



City of Morro Bay
Water Reclamation Facility Project

Agricultural Mitigation Program
SPECIAL CONDITION NO. 5

Final | June 2023

APPROVED
3-19-0463
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Abbreviations

BOD	biochemical oxygen demand
CCC	California Coastal Commission
CDP	Coastal Development Permit
City	City of Morro Bay
CWA	Clean Water Act
District	Agriculture District
Agriculture District	Primary Zoning District for Agriculture
IPR	Indirect Potable Reuse
MGD	Million Gallons per Day
NOI	Notice of Intent
NEP	National Estuary Program
Program	Agricultural Mitigation Program
WWTP	Existing Wastewater Treatment Plant
WRF	New Water Reclamation Facility
RWQCB	Regional Water Quality Control Board
SLCRCD	Coastal San Luis Resources Conservation District
Site	Existing WRF Site
TSO	Time Schedule Order
TSS	Total Suspended Solids
USFWS	U.S. Fish and Wildlife Services

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Section 1

PROJECT BACKGROUND

On July 11, 2019, the California Coastal Commission (CCC) approved Coastal Development Permit (CDP) 3-19-0463 for the City of Morro Bay's (City's) Water Reclamation Facility (WRF) Program and on July 19, 2019, the City received the Notice of Intent (NOI) which included the CCC's specific requirements.

The existing Morro Bay-Cayucos Wastewater Treatment Plant (WWTP) is located at 160 Atascadero Road in Morro Bay and is jointly owned and operated by the City and the Cayucos Sanitary District. The WWTP was originally built in 1954 in a low-lying area near the outlet of Morro Creek to the Pacific Ocean, and it provided wastewater treatment services for the City and to the unincorporated community of Cayucos, located approximately six miles to the north. The WWTP was built before modern state and federal water quality standards, and does not meet federal Clean Water Act (CWA) standards for full secondary treatment. Instead, the WWTP has been operating under a CWA waiver for full secondary treatment requirements for biochemical oxygen demand (BOD) and total suspended solids (TSS) since 1984. In 2018, the City received a Time Schedule Order (TSO) from the Central Coast Regional Water Quality Control Board (RWQCB) requiring compliance with full CWA secondary treatment requirements by February 28, 2023.

Because of the age of the existing wastewater treatment plant, its failure to meet core CWA water quality standards and the possibility of potential fines/penalties for failure to meet the RWQCB's mandate for CWA compliance by 2023, the City has been pursuing a new upgraded wastewater treatment facility for more than a decade. The City and the Cayucos Sanitary District initially proposed to redevelop the wastewater treatment plant at its current site, but the CDP was appealed to the CCC, and ultimately in 2013, the CCC denied the City's redevelopment-in-place proposal on the basis of inconsistencies regarding avoiding coastal hazards, land use priorities, recycled water provisions and public view protections.

Following the CDP denial and given the CCC's direction to the City and the Cayucos Sanitary District on the appropriate path for upgraded wastewater and water reclamation functions, the City developed criteria for a potential Water Reclamation Facility (WRF) Program, including coastal hazards avoidance through inland plant relocation, water quality improvement through compliance with applicable water quality standards, and water supply security through recycled water.

The City's WRF Program meets Coastal Act consistency on many fronts—for the protection and enhancement of coastal resources, for providing essential public services to Morro Bay residents and visitors, and for developing a local, sustainable, natural disaster and drought resilient water supply. The WRF Program is the first Wastewater Treatment Facility in California to be relocated away from Coastal and Flood Hazards and provides the City the ability to reliably treat and safely dispose of wastewater during Tsunami, Flood and other Natural Disasters.

Additionally, the WRF Program provides the City the ability to capture and treat a critical water supply that is currently lost to the ocean and utilize it to enhance groundwater recharge in the Morro Basin through an Indirect Potable Reuse (IPR) recycled water program that will inject advanced purified water to increase water supply availability and prevent seawater intrusion. The WRF Program provides the City with a water supply that will be available regardless of future hydrologic conditions, including climate change, and enables the City to improve the resiliency of its water supply portfolio to mitigate against future droughts and SWP infrastructure failures. Having this local, resilient supply will provide water security for the City, reduce its reliance on Sacramento-San Joaquin Delta imports, improve local

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groundwater quality, and increase the City's potential to provide water to other local water utilities to improve regional water supply reliability and resilience.

