COUNCIL AGENDA: 09/17/19
FILE: 19-801
ITEM: 7.1

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: Kerrie Romanow
Matthew Cano

SUBJECT: SEE BELOW

DATE: August 21, 2019

Approved [signature] Date 9-3-19

SUBJECT: APPROVAL OF A DESIGN-BUILD CONTRACT WITH WALSH CONSTRUCTION COMPANY, LLC FOR THE DIGESTED SLUDGE DEWATERING FACILITY PROJECT AT THE SAN JOSÉ-SANTA CLARA REGIONAL WASTEWATER FACILITY

RECOMMENDATION

(a) Adopt a resolution adopting an Addendum to the Environmental Impact Report for the San José-Santa Clara Water Pollution Control Plant Master Plan Project in accordance with the California Environmental Quality Act (CEQA), as amended, and adopting a related Mitigation Monitoring and Reporting Program.

(b) Approve the design-build contract with Walsh Construction Company, LLC for the Digested Sludge Dewatering Facility at the RWF in an amount not to exceed $7,492,564 for the performance of Preliminary Services under the contract.

(c) Approve a design contingency in the amount of $749,256 for City-approved changes to the scope of Preliminary Services.

(d) Adopt a resolution authorizing the City Manager or his designee to:

  (1) Negotiate and execute separate amendments to the contract to direct Walsh Construction to repair critically deteriorated infrastructure that requires immediate repair, which may be discovered during subsurface investigations, in an amount not to exceed $500,000.

  (2) Negotiate and execute separate amendments to the contract to allow Walsh Construction to proceed with discrete portions of the Design-Build Work (referred to as "Early Work Packages") prior to the City's execution of the Definitive Contract Amendment in an amount not to exceed $10,800,000, which amounts will be subject to the base Guaranteed Maximum Price;

  (3) Negotiate and execute change orders in excess of $100,000 up to the amount of the approved contingency for changes to the scope of the Preliminary Services and/or Early Work Packages.

OUTCOME

Approval of staff's recommendations will allow for the performance of Preliminary Services and subsurface investigations for the Digested Sludge Dewatering Facility Project, by Walsh Construction Company, LLC, pursuant to the design-build contract. In addition, schedule driven activities could be initiated as early work packages, allowing for refinement of the Guaranteed Maximum Price (GMP) before it is presented to Council in 2020. The Preliminary Services contingencies will provide funding for additional work and unforeseen conditions that may be necessary for the effective completion of the Preliminary Services.

EXECUTIVE SUMMARY

The Digested Sludge Dewatering Facility (Project) will provide a new biosolids mechanical dewatering facility (Facility) to allow City to transition out of the existing solar drying. The current solar operation uses 750 acres of land and requires four years to dry sludge biosolids. The new dewatering facility will be built in an area of approximately 10 acres and will drastically reduce the process time to less than one day.

Construction of the new Facility will position the RWF to meet multiple objectives established previously in the Plant Master Plan (PMP) and the Biosolids Transition Strategy, as well as to position the facility to respond to emerging regulatory changes, specifically Senate Bill (SB) 1383. The Project is intended to: 1) reduce the footprint of the biosolids processing area and enable other land uses, 2) create flexibility to respond to future regulatory changes governing the allowable disposal of treated biosolids, specifically the potential impact of SB 1383, which calls for diversion of organics, including biosolids, from landfills, and 3) reduce odors in the community.

The dewatered cake to be produced in the new Facility is a desirable end product, which has been confirmed by market surveys completed by staff and their consultants, and it could be used for multiple beneficial uses, including composting, land application, as a component for liquid fertilizers and production of soil amendments.

In January 2016, the Director of Environmental Services and Director of Public Works approved the use of the progressive design-build (PDB) delivery method for the Project due to its complexity, the need to coordinate with multiple other projects, and uncertain requirements for integration with existing facilities. The PDB delivery method provides a single point of responsibility for both design and construction and increases the potential for innovative solutions to complex issues. Brown and Caldwell is assisting with the process by serving as the Owner's Advisor for the Project, providing support to City staff for the resolution of technical issues.

