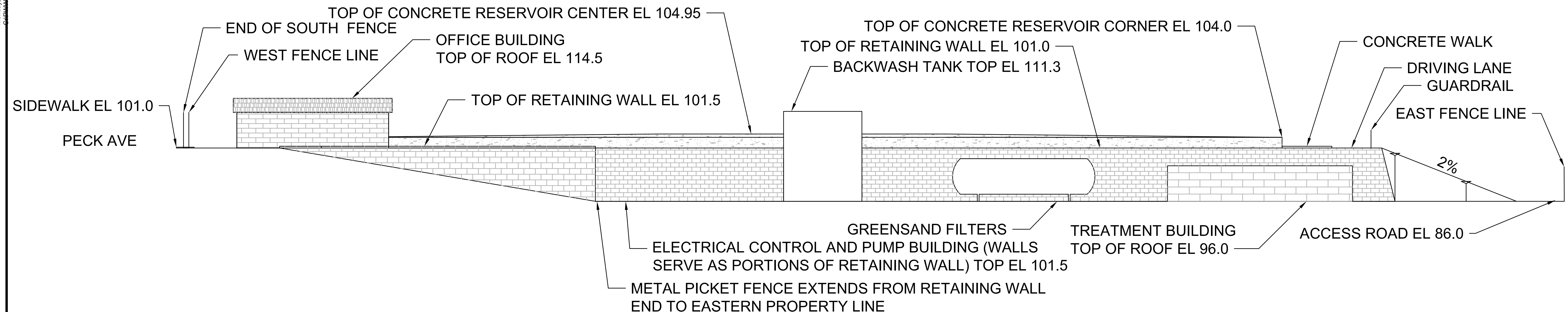

SOUTH ELEVATION (VIEW FROM SPORTS FIELD)

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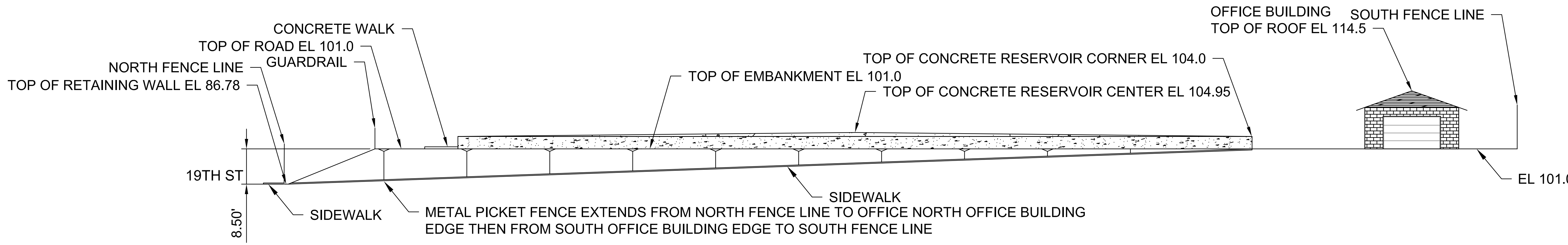

WEST ELEVATION (VIEW FROM N PECK AVE)

REV	DATE	BY	DESCRIPTION	SCALE	WARNING		DESIGN DEVELOPMENT PHASE - APRIL 2018				PECK RESERVOIR REPLACEMENT PROJECT	SHEET
					0 ½ 1 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE	DESIGNED DRAWN CHECKED	NOT FOR CONSTRUCTION This document is an interim document and not suitable for construction. As an interim document, it may contain data that is potentially inaccurate or incomplete and is not to be relied upon without the express written consent of the preparer.	Hazen	Stantec			224501051

Appendix B

Arborists Memorandum

City of Manhattan Beach
Department of Public Works
Maintenance Division

3621 Bell Avenue, Manhattan Beach, CA 90266
Phone: (310) 802-5311 Fax: (310) 802-5301 TDD: (310) 546-3501

September 12, 2018

Mr. Gilbert Gamboa
Senior Civil Engineer
City of Manhattan Beach
3821 Bell Ave.
Manhattan Beach CA. 90266

RE: Peck Reservoir Landscape

Dear Mr. Gamboa:

The Peck Reservoir perimeter slope is covered with a mixture of mature ivy, and ice plant, which cover the upper and lower slope areas. While most of the trees have been planted at the top of the slope, a few are growing along the lower fence line.

