MITIGATION AND MONITORING PROGRAM
Laguna Treatment Plant Flood Protection Project

Existing Regulation or Mitigation Measure	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Monitoring Compliance Record (Name/Date)
Existing Regulations and BMPs				
Implementation of Geotechnical Design Recommendations The Project will be designed and constructed in compliance with the site-specific recommendations made in Design Report, *Geotechnical Investigation, Proposed Laguna Treatment Plant Flood Wall* (Brelje & Race 2020). This will include design in accordance with recommendations for re-working and properly placing the existing man-placed fill beneath the flood berm alignment, providing adequate support for the floodgate, and inclusion of a retaining wall on the east side of the Llano Road grade rise. The geotechnical recommendations will be incorporated into the final plans and specifications for the Project and will be implemented during construction.	Incorporate recommendations into final plans and specifications.	City of Santa Rosa	Verify geotechnical design recommendations are incorporated specifications, prior to bid.	
Implementation of Air Quality Control Measures during Construction To limit dust, criteria pollutants, and precursor emissions associated with the construction activity, the following Bay Area Air Quality Management District (BAAQMD) recommended Basic Construction Measures will be included in construction contract specifications and required during implementation of the Project: • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas and unpaved access roads) shall be watered two times per day; • All haul trucks transporting soil, sand, or other loose material off-site shall be covered or shall have at least two feet of freeboard; • All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping shall be prohibited; • All vehicle speeds on unpaved areas shall be limited to 15 miles per hour; • All paving shall be completed as soon as possible after trenching work is finished; • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points;	Incorporate into final plans and specifications.	City of Santa Rosa	Verify in specifications prior to bid. Check jobsite compliance daily or as necessary.	

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• All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation; • A publicly visible sign shall be posted with the telephone number and person to contact at the City regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.				
Implementation of Stormwater Pollution Prevention Plan The Project would disturb more than an acre, therefore the City will be required to seek coverage under State Water Resources Control Board (Water Board) Order No. 2009-0009-DWQ, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities. The City will submit permit registration documents (notice of intent, risk assessment, site maps, SWPPP, annual fee, and certifications) to the Water Board. The SWPPP will address pollutant sources, best management practices, and other requirements specified in the Order. The SWPPP will include erosion and sediment control measures, dust control practices to prevent wind erosion, sediment tracking, and dust generation by construction equipment. A Qualified SWPPP Practitioner will oversee implementation of the Project SWPPP, including visual inspections, sampling and analysis, and ensuring overall compliance.	Incorporate into final plans and specifications.	City of Santa Rosa	Verify in plans and specifications, prior to bid. Check jobsite compliance daily or as necessary.	
Implementation of Applicable Community Climate Action Plan Measures The majority of GHG reduction measures within the Community Climate Action Plan apply to land use projects and therefore would not apply to this infrastructure project. The exception is Measure 9.2 Construction Emissions, which promotes reducing emissions from heavy-duty construction equipment by limiting idling and utilizing cleaner fuels, equipment, and vehicles. To ensure that the Project is consistent with Measure 9.2, the following action items shall be incorporated into the Project design and/or implemented during construction.Sand bags will be in place around manholes. Sand bags will be placed around any ditches or fill/vent pipes where the slurry material is placed into the sewer mains. • 9.2.1 Construction vehicle shall minimize idling times either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes or less (as required by the California airborne toxics control measure Title 13, Section 2485 of CCR). Provide clear signage at all access points to remind contractors of idling restrictions.	Incorporate into final plans and specifications.	City of Santa Rosa	Verify in specifications prior to bid. Check jobsite compliance as necessary.	

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• 9.2.2 Construction equipment shall be maintained in accordance with manufacturer's specifications. • 9.2.3 Contractor shall be required to implement one of the following measures, as feasible and appropriate to the construction project: - Substitute electrified equipment for diesel- and gasoline-powered equipment where practical. - Use alternative fuels for construction equipment onsite, where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel. - Avoid the use of on-site generators by connecting to grid electricity or utilizing solar-powered equipment.				
Compliance with City of Santa Rosa Tree Ordinance The City will comply with Chapter 17-24 Trees, of the City's Municipal Code which regulates the removal of heritage and non-heritage trees and requires tree replacement on-site or the payment of an in-lieu fee. The City has identified areas within the LTP for planting replacement trees. The City will pay the in lieu fee as allowed in the City of Santa Rosa Tree Ordinance for any replacement trees that will not fit within the LTP site.	Incorporate tree planting into final plans and specifications.	City of Santa Rosa	Verify in plans and specifications prior to bid. Confirm trees have been planted post construction.	
Compliance with Municipal Separate Storm Sewer System (MS4) Permit The Project will create or replace more than 10,000 square feet of impervious surface and therefore will be required to incorporate low impact development (LID) bioretention features in accordance with the Low Impact Development Technical Design Manual. The design goal of 100% capture and treatment for the new and existing impervious developed portions of the Project footprint will be achieved by routing the event runoff through four LID bioretention features. The LID features are designed to retain the volume of runoff from the newly developed portion of the site resulting from the 1-inch 24-hour storm event. Excess runoff will be diverted into the on-site storm drain system. The sizing of the features and treatment requirements have been calculated using City of Santa Rosa Storm Water BMP Calculator, ver. 8.11.0. Based on the current Project design, approximately 11,000 square feet of bioretention area will be provided. If the borrow areas are covered with an impervious surface, additional bioretention will be provided in accordance with the MS4 permit.	Incorporate MS4 requirements into final plans and specifications.	City of Santa Rosa	Verify in plans and specifications prior to bid.	