A design-build contract has been negotiated with Walsh Construction for Preliminary Services, which includes the completion of preliminary investigations required for the project, development of the design to a 60-percent level of completion, and development of the Guaranteed Maximum Price (GMP) that the City will pay to build the Facility. The tasks identified as part of these Preliminary Services are expected to be completed in 18 months.

Based on the price and contract terms established as part of the Preliminary Services, the Definitive Contract Amendment (DCA) will include the requirements to complete the construction, start up and commissioning and support services for this Project. Construction of the project is expected to take approximately 36-months, including site preparation activities. The contract also requires enrollment in the City's Owner Controlled Insurance Program (OCIP). The project is not subject to the Citywide Project Labor Agreement (PLA) since it was procured prior to the Council adopting these requirements.

The contract allows for the issuance of Early Work Package (EWP) during the Preliminary Services to shorten the overall project schedule and reduce risk, both of which have the potential to reduce overall project costs. Staff has identified the need for two EWPs to: 1) prepare the site for construction (including rough grading, site surcharge and utility connections) and 2) accelerate the completion of final design in preparation for GMP. Staff is requesting approval of Preliminary Services, authorization to negotiate and execute two EWPs, and approval of associated City-held contingencies as summarized below:

Preliminary Services (Design Phase, Design-Builder)	$7,492,564
Design Contingency (Owner-Controlled)	$749,256
Infrastructure Repair Contingency (Owner-controlled)	$500,000
Early Work Package No. 1 (Site Work) Not-to-Exceed Limit	$5,760,000
Early Work Package No. 2 (Final Design)	$5,030,000
Total Not-To-Exceed Amount	**$19,541,820**

The Project's current budget can be broken down as follows:

Preliminary Services (Design Phase, Design-Builder)	$7,492,564
Design Contingency (Owner-Controlled)	$749,256
Planning Level Construction Phase/GMP	$85,129,000
Construction Contingency @15% (Owner-controlled)	$12,769,000
Total Design and Construction	**$106,139,820**
Project Delivery	$21,829,822
Total Project Budget	**$127,969,642**

Completion of the Basis of Design Report (BDR) during early 2020 and 30% design in mid-2020 will allow Walsh Construction to provide a more accurate GMP estimate. Staff will return to Council in fall 2020 to recommend a GMP not-to-exceed amount and seek delegation of authority to the City Manager to negotiate and execute the final DCA and any additional EWPs that may be identified.

BACKGROUND

Project History and Purpose

The RWF is an advanced wastewater treatment facility that treats an average of 110 million gallons per day of wastewater collected from eight South Bay cities and four special districts. Biosolids resulting from the wastewater treatment process are first digested in anaerobic digesters, resulting in approximately 85 dry tons of digested sludge per day, and then transferred to open-air lagoons. The stabilization process in the open air lagoons lasts approximately three-and-a-half years, then the biosolids are moved to drying beds for another six months, resulting in Class A biosolids that are transported to the adjacent Newby Island landfill for use as an alternative daily cover (ADC) material.

In 2008, the RWF embarked on a master planning process to rehabilitate and upgrade its facilities and to explore potential process changes. The Plant Master Plan (PMP), adopted by the San Jose and Santa Clara City Councils in 2013, recommended a comprehensive Biosolids Management Plan (BMP) that would transition from the current open lagoons and drying bed process to an enclosed, mechanical dewatering and drying facility with the resulting dewatered biosolids hauled off-site. This transition was recommended to:

- Reduce potential odors in the community,
- Position the RWF to have multiple and diversified disposition options besides use of biosolids as ADC,
- Reduce the footprint of the lagoons and drying beds area to enable other land uses, and
- Create flexibility to respond to future regulations governing the disposal of treated biosolids.

An additional recommendation was to prepare a Biosolids Transition Strategy to further evaluate specific issues regarding implementation of this biosolids transition. This strategy was completed in 2014 and Council approved recommendations identified in this document in December 2014 and June 2015. One of the key recommendations was to proceed with the Project.