There're a total of twenty-four trees located on site, Tristian, Brazilian Pepper, and Aleppo Pine. The Brazilian Pepper and Tristian are showing signs of low vigor, thinning branches, and depending on environmental conditions, these trees have a limited lifespan.

The Peck Reservoir is a focal point to the neighborhood and its aesthetics are important to the community as a whole. However, the Peck Reservoir construction project could negatively impact these trees because of their aggressive root systems, and location next to the reservoir, which could result in in the loss of structural integrity for the tree. Serious consideration should be given to the removal of all the trees, and replaced with drought tolerant colorful shrubs/ground cover that'll have non aggressive root systems, and a low profile for reservoir security.

Peck Reservoir is located in Area District I, however Ordinance 10.52.120 Tree Preservation and Restoration in Residential Zones, Area Districts I and II, don't apply to the site since the ordinance only applies to the protection, removal, and replacement of trees on private property. Ordinance 7.32.030 – Enforcement, states; "The Public Works Director shall have final jurisdiction and control of the kind and type of planting, setting out, location, trimming, maintenance and removal of all trees and shrubs on City property and public places, and the supervision of all trees planted or growing in such places".

I've identified a number or shrubs and groundcover to be planted on the reservoir perimeter, that'll be aesthetically pleasing, and act as a screen when viewed from across the street. However, I would welcome any input from the Landscape Architect or Water Division Staff.

City of Manhattan Beach
Department of Public Works
Maintenance Division

3621 Bell Avenue, Manhattan Beach, CA 90266
Phone: (310) 802-5311 Fax: (310) 802-5301 TDD: (310) 546-3501

This is the existing plant material at Peck Reservoir and approximately square footages.

Section A – N. Peck Ave.
3 each – Brazilian Pepper Trees (Schinus terebinthefolius)
1 each – Tristania Tree (Tristania conferta)
1 each – Privet Shrub (Ligustrum)
1 each – Privet Hedge Approx. 200 lineal feet
205 X 15 = 3,075 sq. ft. of Landscape Area

Section B – 19th Street
1 each – Brazilian Pepper Tree (Schinus terebinthefolius)
7 each – Tristania Trees (Tristania conferta)
294 X 35 = 10,290 sq. ft. of Landscape Area

Section C – East Side of Reservoir
1 each – Brazilian Pepper Tree (Schinus terebinthefolius)
5 each – Tristania Trees (Tristania conferta)
200 X 47 = 9,400 sq. ft. of Landscape Area

Section D – South Side of Reservoir
1 each – Aleppo Pine Tree (Schinus terebinthefolius)
5 each – Tristian Trees (Tristania conferta)
210 X 38 = 7,980 sq. ft. of Landscape Area

City of Manhattan Beach
Department of Public Works
Maintenance Division

3621 Bell Avenue, Manhattan Beach, CA 90266
Phone: (310) 802-5311 Fax: (310) 802-5301 TDD: (310) 546-3501

Please reference the recommended, but not limited to, plant palette.

Shrubs

- Arctostaphylos densiflora
- Ceanothus X 'Julia Phelps'
- Chrysothamnus nauseosus
- Eriogonum fasciculatum
- Festuca glauca
- Hesperaloe parviflora
- Hesperoyucca whipplei
- Leucophyllum frutescens 'White Cloud'
- Mimulus cardinalis

Ground Covers

- Baccharis pilularis 'Pigeon Point'
- Fragaria vesca California

I've individually photographed all trees and the landscape for future presentation/reports, if needed.

Please feel to contact me if you have any further questions or concerns.