Section 2

PROJECT COMPONENTS

Since 2019, the City initiated construction of the Treatment Facility and associated Conveyance facilities (e.g. pipelines, pump stations, etc.) to convey wastewater from the existing WWTP to the Treatment Facility, treated effluent to the ocean outfall for disposal and advanced purified water to the Morro Basin for groundwater recharge via injection (Project).

The WRF Program includes construction of a new one Million Gallon per Day (MGD) wastewater and advanced treatment facility, now named the Water Resources Center, on South Bay Boulevard north of Highway 1, two new lift stations, approximately 3.5 miles of pipelines and wells to inject the purified water. The Water Resources Center and Conveyance facilities are currently operational and the City is working to close-out those components of the project. The Recycled Water or IPR component of the WRF Program is scheduled to come online in 2025.

Section 3

DOCUMENT PURPOSE

This Report outlines the City's proposed Agricultural Mitigation Program (Program), a requirement of the WRF CDP Special Condition 5 (SC-5). The Program describes actions the City proposes to take to mitigate impacts to agricultural operations caused by the Project. The mitigation actions allowed under the WRF CDP are described in SC-5 and include creating an agricultural conservation easement and other measures to facilitate the success of agriculture operations in the Coastal Zone. The requirements describe the potential for an agriculture conservation easement including preservation of farmland of comparable quality to the project site, and of a type that may be at risk of urban development. The easement must be in a 2:1 ratio for the agricultural land lost due to the Project's approval. SC-5 also allows for additional actions to fulfill the mitigation requirements. These actions could involve protecting agricultural lands and operations by implementing measures that support the success of farming operations on land that has similar quality and amount contemplated to be protected under the agricultural conservation easement. Examples of such measures could include offering recycled water as an alternative to costly water supplies for farming operations and enacting city policies that prohibit urban development on agricultural lands.

SC-5 specifies that if the Program identifies other measures to satisfy, either in whole or in part, the Executive Director must assess whether they provide a comparable amount of mitigation to the 2:1 conservation easement requirement to provide for the protection of agriculture lands and operations in and/or around the City of Morro Bay. This Program outlines the proposed measures that the City has taken and is considering undertaking to mitigate against the Project's impacts to agriculture operations. Included in the proposed Program are a 2:1 agriculture conservation easement, policies prohibiting urban growth into agriculture lands and other actions to provide for successful agriculture operations in the Coastal Zone.

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Section 4

AGRICULTURAL MITIGATION PROGRAM

4.1 Program Components

This section of the Program provides an overview of existing and proposed Agricultural Mitigation Program components to offset the impacts to agriculture caused by the Project. The City will continue to work with Coastal Commission Staff to further refine the portfolio of components that will be included in the implementation phase of the Agriculture Mitigation Program.

4.1.1 2:1 Agriculture Conservation Easement

WRF CDP SC-5 states, "the Program shall specify the measures to be taken to mitigate for project agricultural impacts by providing an agricultural conservation easement over agricultural property of a similar quality as the project site, and of a type that is potentially threatened by urban development, at a ratio of at least 2:1 for the loss of agricultural land associated with the approved project..."

To address the requirements of SC-5 for a 2:1 agricultural conservation easement to mitigate against the 6.7 acres of "Grazing Land" or "Farm Land of Local Potential" that were taken out of service for the City's Water Resources Center, the City has placed 19.4 acres of agricultural land into a conservation covenant that will protect the land from development in perpetuity and allow for continued agriculture activities, see additional description below.

For the Water Resources Center, the City purchased a lot with an area in total of 27.6 acres. Of the 27.6 acres, 6.7 acres is required for the developed footprint of the Water Resources Center and 1.5 acres is reserved as an easement access area for the Whale Rock pipeline on the western boundary of the parcel. The remaining 19.4 acres outside of these areas has been placed into a Conservation Covenant that will ensure that the land will be retained in a natural condition to provide suitable upland habitat for the California red-legged frog, a requirement of the US Fish and Wildlife Service (USFWS) for the Project, see Figure 1. The Biological Opinion requires that grazing, the previous form of agriculture operations that occurred on the property, be allowed to continue for the free movement of the California red-legged frogs.