A summary of the studies and recommendations associated with the biosolids transition were presented previously as part of the information memo dated March 2, 2018, which is included as Attachment A to this memorandum.

As noted in Attachment A, while the closure of Newby Island Landfill is no longer an imminent risk to current RWF biosolids operations, recent legislation (California enacted Senate Bill 1383) that could possibly eliminate the option to send biosolids to Newby Island Landfill as early as January 1, 2022, has increased the urgency for the RWF to diversify its disposition options.

Construction of the new Facility will position the RWF to have diversified and multiple disposition options for its biosolids. Dewatered cake is a desirable end product based on previously completed market surveys and will ensure that the RWF has disposition options in compliance with the pending SB 1383 regulations. The new Facility will also reduce odors in the community and allow the RWF to reduce its biosolids processing operational footprint from 750 acres to 10 acres.

Project Description

The Project will construct a new dewatering building to house mechanical dewatering equipment; sludge and dewatered cake storage, conveyance, and truck load-out facilities; chemical feed station; pump station to return centrate to headworks; operations and maintenance space and storage; and associated mechanical, electrical, and instrumentation equipment. The Project scope will also include new sludge transfer pumps and sludge storage tanks; a new sludge export pump station and pipelines; vehicle storage and parking; and general civil work. The proposed sludge pumping facilities will transfer sludge from the existing digesters to the new dewatering building on the east side of Zanker Road, as illustrated in Attachment B. The dewatered sludge will be loaded into trucks and hauled away for a variety of beneficial re-uses. The Facility will be designed to process a wide range of digested sludge flows, loads, and characteristics. It will allow for future expansion to ultimate flow and load conditions and to accommodate potential future biosolids processing facilities.

Project Delivery Method

On January 1, 2015, Senate Bill 785 (Wolk) took effect and allowed the use of design-build by regional facilities, like the RWF, for projects valued over $1,000,000 as long as their respective governing bodies approved. Subsequently, on March 24, 2015, City Council adopted a resolution approving the use of low bid design-build and progressive design-build (PDB) as possible delivery methods for projects in the RWF's CIP and delegated authority to the Directors of Environmental Services and Public Works to determine the appropriate delivery method for each project. In January 2016, the PDB delivery method was determined to be appropriate for the Project due to its complexity, the need to coordinate with multiple other projects, and uncertain requirements for integration with existing facilities. Brown and Caldwell is assisting with the process by serving as the Owner's Advisor for the Project.

ANALYSIS

Design-Builder Selection Process

The City used a two-step selection process for procurement of the design-builder, in accordance with Public Contract Code, Sections 22160-22169 (State Law), which governs certain local agency design-build projects.

The first step of the selection process involved shortlisting design-builders based on qualifications. As part of this step, a Request for Qualifications (RFQ) was advertised on March 16, 2018, and Statements of Qualifications (SOQs) were received on May 9, 2018 by interested proposers. The RFQ consisted of a pre-qualification questionnaire intended to address the minimum general requirements that should be met by design-build firms (acceptable safety record, licenses and registrations, workers compensation history, etc.) and a requirement to list key personnel including their project experiences. The RFQ also required that the design-build firm had completed design-build projects similar in nature to the Project and were financially capable of performing the work.

Four design-build firms submitted SOQs:

- AECOM, as Engineer and General Contractor
- HDR Engineering, with Overaa Construction as General Contractor
- Jacobs Engineering, with Kiewit Construction as General Contractor
- Walsh Construction, with Black & Veatch as Engineer

Based on the submittals, the City determined that all four firms were qualified and eligible to submit proposals.

The second step of the selection process consisted of the submission and evaluation of technical proposals. A Request for Proposals (RFP) was issued on October 10, 2018 and the City received proposals from three firms on December 14, 2018. AECOM did not submit a proposal.