Respectfully,

Ernest Area
Urban Forester
City of Manhattan Beach

Appendix C

Mitigation, Monitoring, and Reporting Plan

Mitigation Monitoring and Reporting Program

for the

City of Manhattan Beach
Peck Reservoir Replacement Project

City of Manhattan Beach
Public Works Department
1400 Highland Avenue
Manhattan Beach, California 90266

January 2019

MITIGATION MONITORING AND REPORTING PROGRAM

Peck Reservoir Replacement Project
Mitigated Negative Declaration

Introduction

The City of Manhattan Beach Public Works Department is planning to replace the existing 7.5 million gallon (MG) Peck Reservoir, pumps and ancillary facilities with a new 8.0 MG concrete reservoir, treatment system, pump station, office building, standby generator, and related ancillary facilities. The project site is located at the southeast corner of North Peck Avenue and 19th Street.

Analysis of the impacts of the Peck Reservoir Replacement Project is presented in the Initial Study / Mitigated Negative Declaration for the project. Potentially significant impacts that could be mitigated to less than significant levels were identified for air quality, biological resources, cultural resources, hazardous materials, noise and traffic.

This Mitigation Monitoring and Reporting Program (MMRP) has been developed to ensure implementation of the mitigation measures outlined in the Mitigated Negative Declaration. The MMRP has been prepared by the City of Manhattan Beach, the lead agency for the Peck Reservoir Replacement Project under the California Environmental Quality Act (CEQA), in conformance with Public Resources Code Section 21081.6 and CEQA Guidelines Section 15097. Adoption of a MMRP is required for projects in which the Lead Agency has required changes or adopted mitigation to avoid significant environmental effects.

Project Description Summary

The proposed replacement reservoir will be an 8.0 MG, 270-feet long by 190-feet wide, single cell reservoir with 77 supporting concrete columns (7 rows of 11 columns each). The structure will be sited in approximately the same footprint as the existing reservoir. Additional new facilities on the site will include:

- A detached operations building (22 feet 8 inches by 42 feet 8 inches) located southwest of the reservoir to house office space, water quality laboratory, and an employee restroom
- Southern California Edison (SCE) transformer installed between the office building and the standby generator
- A diesel standby generator (750 kilowatt unit) installed on the south side of the reservoir, adjacent to the pump station
- Electrical Control and Pump Building to house four (three duty plus one standby) horizontal split case pumps
- Water treatment facilities including green sand filters, chlorine equipment, ammonia equipment, chemical building, backwash tank, and ancillary equipment
- Well pipeline replacement in Herron Avenue

- Chemical (liquid sodium hypochlorite) dosing line
- Perimeter service road, asphalt paved
- Verdura® block retaining wall along the south property line, southern reservoir embankment, eastern reservoir embankments, and behind the sidewalk on the north side
- Site access gate (key/lock entry)
- Site lighting and motion sensor lighting
- Intrusion alarms on all access doors
- Intrusion alarms on all reservoir hatches
- Site cameras and video systems

Mitigation Monitoring and Reporting Responsibility

The City of Manhattan Beach Public Works Department shall have primary responsibility for administrating the MMRP activities to staff, consultants, or contractors. The City of Manhattan Beach has the responsibility of ensuring that monitoring is documented through periodic reports and that deficiencies are promptly corrected. The designated environmental monitor will track and document compliance with mitigation measures, note any problems that may result, and take appropriate action to remedy problems. Specific responsibilities of the City of Manhattan Beach include:

- Coordination of all mitigation monitoring activities
- Management of the preparation, approval, and filing of monitoring or permit compliance reports
- Maintenance of records concerning the status of all approved mitigation measures
- Coordination with other agencies and relevant Tribal representatives

Resolution of Noncompliance Comments

The City of Manhattan Beach will act as the contact for interested parties who wish to register comments. Any person or agency may file a comment with the City of Manhattan Beach (1400 Highland Avenue, Manhattan Beach, California 90266) regarding the mitigation measures adopted as part of the approval process for the Peck Reservoir Replacement Project. Comments shall be in written form, providing detailed information on the purported violation. The City of Manhattan Beach shall conduct an investigation and determine the validity of the comment. If noncompliance with a mitigation measure is verified, the City of Manhattan Beach shall take the necessary action(s) to remedy the violation. The commenter shall receive written confirmation indicating the results of the investigation or the final corrective action that was implemented to respond to the specific noncompliance issue.