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Mitigation Measures				
BIO-1: Protect California Tiger Salamander and CTS Habitat during Construction Mitigation for impacts to CTS habitat shall be as stipulated in the *Santa Rosa Plain Conservation Strategy* (USFWS 2005) or any subsequent guidance adopted by USFWS. To prevent loss of CTS habitat within the Santa Rosa Plain, the USFWS and CDFW require that mitigation lands be purchased for the acreage that is being disturbed. The Project is located both within and outside 2,200 feet of a known breeding site, and the City shall compensate for loss of CTS habitat by purchasing mitigation credits at a ratio of 2:1 and 1:1 respectively, or as required by USFWS and CDFW. The mitigation shall be purchased from a mitigation bank that is within the Santa Rosa Plain for the species. Minimization and avoidance measures contained in the Project's Biological Opinion with USFWS and Incidental Take Permit from the CDFW shall be implemented during construction within areas where CTS may occur. These measures may include but are not limited to: • A USFWS/CDFW-approved biological monitor will be on site during work in potential CTS habitat. • The biological monitor will conduct a training session for all construction workers before work begins on the Project. • City or its subcontractor shall install temporary exclusion fencing to prevent the CTS from dispersing into the Project site. Exclusion fencing will be at least three feet high and the lower six inches of the fence will be buried in the ground to prevent animals from crawling under. The remaining 2.5 feet will be left above ground to serve as a barrier for animals moving on the ground surface. The barrier shall be designed to allow the CTS to leave the Project area using a one-way funnel, ramp or other method approved by the CDFW. • An erosion and sediment control plan will be implemented to prevent impacts of wetland restoration and construction on habitat outside the work areas. • Access routes and number and size of staging and work areas will be limited to the minimum necessary to achieve the Project goals. Routes and boundaries of the roadwork will be clearly marked prior to initiating construction/grading.	Incorporate requirements into final plans and specifications. Conduct worker training session. Biological monitor to clear site where ground disturbance occurs in CTS habitat. Install exclusion fencing and erosion control BMPs	City of Santa Rosa	Verify in plans and specifications prior to bid. Conduct training prior to the start of ground disturbance. Clear site prior to the start of ground disturbance Verify correct installation of exclusion fencing and BMPs prior to start of construction and check jobsite compliance daily or as necessary.	

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• All foods and food-related trash items will be enclosed in sealed trash containers at the end of each day and removed completely from the site once every three days. • No pets will be allowed anywhere in the project site during construction. • A speed limit of 10 mph on dirt roads will be maintained, if applicable. • All equipment will be maintained such that there will be no leaks of automotive fluids such as gasoline, oils, or solvents. • Hazardous materials such as fuels, oils, solvents, etc., will be stored in sealable containers in a designated location that is at least 200 feet from aquatic habitats. All fueling and maintenance of vehicles and other equipment and staging areas will occur at least 50 feet from any aquatic habitat. • Project areas temporarily disturbed by construction activities will be revegetated. • If CTS are found, the City shall coordinate with the USFWS and CDFW to prevent take of individuals and mitigate for loss of habitat.				
BIO-2: Protect Migratory and Nesting Birds The City shall protect migratory and nesting birds. Seasonal avoidance of the February 1 to August 31 nesting season shall be utilized when feasible, to avoid impacts on bird species protected under the federal MBTA and California FGC that may be nesting within the Project site or adjacent area during construction. Removal of trees and clearing of shrubs or other vegetation for construction shall be conducted, if possible, during the fall and/or winter months from September 1 to January 31, outside of the active nesting season. If vegetation removal cannot be confined to work during the non-nesting season, the City shall have a qualified ornithologist conduct pre-construction nesting surveys within, and adjacent to, the Project construction footprint, to check for nesting activity of native birds. The ornithologist shall conduct a preconstruction survey within the seven-day period prior to vegetation removal. If vegetation removal work lapses for seven days or longer during the nesting season, a qualified ornithologist shall conduct a supplemental avian survey before Project work is reinitiated. If an active nest is found, the qualified ornithologist would determine the extent of an appropriate construction free buffer zone to be established around the nest and/or operational restrictions in consultation with the CDFW. Buffer zones would be delineated with flagging and maintained until the nests have fledged or nesting	Conduct preconstruction nesting surveys if grading or vegetation removal occurs during nesting season. Implement recommended buffers and protection measures as necessary.	City of Santa Rosa	Verify surveys are conducted within 7 days of start of construction. Verify disturbance buffers and fencing requirements are installed, if needed.	