State Law allows the use of "best value" as a design-builder selection method so that competitive proposals can be evaluated by using the criteria and selection procedures specifically identified in the RFP. "Best value" selection is done through an evaluation of objective criteria that may include, but not be limited to price, features, functions, life-cycle costs, experience, and past performance. Responsive proposers are ranked based on a determination of the best value provided to the City. Key elements reviewed and scored during the RFP process included:

- Technical and management approach to meet Project objectives;
- A design-build price consisting of a Preliminary Services fee, general conditions fee, and design-builder fee;
- Approach to how life-cycle cost will be addressed during the Project cost evaluation process;

- A bonding capacity of at least $100 million;
- Ability to meet all insurance mandates as dictated by the RFP;
- Strategy for local subcontracting, commitment to providing a skilled and trained workforce, and labor peace; and
- The City's small and local business preference.

The selection panel, consisting of representatives from Environmental Services, Public Works, and a local labor union, evaluated the written proposals based on the key elements above and held interviews with the three candidate firms on January 29, 2019. Evaluations were based on the following criteria and scoring:

Evaluation Criteria	**Weight**
SOQ Score Carryover	20
Project Approach	25
Review of Indicative Design	5
Subcontracting & Workforce	5
Life-Cycle Cost	2
Price	13
Local Business Preference	5
Small Business Preference	5
Interview	20
Total	100

The rounded scores and final ranking were as follows:

Evaluation Criteria	**HDR**	**Jacobs/CH2M**	**Walsh**
SOQ Score Carryover	15.6	14.8	15.5
Project Approach	20.0	18.4	23.5
Review of Indicative Design	4.0	3.6	5.0
Subcontracting & Workforce	3.8	3.8	4.3
Life-Cycle Cost	1.7	1.0	1.5
Price	12.7	8.9	11.3
Local Business Preference	5.0	5.0	5.0
Small Business Preference	0.0	0.0	0.0
Interview	16.5	12.7	17.9
Total	79.3	68.2	84.0
Ranking	2	3	1

The selection panel unanimously ranked Walsh Construction as the highest ranked firm to execute the Project. While all three firms were well qualified, Walsh Construction distinguished itself from the other proposers during the interview phase by demonstrating a clear understanding of Project objectives, outlining innovative approaches to completing the Project, and confirming their highly experienced professionals were dedicated to the success of the Project. The Walsh Construction/Black and Veatch team has extensive design-build experience, including the design and construction of similar dewatering facilities. Walsh Construction has a local Bay Area office in Concord and has been successfully working with the City for the last three years on the Digester and Thickener Facilities Upgrade project. In addition, they have previously completed a total of seventeen (17) treatment plant projects with their engineering partner, Black and Veatch.

Design-Builder Contract Negotiations

A draft design-build agreement was included as part of the RFP process. This agreement was initially developed by City staff and the City Attorney's Office in consultation with attorneys from the City's outside design build counsel, Hawkins Delafield & Wood LLP (Hawkins). This agreement has been previously used in two other design build projects at the RWF, the Cogeneration Facility and Headworks projects, and it was tailored to accommodate specific requirements of the Project. Attachment C contains the key contract elements and terms.

Upon establishment of the proposer rankings, City staff negotiated all aspects of the design-build contract with Walsh Construction in order to finalize the terms of the agreement. Negotiations started in March 2019 and were completed in August 2019. The negotiations were completed with the intent of achieving the following goals:

- Develop a fixed and fair fee for the Preliminary Services consistent with industry standards;
- Ensure the City receives services commensurate with cost;
- Establish a detailed scope of services and realistic schedule and budget requirements;
- Establish a collaborative relationship with the Walsh Construction that will continue during the design process;
- Allow for aspects that will allow innovation to maximize value to the City; and,
- Equitably allocate risk and reward.

Although the terms of the contract apply to the entire Project, staff is requesting approval of only the Preliminary Services and authorization to negotiate two EWPs and associated City-controlled contingencies as summarized below:

Preliminary Services (Design Phase, Design-Builder)	$7,492,564
Design Contingency (Owner-Controlled)	$749,256
Infrastructure Repair Contingency (Owner-controlled)	$500,000
Early Work Package No. 1 (Site Work) Not-to-Exceed Limit	$5,770,000
Early Work Package No. 2 (Final Design) Not-to-Exceed Limit	$5,030,000
Total Not-To-Exceed Amount	**$19,541,820**

The Preliminary Services to be performed under this contract will include project management, preliminary investigations; preparation of Basis of Design Report; completion of detailed design to 60 Percent; development of Definitive Project Submittal (DPS) and GMP; and completion of the DCA.