Mitigation Monitoring and Reporting Plan Matrix

The MMRP is organized in a matrix format and includes: mitigation measure by number, impact summary, text of the mitigation measures, time frame for monitoring, agency responsible, and space to indicate verification that the measures were implemented. The

verification columns will be used to document the person who verified the implementation of the mitigation measure, the date on which this verification occurred, and any other notable remarks.

MITIGATION MONITORING AND REPORTING PROGRAM

Peck Reservoir Replacement Project

Mitigated Negative Declaration

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
AQ-1	Construction activities and equipment will temporarily emit particulate matter.	**Site Watering**. Disturbed areas of the project site shall be watered a minimum of three times per day during the demolition, excavation, grading and site preparation phases of project construction.	Demolition, excavation, grading and site preparation phases of project construction	City of Manhattan Beach South Coast Air Quality Management District enforces Rules 401 (Visible Emissions) and Rule 403 (Fugitive Dust).			
AQ-2		**Cover Soil Stockpiles**. Geotextile or plastic covers shall be installed on soils stockpiled during and after construction. Alternatively, non-toxic soil binders shall be applied to prevent off site migration of the stored soils by wind or water.					
AQ-3		**Street Sweeping**. Street sweeping will be conducted at least twice per week along the haul route during excavation and earthwork for the reservoir.					
BIO-1	Construction activity, noise and vegetation removal have the potential to disturb nesting birds protected by the Migratory Bird Treaty Act (MBTA), if any are present at the site at the start of project construction.	**Nesting Birds**. For all construction-related activities that take place within the nesting season (February 1 through August 31), a preconstruction nesting-bird survey shall be conducted no more than 14 days prior to project initiation within the project area and a 500-foot buffer. If active nests are found for species subject to the MBTA, a no-disturbance buffer zone shall be established according to the biologist's assessment of the species' sensitivity to disturbance, generally 300 feet for smaller birds and 500 feet for raptors. Within this buffer zone, no construction shall take place until August 31, until the biologist determines that the nest is no longer active, or unless an alternative method of avoiding nest disturbance is prepared by the biologist and approved by the relevant resource agencies.	Prior to construction activity during the period: February 1 through August 31	City of Manhattan Beach The United States Fish and Wildlife Service (USFWS) enforces the MBTA.			
CR-1	Although none	**Unexpected Cultural Discoveries**. If during	Construction	City of			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
	are known for the project site, excavation and grading have the potential to disturb previously unknown archaeological resources.	excavation or earth moving activities within the project site the construction contractor identifies potential historic or archaeological resources, all excavation and/or grading within 10 feet of the discovery area shall be halted immediately and work redirected until a qualified archaeologist has evaluated the nature and significance of the find. The Archaeologist shall determine whether the resource is a “unique archaeological resource” pursuant to Section 21083.2(g) of the California Public Resources Code (PRC) or a “historical resource” pursuant to Section 15064.5(a) of the State CEQA Guidelines (14 California CCR). If the archaeological resource is determined to be a “unique archaeological resource” or a “historical resource”, the Archaeologist shall formulate a mitigation plan in consultation with the Lead Agency that satisfies the requirements of the above-listed Sections and that reduces the adverse effects of the project to a less than significant level. If the Archaeologist determines that the archaeological resource is not a “unique archaeological resource” or “historical resource”, s/he need only record the site and submit the recordation form to the South Central Coastal Information Center (SCCIC). If archaeological resources are found to be significant, the Archaeologist shall determine appropriate actions, in cooperation with the Lead Agency and Contractor, for exploration and/or salvage. These actions, as well as final mitigation and disposition of the resources, shall be subject to the approval of the Lead Agency. The Archaeologist shall then prepare a final	activity involving excavation into native soils	Manhattan Beach If prehistoric resources are identified, then relevant Native American tribes shall be contacted.			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