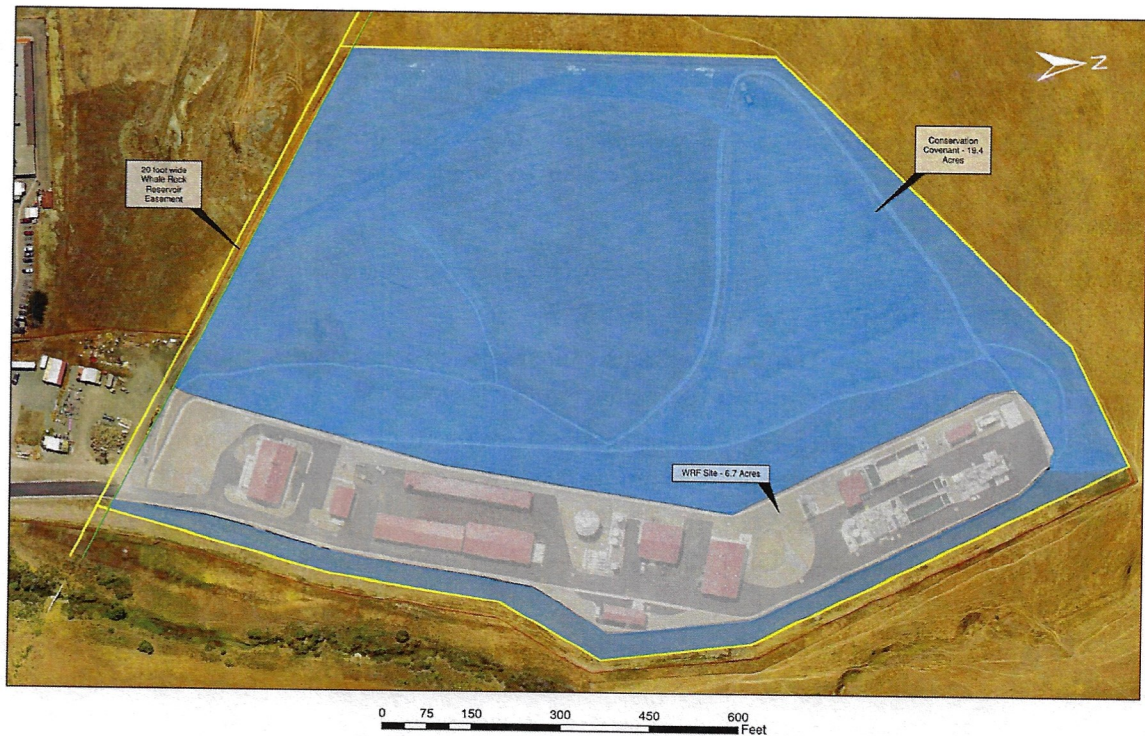


Figure 1: WRF site photo with Conservation Covenant

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4.1.2 City Policies Protecting Agriculture

The City has adopted the following Land Use policies to protect existing and future agriculture land and operations in the city limits and/or the closely surrounding area. These policies restrict urban growth from encroaching on agricultural lands and operations.

4.1.2.1 Zoning

The City's Title 17 Zoning Regulations include a Primary Zoning District for Agriculture (Agriculture District) and excerpts from these regulations are provided below:

17.06.010 Purpose and Applicability – The purpose of the Agriculture District (District) is to provide for the continuation of agricultural uses in suitable areas and for limited nonagricultural uses which may be necessary to support such continued agricultural activities. New development in this District shall also be sited and designed to protect and enhance scenic resources associated with the rural character of agricultural lands. This District implements the Agriculture General Plan/LCP Land Use Plan Land Use Designation.

17.14.040 A. – Agriculture, coastal-dependent, and visitor-serving uses shall have priority over private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry.

4.1.2.2 General Plan/Local Coastal Land Use Plan

The City's General Plan/Local Coastal Land Use Plan includes policies restricting urban development in agriculture lands and excerpts from these regulations are provided below:

POLICY LU-3.2: Hillside Protection. The City's backdrop of undeveloped open hillsides, ridgelines, and agricultural lands, particularly the areas shown as Agriculture and Undeveloped in Figure LU-3, shall be protected.

POLICY LU-4.6: Development Priority. Using private lands suitable for visitor-serving commercial recreational facilities shall have priority over using such lands for private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry.

POLICY CD-1.5: Place Value on Agriculture. Continue to protect agricultural areas within the City's planning area for future agricultural use.

POLICY CD-1.6: Protect Agriculture. Protect the existing agricultural and open space greenbelt surrounding existing developed areas for its agricultural, open space, habitat, and scenic qualities, including to ensure development remains within existing developed areas with adequate public services. When approving development in areas near agricultural zones in the Planning Area, consider potential long-term agricultural impacts and require mitigation as part of development.

POLICY OS-7.2 Place Value on Agriculture. Continue to protect high quality agricultural areas within the City's planning area but outside the city limits for future agricultural use.