As part of their proposal submittal, Walsh Construction was required to submit a lump-sum fee for the Preliminary Services reflecting the scope included in the RFP; this fee was used as the starting point for the negotiations with the City. As part of the negotiation process, City staff identified additional project requirements for the project, mostly related to additional preliminary investigations requirements. These studies and investigations are necessary to inform the design phase of the Project and reduce risks to the City during the construction phase. Preliminary investigations to be completed include geotechnical and hydrologic analysis, hazardous materials investigations, soils testing, underground utilities investigations, odor modeling and dewatering equipment testing. The final lump sum fee that is presented in this Memorandum reflects these City-identified additions. An owner-controlled construction contingency of $500,000 is being recommended in the event that the utility investigations, performed during Preliminary Services, discover critically damaged infrastructure that require immediate repair. This situation has been previously encountered in other recent projects at the RWF; therefore, Staff feels it is prudent to include this allowance for the Project.

Staff recognizes that despite the best efforts that have been made to develop an all-inclusive scope, there may be unknown conditions and changes to the design required to accommodate potential regulatory issues, changes in existing conditions or items identified by project stakeholders, so it is recommended to include a City-controlled design contingency amount to cover costs for City-approved changes to the Preliminary Services scope. Staff is recommending the allowance of a ten percent contingency for this purpose. All changes will be negotiated based on a detailed scope, pre-negotiated service fees schedule and allowable markups for the Design Builder, as established in the agreement.

In addition, City Staff is also recommending two EWPs for activities that should be completed prior to the final negotiation and approval of the GMP: 1) Site Preparation, and 2) Final Design of the Facility.

The purpose of EWP No. 1 (Site Preparation) is to complete time-intensive site work in advance of the main construction phase for the Facility. This work will include the relocation of existing utilities at the proposed site and work necessary to complete site preparation and foundation work. Traditional foundation work will most likely require the use of foundation piles; however, the preliminary geotechnical investigations results will inform the design-builder on the feasibility of completing site surcharge on the site. Surcharging the area for the new Facility may be a cost-effective measure compared to piling, however, the process can take anywhere from six months to one year during which time no other work at the site can proceed. This work cannot be completed within the Preliminary Services, since it requires a construction-type contract that includes all necessary requirements for safety, insurance, bonding, etcetera.

The purpose of EWP No. 2 (Final Design) is to allow the Design Builder to proceed with the final design while the GMP is being negotiated with the City, avoiding potential delays. In addition, if GMP negotiations are not successful and the City decides not to enter into contract with the Design Builder for the construction phase, the finalized design could be packaged and put out for bid for construction like any other traditional design-bid-build project, minimizing overall delay.

Both of these packages are schedule-driven and timely completion will reduce overall risk to the City. The costs included at this point are "not-to-exceed" amounts which will be subject to the base GMP.

Project Schedule

The Preliminary Services Work is projected to take 18 months and the subsequent Design-Build Work is anticipated to take 36 months, including Site Preparation. Key milestones for the project include:

October 2019	Notice to Proceed for Preliminary Services
July 2020	EWP No.1: Site Preparation
September 2020	Completion of 30% design and return to City Council for approval of not-to-exceed amount
November 2020	EWP No.2: Final Design
January 2021	Definitive Project Submittal
April 2021	Completion of GMP Negotiations and Notice to Proceed for Construction/Design-Build Work
November 2023	Project Completion

Project Budget
The Project's current budget can be broken down as follows:

Preliminary Services (Design Phase, Design-Builder)	$7,492,564
Design Contingency (Owner Controlled)	$749,256
Construction Phase/GMP	$85,129,000
Construction Contingency @ 15% (Owner-controlled)	$12,769,000
Total Design and Construction	**$106,139,820**
Project Delivery	$21,829,822
Total Project Budget	**$127,969,642**

The $85,129,000 GMP estimate included in the current project budget is based on a planning-level estimate from the Project Definition Report (representing approximately 5-percent design level of completion) developed by the Owner's Advisor. Construction costs at this level of design are considered to be within an accuracy of - 30% to + 50%, since most of the scope elements are still at an early stage of development. The current estimate also includes a 15% contingency.