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		technical report, following the guidelines of the California Office of Historic Preservation, which includes the monitoring results and any evaluation of resources. Copies of the report shall be submitted to the Lead Agency and to the California Historical Resources Information System (CHRIS) SCCIC. If prehistoric resources are identified, then a Native American monitor shall be invited to observe ground-disturbing activities.					
CR-2	Although none are known for the project site, excavation and grading have the potential to disturb previously unknown paleontological resources.	**Unexpected Paleontological Discoveries**. If any paleontological materials are encountered during ground disturbing activities, all excavation and/or grading within 10 feet of the discovery area shall be halted immediately and work redirected until a paleontologist has evaluated the nature and significance of the find.	Construction activity involving excavation into native soils	City of Manhattan Beach			
CR-3	Although none are expected to be discovered at the project site, excavation and grading have the potential to disturb previously unknown human remains.	**Human Remains**. In the unexpected event that human remains are encountered during excavation activities, all work shall halt and the County Coroner shall be notified (California Public Resources Code §5097.98). The Coroner shall determine whether the remains are of forensic interest. If the Coroner, with the aid of the project Archaeologist, determines that the remains are prehistoric, s/he will contact the Native American Heritage Commission (NAHC). The NAHC will be responsible for designating the Most Likely Descendant (MLD), who will be responsible for the ultimate disposition of the remains, as required by Section 7050.5 of the California Health and Safety Code. The MLD shall make his/her recommendation within 48 hours of being granted	Construction activity involving excavation into native soils	City of Manhattan Beach Los Angeles County Coroner to be contacted for human remains. Native American Heritage Commission to be contacted for prehistoric human remains.			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
		access to the site. The recommendation of the MLD shall be followed if feasible, and may include scientific removal and non-destructive analysis. If the landowner rejects the recommendations of the MLD, the landowner shall rebury the remains with appropriate dignity on the property in a location that will not be subject to further subsurface disturbance (California Public Resources Code §5097.98).					
HM-1	Although not anticipated at the project site, demolition of the existing reservoir and associated facilities could potentially disturb asbestos-containing materials (ACM).	**Asbestos Containing Materials**. If ACM are identified during the survey conducted prior to demolition, the following measures shall be implemented: • ACM shall be removed and disposed prior to demolition using a licensed abatement contractor in accordance with Federal, State, and local regulations and ordinances. • Bid documents and specifications shall be prepared for the demolition/construction project to ensure lawful removal techniques are used. • A third party shall 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: • Materials containing asbestos shall not be cut, sanded, or drilled. • Prior to initiating demolition activities that would	Prior to demolition period of construction	City of Manhattan Beach Written notification to California Division of Occupational Safety and Health (Cal/OSHA) if asbestos containing materials activities involve more than 100 square or linear feet of removal. Written notification to the South Coast Air Quality Management District may also apply.			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
		disturb the ACM, the area shall be thoroughly wet to prevent possible release into the air. • ACM dust shall be removed with a high-efficiency particulate air (HEPA) vacuum or wet wiped with disposable towels.					
HM-2	Although not anticipated at the project site, demolition of the existing reservoir and associated facilities could potentially disturb lead-based paint (LBP).	**Lead Based Paint**. If areas of LBP are identified prior to demolition, the following measures shall be implemented: • 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 or peeling LBP shall be removed by a licensed lead abatement contractor and waste shall be disposed as required by Federal, State, and local regulations. LBP may be disposed as construction debris as long as it remains on the substrate. • The demolition contractor shall implement precautions to comply with OSHA 29 CFR 1926.62, Lead in Construction. The following precautions shall be taken prior to any demolition activities that would disturb LBP: – Materials containing LBP shall not be cut, sanded or drilled. – Prior to initiating demolition activities that would disturb LBP, the area shall be wet to prevent possible release into the air. – Dust shall be removed with a HEPA vacuum or wet wiped with disposable towels.	Prior to demolition period of construction	City of Manhattan Beach Written notification to Cal/OSHA if lead-based paint activities involve more than 100 square or linear feet of removal. Written notification to California Department of Public Health may also apply.			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