4.1.3 Recycled Water for Agriculture

The City is investigating the potential for making recycled water available for agriculture operations in and around the City to offset the costs of potentially more expensive water supplies. As the City further completes the design and permitting for the Recycled Water Facilities component of the WRF, it will continue to evaluate opportunities for when treated wastewater or recycled water could be made available for agricultural purposes. When the City's Indirect Potable Reuse (IPR) Advanced Treatment System is not operating, the City will be discharging treated wastewater to the Pacific Ocean through its existing ocean outfall and it could be beneficial to identify opportunities to utilize this water supply source to reduce agricultural and/or landscape irrigation demands on other water supply sources.

This recycled water resource could be made available either through a recycled water fill station located at the Water Resources Center or other means. Additional investigation into the level of additional treatment that would be required to produce recycled water of sufficient quality for irrigation uses is required, as well as investigation into the cost for infrastructure to allow agriculture users to take delivery of the water.

4.1.4 Pilot Denitrifying Treatment System

Synthetic fertilizers from upstream agricultural have led to impaired levels of Nitrate in the surface water and groundwater in the lower areas of the Chorro Creek Watershed and the Morro Bay Estuary. This has resulted in a decline in water quality and aquatic habitat and led to harmful algal blooms and reduced levels of dissolved oxygen impacting aquatic ecosystems, including those that support Endangered Species Act Threatened Steelhead Trout. However, there are innovative denitrification systems available that can effectively and efficiently treat surface water or groundwater, reducing nitrate concentrations by more than 90% - and below safe drinking water standards.

The City is investigating the potential to partner with the Coastal San Luis Resources Conservation District (SLCRCD) and/or the Morro Bay National Estuary Program (NEP) to install a denitrification system that could treat groundwater from existing City unused groundwater wells adjacent to Chorro Creek. The groundwater, once treated, could be discharged to Chorro Creek or percolated into the groundwater basin. This process would lead to a watershed-wide reduction in groundwater nitrates, leading to improved surface water quality and aquatic habitat.

4.1.5 Rangeland Enhancement Activities

Rangeland for cattle grazing is the primary agriculture land use in the Chorro Creek watershed where the Water Resources Center is located. Investments in practices and infrastructure on rangeland ensures that the lands surrounding the Water Resources Center assist in allowing ranchers to maintain sustainable operations and protect water quality. Installation of cattle exclusion fencing, paired with installation of stock water infrastructure, provides cattle a source of water other than riparian areas and reduces nutrient and sediment loading to creeks that discharge directly to the Morro Bay estuary.

Compost application to rangeland soils is a multi-benefit practice, increasing soil health, water holding capacity, forage production, and CO2 sequestration potential. Applying a .25" layer of compost to soils increases soil organic matter and improves soil structure. This in turn generates additional forage production, which benefits cattle health and yield, as well as increases the soil's resilience to drought, wildfires, and erosive storm events. Healthier soils are also able to sequester more carbon dioxide, a potent greenhouse gas contributing to climate change.

Improving rural ranch roads reduces erosion and sediment loading into creeks and increases the sustainability of the ranching operation. By creating hydrologically disconnected ranch roads through the installation of water bars, rolling dips, out-sloped road surfaces, and appropriately sized culverts, erosion is mitigated, maintenance requirements are reduced, and water quality is protected. Any combination of the above-described enhancements would achieve both agricultural and water quality benefits.