It is anticipated that construction costs could be higher than this preliminary estimate after the Design Builder performs early investigations and progresses the design. If necessary, staff will make budget adjustments and continue to refine the costs after completion of the BDR and the EWPs, when a more definitive scope of work and construction cost estimate will be available.

Staff will also actively work with Walsh Construction during the design process and incorporate value engineering, evaluation of life-cycle costs, and validation of scope and cost elements to obtain the best value for the City. During development of the DPS, there will be an opportunity to evaluate construction costs through a transparent, open-book process. The Owner's Advisor will assist in validating the proposed costs to ensure the City receives a fair and competitive price to construct the Project.

EVALUATION AND FOLLOW-UP

Following the completion of the 30% design in September 2020, which will more clearly define the Project, staff will return to Council to seek delegation of authority to the City Manager to negotiate and execute the DCA, which will allow the construction phase Design-Build work to begin for the agreed upon GMP.

A progress report on this and other RWF capital projects will be made to the Transportation and Environment Committee and City Council on a semiannual basis. Monthly progress reports of the RWF CIP will also be submitted to the Treatment Plant Advisory Committee (TPAC) and posted on the City's website.

POLICY ALTERNATIVES

Alternative #1: Approve the Contract to authorize Preliminary Services, but do not authorize the City Manager to negotiate and execute contracts for two EWPs.
Pros: Postpones Council approval of EWPs until GMP scope and fee are completely defined.
Cons: Delays site preparation and completion of design, extending the project schedule, which increases project costs.
Reason for not recommending: Staff recommends authorizing the EWPs to reduce City-risk and avoid schedule delays. Additional authorization for other EWPs may be requested, if beneficial, as part of the next Project Council Memo to be submitted in 2020.

Alternative #2: Approve the Contract to authorize Preliminary Services and authorize the City Manager to negotiate and execute contracts for two EWPs, and the GMP.
Pros: Allows for identification of manufacturer-specific design requirements, which eliminate the risk of redesign costs, avoids potential delays of initial site work, which would increase project cost, and eliminates the need to return to Council if the initial budget is adequate.
Cons: At the current level of design completion, there is uncertainty regarding Project costs, thus the GMP recommendation to Council for approval at this point in time will need additional contingency to account for these uncertainties.

Reason for not recommending: Staff recommends waiting until completion of the 60% design and EWPs before authorizing the GMP in order to collect additional information and advance project design, which will improve the accuracy of the GMP.

PUBLIC OUTREACH

The RFQ was advertised on BidSync on December 10, 2018. This memorandum will be posted on the City's Council Agenda website for the September 24, 2019 Council Meeting following the TPAC meeting on September 12, 2019. Information about the procurement process was shared during a vendor open house event held at the RWF on February 8, 2017, which was well-attended by prospective consultants and contractors. Information on this event was posted to BidSync and the CIP Document Library on the City's website.

COORDINATION

This memorandum has been coordinated with the Planning, Building and Code Enforcement Department, City Attorney's Office, Finance Department, and City Manager's Budget Office.

COMMITTEE RECOMMENDATION/INPUT

This item is scheduled to be heard at the September 12, 2019, TPAC meeting. A supplemental memo with the Committee's recommendation will be included in the amended September 17, 2019 City Council meeting agenda.

FISCAL/POLICY ALIGNMENT

This Project is consistent with the Council approved budget strategy to address rehabilitation and replacement of critical infrastructure and equipment at the RWF and to improve operational reliability and efficiency.