NOI-1	Construction equipment and vehicles would emit noise, potentially in exceedance of City noise standards.	**Noise Mitigation Plan.** Prior to the start of construction of the proposed reservoir, the construction contractor shall develop a noise mitigation plan based on an updated estimate of construction equipment and schedule. The objective of the mitigation plan shall be to reduce noise levels during project construction, if feasible to the limits as outlined in the City of Manhattan Beach municipal code. The mitigation plan shall detail measures to limit construction noise, including: • Equip all construction equipment, fixed and mobile, with properly operating and maintained noise mufflers and intake silencers, consistent with manufacturers' standards. • Place all stationary construction equipment as far as feasible from near-site residential receptors and situate them so that emitted noise is directed away from off-site sensitive receptors. • Install temporary sound walls, curtains, or acoustic blankets on fences with a height as required to meet required noise standards to the extent feasible and to reduce the residents' view of the construction effort. The surface of the sound walls, curtains, or acoustic blankets shall present a solid face from top to bottom without any openings or cutouts.	Plan to be developed prior to the start of construction. Plan to be implemented during the construction period.	City of Manhattan Beach			
NOI-2	Construction equipment and vehicles would emit noise, potentially in exceedance of City noise standards.	**Control of Construction Hours**. Construction activities shall only be permitted to take place between the hours of 7:30 a.m. and 6 p.m. on Monday through Friday, and 9 a.m. and 6 p.m. on Saturday, except with the express written permission of the City of Manhattan Beach City Council or Public Works Director, or in case of emergency.	Construction period	City of Manhattan Beach			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
NOI-3	Construction equipment and vehicles would emit noise, potentially in exceedance of City noise standards.	**Equipment Mufflers.** During all phases of construction, the project contractor shall equip applicable construction equipment with properly operating and maintained mufflers consistent with manufacturers' standards.	Construction period	City of Manhattan Beach			
NOI-4	Construction equipment and vehicles would emit noise, potentially in exceedance of City noise standards.	**Notifications**. Prior to the start of construction, surrounding properties within 500 feet of the reservoir, schools with ¼ mile, and police and fire offices shall be notified of the proposed project, including information about the anticipated construction schedule. The notification shall include a 24-hour project hotline and email address where residents can express a concern about the project or request additional information. The contact person's name, phone number and email address shall also be posted at the construction site.	Prior to the start of construction	City of Manhattan Beach			
NOI-5	Operation of the proposed pump station would emit noise, including nighttime noise, potentially in exceedance of City noise standards.	**Pump Station Building and Generator**. The pump station building and generator enclosure shall provide sufficient inside-to-outside building attenuation to reduce noise to acceptable levels as prescribed by the City Municipal Code. For the pump station building, this shall be achieved through a combination of concrete/concrete masonry unit (CMU) walls and roof, noise abatement panels, acoustic louvers, hollow metal doors, and potentially other noise reduction characteristics. The generator will be equipped with an environmental and sound attenuating enclosure. To attenuate noise, the generator enclosure will incorporate a combination of noise abatement panels, acoustic louvers, hollow metal doors, and potentially other noise reduction characteristics as needed to meet noise ordinance standards at	Noise attenuating features to be included in project design. Verification of effectiveness will be conducted after construction is complete.				