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activity has ceased. Buffer sizes would take into account factors such as: (1) roadway, LTP, and other ambient noise levels, (2) distance from the nest to the LTP facilities and distance from the nest to the active construction area, (3) noise and human disturbance levels at the construction-site at the time of the survey and the noise and disturbance expected during the construction activity, (4) distance and amount of vegetation or other screening between the construction-site and the nest, and (5) sensitivity of individual nesting species and behaviors of the nesting birds.				
BIO-3: Protect Wetland Resources during Construction The City shall clearly identify wetland areas to be preserved within and abutting the Project footprint with high-visibility construction fencing or markers (e.g., lathe or pin flags) before site preparation. These wetland exclusion areas will be marked appropriately on the construction documents, as defined in the Preliminary Jurisdictional Delineation dated July 2021. Construction will not encroach upon these preserved jurisdictional wetland areas. No construction activity, traffic, equipment, or materials will be permitted in fenced wetland areas. The fencing will be maintained throughout the construction period. Exclusion fencing and markers will be removed following the completion of construction activities.	Include wetland exclusion areas into final plans. Install exclusion fencing.	City of Santa Rosa	Verify in plans prior to bid. Install fencing prior to start of ground disturbance. Check jobsite compliance daily or as necessary.	
BIO-4: Compensate for Loss of Wetland Resources The City shall avoid fill of wetland resources, to the extent feasible. If fill cannot be avoided, the City shall compensate for the loss of seasonal and perennial wetland habitat through the purchase of wetland credits at a ratio of 1:1, from an approved mitigation bank within the Santa Rosa Plain so that there is no net loss in wetlands. Alternatively, on-site restoration and/or enhancement activities can be implemented through a Wetland Restoration and Enhancement plan that quantifies the restoration and enhancement areas, details the activities to be implemented (removal of non-natives, enlarging existing wetland features, removal of existing fill, etc.), identifies the benefits of the activities, and provides for monitoring to ensure long-term success of the enhancement and restoration activities. Required permits from the U.S. Army Corp of Engineers and the North Coast Regional Water Quality Control Board shall be received prior to the start of on-site construction activity. The City shall ensure any additional avoidance measures outlined in the permits are implemented.	Purchase credits equivalent to 1:1 ration. OR Perform on site restoration and enhancement.	City of Santa Rosa	Purchase wetland credits prior to end of construction. Verify restoration and enhancement activities have been complete prior to end of construction.	

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TCR-1: Protect Unknown Tribal Cultural Resources The City shall prepare a Tribal Cultural Resources Inadvertent Discovery Treatment Plan for the LTP. The Treatment Plan shall be reviewed by the City and FIGR and approved by the City prior to the start of Project construction. Alternatively, the City may utilize and implement a Treatment Plan prepared by the Federal Lead Agency, approved through the Section 106 process, and meets the criteria of this mitigation measure. The Treatment Plan shall detail recommended steps for protecting, preserving, or data recovery for archaeological and tribal cultural resources, if found. The Treatment Plan shall include one or more of the following strategies to ensure that appropriate actions to protect tribal cultural resources are taken, as described below. <u>Protection and Preservation</u> The preferred treatment of an archaeological resource is protection and preservation. Protection can be achieved by either avoidance (not developing within the boundaries of an archaeological resource), by covering an archaeological resource with geo-fabric and sufficient fill to protect it during and after construction, or by reducing/restricting development within the boundaries of a resource. <u>Pre-Construction Data Recovery</u> For significant archaeological resources that are not protected and preserved in place, data recovery within a sensitive area to be affected is necessary. Data recovery must be performed by qualified archaeologists using standard archaeological techniques. Data recovery must include processing and analysis of recovered cultural materials using appropriate archaeological methods, and preparation of the recovered materials for permanent disposition (e.g., re-burial in a location that would be protected in perpetuity) per the requirements of the Treatment Plan. <u>Construction Monitoring</u> Archaeological monitoring shall be instituted for ground-disturbing activities associated with construction. Monitoring shall be performed by a qualified archaeologist and may also include a Native American monitor, if requested by the local tribe affiliated with the area, and will consist of directly watching the excavation, grading, trenching, and other earth-moving processes. Monitoring shall continue on a daily basis whenever depth of excavation exceeds six feet or for other reasons identified by the monitoring archaeologist or tribal representative.	Incorporate compliance requirements into specifications. Prepare Treatment Plan, if needed, or implement Plan prepared by USEPA.	City of Santa Rosa	Verify in specifications prior to bid. Implement Plan as needed.	

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In the event that archaeological deposits are encountered, the piece of equipment that encounters the suspected materials must be stopped, and the find inspected by the monitoring archaeologist. If the deposit contains Historic Resources, Unique Archaeological Resources, or Tribal Cultural Resources as defined by CEQA, all work must be stopped in the immediate vicinity and the archaeologist shall undertake data recovery of the deposit. Data recovery efforts must follow standard archaeological methods. Work may proceed after a find has been appropriately addressed and a qualified archaeologist and tribal representative agree that no further damage would result.				