

Chapter 19. Alternatives

19.1 Introduction

CEQA requires that a lead agency evaluate the comparative effects of a range of reasonable alternatives to the proposed program that would feasibly attain most of the primary objectives of the program but would avoid or substantially lessen any of the significant effects of the program (CEQA Guidelines, Section 15126.6(a)). Section 15126.6 also states that an environmental impact report (EIR) is required to set forth only those alternatives necessary to permit a reasoned choice. Significant effects of the alternatives shall be discussed but in less detail than those of the program.

The EIR is required to assess the identified alternatives and determine which among the alternatives (including the proposed program) is the environmentally superior alternative. One of the alternatives assessed must be the “No Project” alternative. If the No Project alternative is identified as the environmentally superior alternative, then another of the remaining alternatives must be identified as the environmentally superior alternative.

The City of San Mateo, after extensive studies and analyses (e.g., Carollo Engineers, Inc., 2014), identified two feasible alternatives that meet all CWP objectives. These alternatives are the In-System Storage Program and Full Conveyance Program. This Draft PEIR evaluates these two CWP alternatives at an equal level of detail. Each of the alternatives includes potentially three wastewater treatment scenarios, any of which could be used with either alternative:

- Baseline treatment
- Conventional activated sludge (CAS)
- Membrane bioreactor (MBR)

In addition, the In-System Storage Program includes multiple potential locations for one or more in-system storage equalization basins. The wastewater treatment and equalization location options were not treated as independent alternatives for evaluation. Instead, given the programmatic review completed in this Draft PEIR, the range of wastewater treatment and in-system equalization location options and worst-case scenarios were evaluated for each of the two CWP alternatives.

Several other alternatives were considered. These alternatives are discussed in this chapter and include the following:

1. No Project alternative
2. Partial conveyance of wet weather flows
3. Conveyance system replacement program
4. Natural treatment system

19.2 No Project Alternative

If the CWP is not approved proposed construction activities and the resulting impacts at the WWTP Site and collection system project locations would not occur. These include temporary impacts on traffic, air quality, and noise and use of energy and materials during construction. Operations of the existing WWTP would continue, similar to current operations. Some construction impacts from repair or replacement of broken or blocked sewer pipes would occur, but at a lesser scale than for the CWP. No equalization storage in the system or at the WWTP would be constructed, and associated impacts would not occur. Impacts on the Detroit Drive parcel, including fill of wetlands and an increase in pervious pavement, would still occur if the parcel is used for the Corporation Yard as the City had proposed prior to the CWP.

However, if the CWP is not approved, wet-weather sanitary sewer overflows (SSOs) would continue to occur. The City of San Mateo and its partner agencies would continue to be in violation of the Cease and Desist Order related to the SSOs. The City would also not meet current and future regulatory requirements related to blending, nutrient loading pathogens. Stormwater quality and Bay water quality would be negatively affected. In addition, recycled water to support the City's sustainability goals would not be made available. Opportunities to increase energy efficiency in the WWTP would not occur. The CWP objectives would not be met. Although some impacts of the CWP would be avoided, the No Project alternative would result in potentially significant impacts that would not occur with the CWP.

19.3 Partial Conveyance of Wet Weather Flows

The *Integrated Wastewater Master Plan* (Carollo Engineers, Inc., 2014) included an evaluation of potential in-system storage sites. The evaluation included sites with less than 4 million gallons of storage capacity, which is the minimum storage required to avoid constructing a new Dale Avenue Pump Station. A feasible CWP alternative could include construction of a smaller in-system storage basin, less than 4 million gallons as proposed for the In-System Storage Program, and a new Dale Avenue Pump station, smaller than that included in the Full Conveyance Program. This alternative is called partial conveyance of wet weather flows for the purpose of this Draft PEIR. This alternative would convey more wet weather flows to the WWTP than the In-System Storage Program, requiring larger diameter pipelines, but less flow than the Full Conveyance Program. Impacts of this alternative would be similar in nature to but somewhat greater than either the Full Conveyance or the In-System Storage Program. Partial conveyance of wet weather flows would result in the impacts of both the in-system storage basin, the new Dale Avenue Pump Station. Partial conveyance of wet weather flows would meet most or all of the CWP objectives, but would still have the same significant and unavoidable construction noise and vibration impacts as the two CWP alternatives. Because it includes an in-system storage basin, the New Dale Avenue Pump Station, and larger-diameter pipelines and pump station upgrades, partial conveyance of wet weather flows could cost more than either the In-System Storage Program or the Full Conveyance Program. Therefore, this alternative was not further evaluated.

19.4 Conveyance System Replacement Program

Replacement of all pipelines in the conveyance system in the City was briefly evaluated as a strategy for addressing SSOs. The cost of such a program would be significantly greater than for either CWP alternative approximately \$1.3 billion based on an informal estimate. In addition, replacement of the conveyance system would not address all SSOs and would not address aging infrastructure at the WWTP, meet current and future regulatory requirements, or support creation of opportunities for recycled water use. In addition, it would have similar construction impacts, including significant and unavoidable construction noise and vibration impacts, as the two CWP alternatives. For these reasons, this alternative was not further evaluated.