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
		adjacent residential properties.					
TR-1	Construction vehicles would travel to the project site, impacting local traffic.	**Construction Management Plan**. The City of Manhattan Beach shall require the contractor to prepare and implement a Construction Management Plan. 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 shall include (but not be limited to) the following: • 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. • Designate a construction haul route. • Require any large vehicles not classified as passenger vehicles or light trucks to use the haul route. • Allow hauling and deliveries between 8 a.m. and 4 p.m. on weekdays only and no city holidays, unless otherwise authorized by an approved revision to the Construction Management Plan. • 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 the City of Manhattan Beach. • 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 onsite unless authorized by an approved revision to the Construction Management Plan.	Plan to be developed prior to the start of construction. Plan to be implemented during the construction period.	City of Manhattan Beach			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
		• 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 working hours per NOI-2 and that generate significant or sustained noise. • Require notification to the Manhattan Beach Unified School District, local police and fire departments prior to start of construction, prior to any lane closures, and prior to any hauling or deliveries outside of designated hours per NOI-2 and NOI-4. • 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 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 City of Manhattan Beach.					

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
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		• Require construction vehicles to fully utilize off-street parking prior to using street parking. • With City of Manhattan Beach approval, certain on-street parking areas may be designated for project-related vehicles. Require the contractor to post appropriate temporary parking signs to designate any approved street parking area or prohibitions near the construction site. • Encourage contractors and construction workers to carpool to the construction site. • Specify penalties for failure to comply with Construction Management Plan. • Provide for monitoring and enforcement of the Construction Management Plan to the satisfaction of the City of Manhattan Beach. • The location of any construction trailers shall be subject to the approval of the City of Manhattan Beach. • Provide for revisions to the Construction Management Plan upon approval by the City of Manhattan Beach.					
TR-2	Construction vehicles would travel to the project site, impacting local traffic.	**Construction Haul Route**. All construction-related vehicle trips shall utilized the preferred construction haul routes (Figures 1, 2, and 3, attached) to the project site as approved by the applicable regulating authorities.	Construction period	City of Manhattan Beach			

No.	Impact	Mitigation Measure	Time Frame for Implementation	Responsible Monitoring Agency	Verification of Compliance		
					Initials	Date	Remarks
TR-3	Heavy equipment used for reservoir construction could degrade the surface of Peck Avenue.	**Repaving**. The Contractor shall conduct a pre-construction inspection, including the hauling routes, and document the results with a video file. If the City determines that Peck Avenue has been degraded due to the reservoir replacement project, the contractor shall repave, with slurry seal overlay, the portions of Peck Avenue determined by the City to be degraded as a result of the project.	Survey prior to the start of construction. Repaving, if warranted, after the conclusion of construction.	City of Manhattan Beach			