COST SUMMARY/IMPLICATIONS

1. AMOUNT OF RECOMMENDATION: $7,492,564

2. COST ELEMENTS

Preliminary Services (Design Phase, Design Builder)	$7,492,564
Design Contingency (Owner-controlled)	$749,256
Infrastructure Repair Contingency (Owner-controlled)	$500,000
EWP No. 1 (Site Preparation) Not-to-Exceed Limit	$5,770,000
EWP No. 2 (Final Design) Not-to-Exceed Limit	$5,030,000
Total Not-To-Exceed Amount	**$19,541,820**

3. SOURCE OF FUNDING: 512 - San José-Santa Clara Treatment Plant Capital Fund

4. FISCAL IMPACT: Operations and Maintenance (O&M) costs are anticipated to be elevated from their current level during the four-year transition period while the existing dewatering facilities are phased out of service, as operators will temporarily be required at the existing facilities as well as the new Facility. The Project involves replacing the existing solar dewatering facilities with a mechanical dewatering facility. However, the modern, more efficient equipment will result in decreased sludge drying time from 4 years (existing process) to instantaneous (i.e.: less than one day). The contract requires a life-cycle cost analysis as part of the Preliminary Services, which will more accurately define O&M costs.

5. PROJECT COST ALLOCATION: In accordance with the recommendations set forth in the Capital Project Cost Allocations Technical Memorandum (Carollo Engineers, March 2016), this project is allocated 40% to BOD and 60% to TSS.

BUDGET REFERENCE

The table below identifies the fund and appropriations to fund the contract recommended as part of this memo and remaining Project costs, including Project delivery, construction, and contingency costs.

Fund #	Appn #	Appn. Name	Total Appn	Amt. for Contract	2019-2020 Proposed Capital Budget Page*	Last Budget Action (Date, Ord. No.)
512	7452	Digested Sludge Dewatering Facility	$12,519,000	$8,241,820	V-137	06/18/2019 Ord. No. 30286
Total Current Funding Available			**$12,519,000**	**$8,241,820**		

*The 2019-2020 Proposed Capital Budget was adopted by City Council on June 18, 2019, and incorporated changes as described in Manager's Budget Message #36 and the Mayor's June Budget Message for Fiscal Year 2019-2020.

Services performed by Walsh Construction under this contract will be authorized by Notice to Proceed. An appropriation is not required for the execution of this design-build contract, but is required for each contract authorization. There is adequate funding available in 2019-2020 to issue Preliminary Services. Future funding is subject to appropriation and, if needed, will be included in the development of future year budgets during the annual budget process.

CEQA

San José-Santa Clara Regional Wastewater Facility Digested Sludge Dewatering Facility Project Addendum, File No. PP18-018. An Addendum to the Environmental Impact Report for the San José-Santa Clara Water Pollution Control Plant Master Plan (SCH# 2011052074) was completed for the Project and posted to the City's website and the City's NewsFlash website on September 6, 2019 and is available at http://sanjoseca.gov/index.aspx?nid=4968. **Attachment D** includes the Mitigation Monitoring and Reporting Program (MMRP)

/s/
MATTHEW CANO
Director of Public Works

/s/
KERRIE ROMANOW
Director, Environmental Services

For questions, please contact Napp Fukuda, Assistant Director, Environmental Services, at (408)793-5353.

Attachment A: TPAC Information Memo on Biosolids
Attachment B: Dewatering Project Site Map
Attachment C: Key Contract Elements and Terms
Attachment D: Mitigation Monitoring and Reporting Program

Attachment A

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: TREATMENT PLANT ADVISORY COMMITTEE

FROM: Kerrie Romanow

SUBJECT: SEE BELOW

DATE: February 28, 2018

Approved D. DSyL Date 3/2/18

INFORMATION

SUBJECT: INFORMATION MEMO ON BIOSOLIDS TRANSITION AT THE SAN JOSÉ-SANTA CLARA REGIONAL WASTEWATER FACILITY

BACKGROUND

At the November 9, 2017 meeting, the Treatment Plant Advisory Committee (TPAC) requested staff to agendize the biosolids transition at the San José-Santa Clara Regional Wastewater Facility[1] (RWF) for discussion at a future TPAC meeting. TPAC inquired about the purpose of the Dewatering Facility Project and implementation timing, especially considering a recent decision by the City of San Jose's Planning Commission to allow the Newby Island Landfill to increase its height and continue operating through 2041. One of the drivers for the biosolids transition as identified in the Plant Master Plan (PMP) was the anticipated closure of the Newby Island Landfill by 2025, along with other considerations such as positioning the RWF to have multiple disposition options for its biosolids and to be able to respond to future regulatory requirements.