19.5 Natural Treatment System

A natural treatment system is a constructed ecosystem that uses biological, physical, and chemical processes to improve water quality. A constructed treatment wetland would be used for polishing water from the WWTP in lieu of advanced treatment. This may help the City meet current and future water quality regulatory requirements. Treatment wetlands would require construction in and impacts to existing saltwater marsh near the WWTP. This could result in significant and unavoidable loss of wetlands and impacts to special-status wildlife and fish. In addition, treated water would flow into the Bay and would not be available for re-use as recycled water. A natural treatment system could increase the overall cost compared to the In-System Storage Program or Full Conveyance Program, and would not meet all the CWP objectives. It would result in significant and unavoidable impacts to biological resources that would not occur with either the In-System Storage Program or Full Conveyance Program. For these reasons, this alternative was not further evaluated.

19.6 Comparison of Alternatives and Environmentally Superior Alternative

Table 19-1 provides a comparison of the alternatives.

TABLE 19-1

Comparison of Alternatives

Programmatic Environmental Impact Report, City of San Mateo Clean Water Program

Alternative	Major Characteristics	Significant Impacts	Meets CWP Objectives?
In-System Storage Program	One or more underground storage basins upstream of the Dale Avenue Pump Station to detain wastewater flows during peak wet weather events	<ul style="list-style-type: none"> Significant and unavoidable construction noise and vibration impacts All other impacts less than significant with mitigation 	Yes
Full Conveyance Program	New pump station next to the existing Dale Avenue Pump Station and larger pipelines to deliver peak wet weather flows to WWTP.	<ul style="list-style-type: none"> Significant and unavoidable construction noise and vibration impacts. All other impacts less than significant with mitigation. 	Yes
No Project Alternative	Operation of the existing WWTP and collection system continue, similar to current operations.	<ul style="list-style-type: none"> CWP impacts, including construction noise and vibration impacts, avoided. SSOs would continue to occur. Violation of Cease and Desist Order related to the SSOs. Stormwater quality and Bay water quality negatively affected. 	No
Partial conveyance of wet weather flows	Includes both in-system storage for wet weather detention and new Dale Avenue Pump Station for wet weather conveyance. May cost more than either In-System Storage Program or Full Conveyance Program.	<ul style="list-style-type: none"> Significant and unavoidable construction noise and vibration impacts. 	Yes
Conveyance system replacement program	Replacement of all pipelines in City's conveyance system.	<ul style="list-style-type: none"> Significant and unavoidable construction noise and vibration impacts. Would not address all SSOs or aging infrastructure at WWTP. Would not meet current or future regulatory requirements. Would not support creation of opportunities for recycled water use. 	No
Natural treatment system	Constructed treatment wetland used for polishing water from WWTP in lieu of advanced treatment.	<ul style="list-style-type: none"> Significant and unavoidable loss of wetlands and impacts to special-status wildlife and fish. Treated wastewater not available for recycled water use. Significant and unavoidable construction noise and vibration impacts may occur. 	No

Both the Full Conveyance Program and In-System Storage Program would meet all of the CWP objectives. Impacts of the two alternatives would be very similar.

- Both CWP alternatives would have similar collection system projects in the same locations. The projects would generally differ only in the diameter of the pipelines or the size of equipment in the pump stations. Construction and operation impacts would be similar in type and scale.

- Both CWP alternatives would have the same facilities constructed and operated at the WWTP. The Full Conveyance Program would have facilities with up to approximately 10 percent larger footprints compared to In-System Storage Program, and would have greater in-plant equalization storage. Construction and operation impacts would be similar in type and scale.
- The primary difference is the location of equalization storage and the Dale Avenue Pump Station. Construction of both the Dale Avenue Pump Station expansion and in-system storage basin would result in similar construction-related impacts in different locations. Both entail soil excavation and construction of underground basins and equipment, with minor appurtenances at the surface.
- Both of the CWP alternatives would use the same mitigation measures to reduce impacts to a less-than-significant level.
- Both of the CWP alternatives would result in significant and unavoidable construction noise and vibration impacts.

The No Project alternative is the only alternative to the In-System Storage Program or the Full Conveyance Program that would avoid or substantially lessen the significant and unavoidable construction noise and vibration impacts of the CWP. Therefore, the No Project alternative would be considered the environmentally superior alternative. However, it would not meet any CWP objectives, and would result in significant water quality impacts and conflict with regulatory requirements.

As shown in Table 19-1, of the remaining alternatives, only the In-System Storage Program or the Full Conveyance Program would meet all CWP objectives. In addition, other alternatives could result in the same or greater impacts. As described above, the In-System Storage Program and the Full Conveyance Program would have very similar impacts in type, scale, and location, and neither is environmentally superior to the other. Therefore, both the In-System Storage Program and the Full Conveyance Program are considered the environmentally superior alternatives.

19.7 References

Carollo Engineers, Inc. 2014. *City of San Mateo Integrated Wastewater Master Plan*. Prepared for City of San Mateo. October.