Figure 1. Truck Route to Peck Reservoir for Materials Deliveries and Refuse

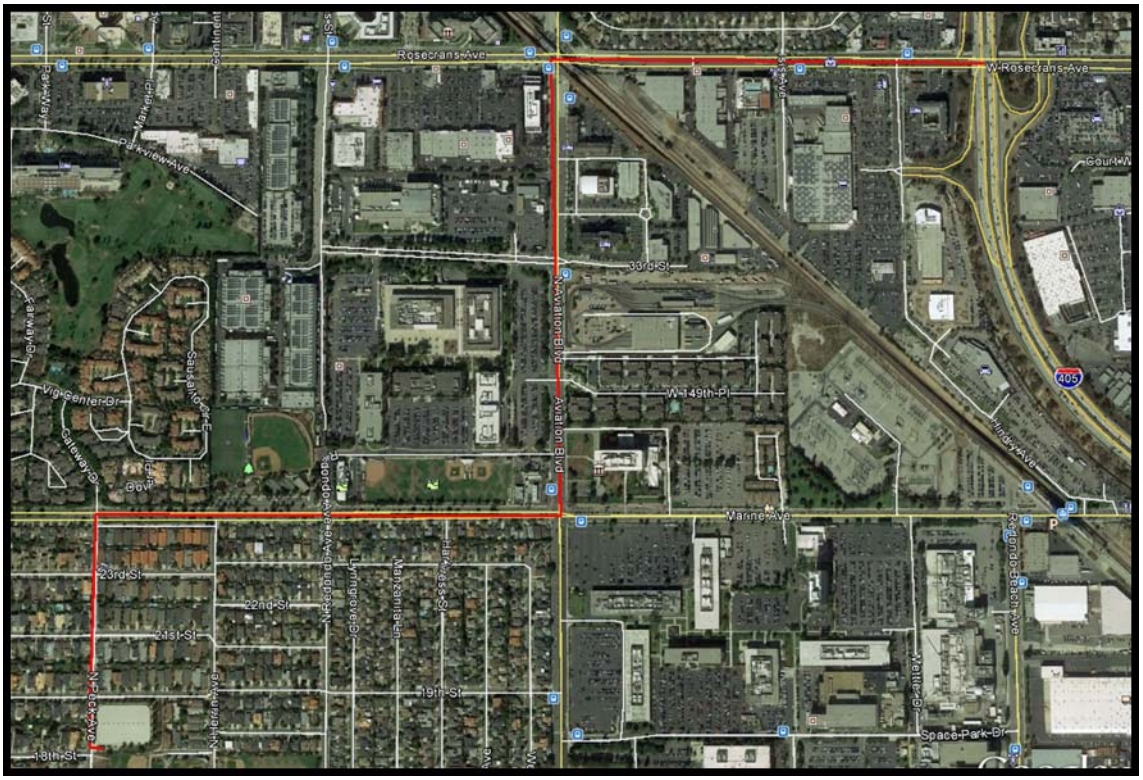

Figure 2. Truck Route for Refuse Materials During Impacted Conditions (1 of 2)

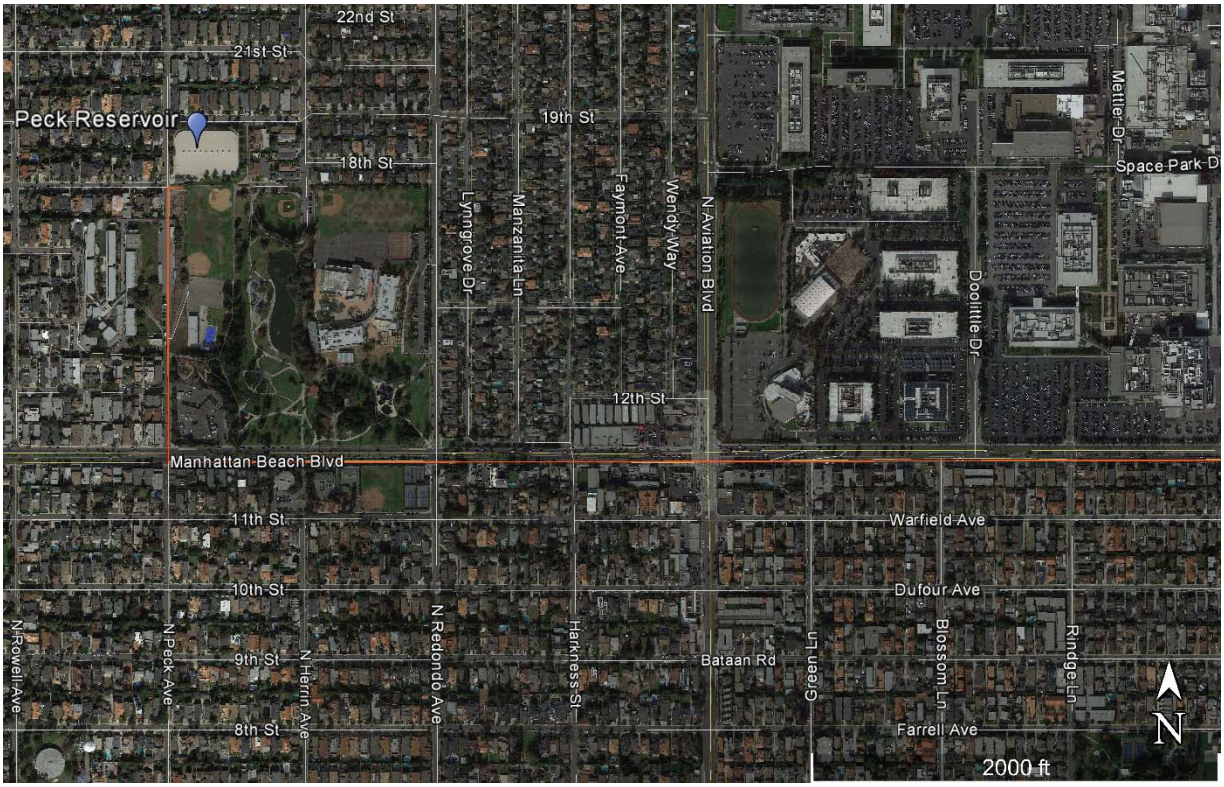

Figure 3. Truck Route for Refuse Materials During Impacted Conditions (2 of 2)