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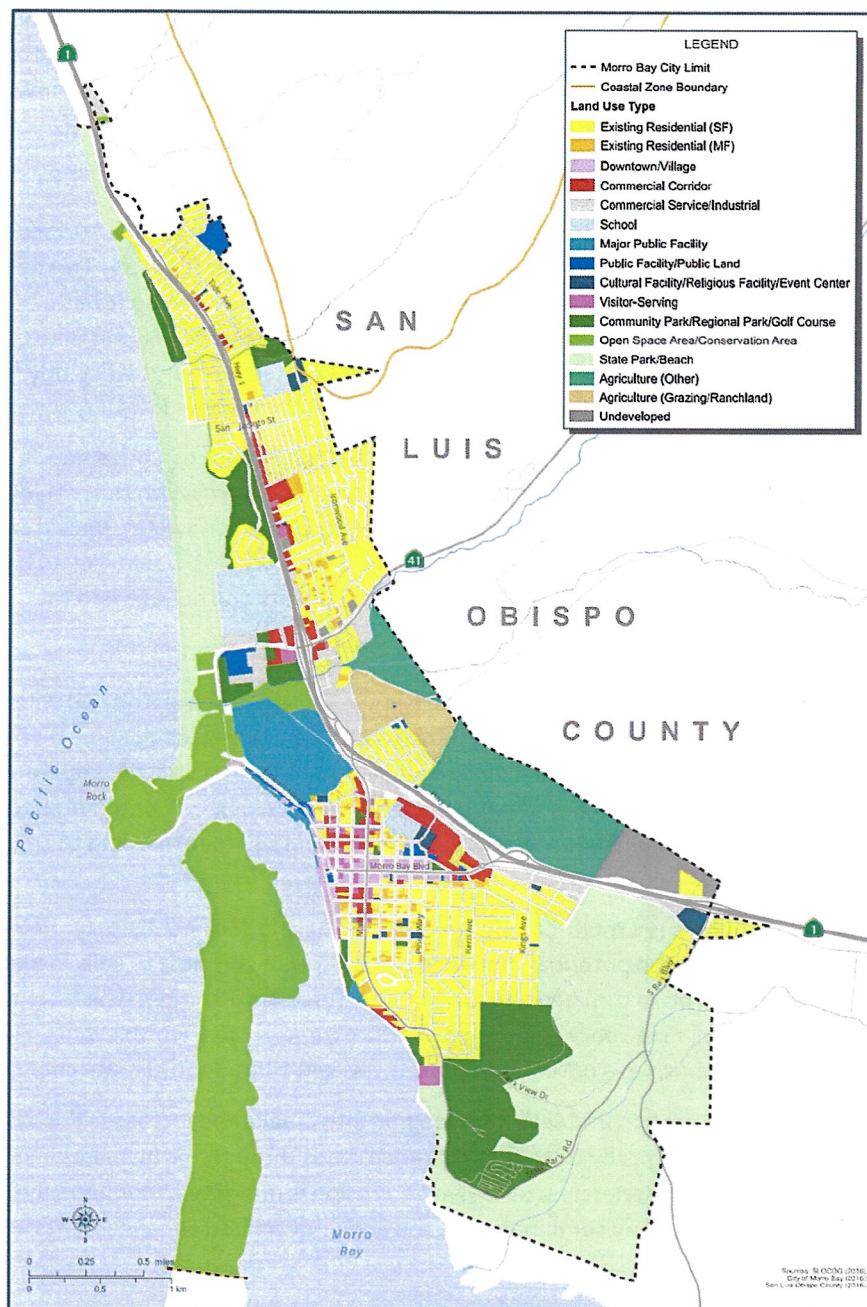


Figure 2: Figure LU-3 from the Morro Bay General Plan/Local Coastal Program Land Use Plan (May 2021)

4.2 Implementation Plan

To provide an overview of the future steps associated with the Program, the City prepared Table 1 below that outlines the current status, estimated implementation timeline, estimated costs and next steps associated with each of the potential different components of the Program. As described previously, the City will continue to work with Coastal Commission Staff to identify the most effective measures for benefitting agriculture operations in and around the city

limits and further develop the portfolio of components that will be included in the implementation phase of the Program to meet the CDP SC-5 requirements.

Table 1. Agriculture Mitigation Program Implementation Plan

Mitigation Measure	Current Status	Estimated Implementation Timeline	Estimated Cost	Next Steps
2:1 Agriculture Conservation Easement	Complete	NA	NA	NA
City Policies Protecting Agriculture	Complete	NA	NA	NA
Recycled Water for Agriculture	Planning Phase	2 years	TBD	Continue design and permitting of IPR system and evaluate non-potable recycled water opportunities
Pilot Denitrifying Treatment System	Planning Phase	6 month – 2 years	\$50,000 - \$100,000	Continue discussion with the SLCRCD/NEP on partnership opportunities
Rangeland Enhancement Activities	Planning Phase	6 months – 2 years	\$10,000 - \$100,000	Continue discussion with the SLCRCD/NEP on partnership opportunities

4.3 Compliance Report

A compliance report shall be submitted to the Executive Director of the Coastal Commission for the Recycled Water for Agriculture, Pilot Denitrifying Treatment System, and Rangeland Enhancement Activities by May 1, 2025. The compliance report shall include the current status of each mitigation measure, the estimated time until completion (if not already completed), and the dollar amount spent per mitigation measure to date with a cost projection for any incomplete components. Any incomplete mitigation measure may require further action and compliance reporting at the discretion of the Executive Director. The program will be considered complete when the proposed mitigation measures are determined by the Executive Director to provide a commensurate amount of mitigation as required by Special Condition 5, and no additional measures are required.

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