This memo provides information on the biosolids transition including a review of the current solids treatment process; key milestones leading up to approval of the Biosolids Transition Strategy by TPAC and Council in May and June 2015, respectively; and a discussion on changes that have occurred since approval of the Biosolids Transition Strategy, including the Newby Island Landfill operating extension and recent developments related to solid waste regulations that may limit and/or remove the ability of wastewater agencies to continue sending biosolids to landfills within the State of California.

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[1] *The legal, official name of the facility remains San José-Santa Clara Water Pollution Control Plant, but beginning in early 2013, the facility was approved to use a new common name, the San José-Santa Clara Regional Wastewater Facility.*

Description of Current Solids Treatment Process and Biosolids Management Practices

Wastewater treatment at the RWF is accomplished by using a series of physical, biological, and chemical processes to treat the liquids stream and the solids stream. The current treatment process generates approximately 85 tons of biosolids per day, which must be disposed of or beneficially reused. Biosolids resulting from the current solids treatment process are beneficially reused as alternate daily cover (ADC) at the Newby Island Landfill. In addition, methane gas, a by-product of the solids digestion process, is captured and used in internal combination engines to generate electrical power and heat for daily RWF operations.

Separated solids (or sludge) is thickened and processed through anaerobic digesters for 15 to 30 days to reduce pathogen content, sludge volume, and create biogas for beneficial reuse. The digested sludge is then pumped to open air lagoons and drying beds for further sludge volume reduction, treatment, and stabilization over a four-year cycle. On an annual basis, a portion of the dried biosolids are hauled off-site to the Newby Island landfill for use as ADC. This operation uses more than 750 acres of land and the treatment process takes approximately four years to complete from start to finish to achieve Class A biosolids. Because the lagoons and drying beds make up a large, uncovered footprint, the process has the potential for odor generation – this was confirmed through an odor study completed in 2015 which showed odor impacts to the adjacent Milpitas community based on the adopted odor goal of 5 dilution to threshold (5 D/T) at the established fence line.

Key Factors and Milestones Leading Up to Approval of the Biosolids Transition Strategy

Plant Master Plan (2008 -2013)

In 2008, the Environmental Serviced Department (ESD) embarked on a master planning process to rehabilitate and upgrade the wastewater treatment facilities at the RWF, to explore potential process changes, and guide compatible uses for the Plant buffer lands. The PMP incorporated guiding principles prepared by the City of Milpitas (Milpitas Guiding Principles[2]) and considered input from the City of Santa Clara, Tributary Agencies, community stakeholder groups, and the public. Extensive community engagement process was used to develop overarching environmental, economic, social, and operational goals for the RWF. In November 2013, TPAC recommended and Council approved the adoption of PMP and certified the final Environmental Impact Report. In December 2013, Santa Clara's City Council took similar actions.
One area of focus for the master planning process was biosolids management since treating wastewater at the RWF produces about 85 dry tons of solids each day. This current system is land-intensive and has historically been linked to odors in the area. Because of these issues and the anticipated closure of Newby Island Landfill in 2025, the adopted PMP recommended a new Biosolids Management Program (BMP) involving a variety of enclosed, odor controlled treatment processes with the resulting treated biosolids to be hauled off-site for processing and

[2] Link to the Milpitas Guiding Principles http://www.ci.milpitas.ca.gov/_pdfs/council/2011/011811/item_09.pdf

various beneficial reuse applications. The BMP also assumed a mix of Class A and Class B biosolids. Class A and Class B designations for biosolids relate to the level of pathogen reduction in the end product. Class B biosolids are considered stabilized sufficiently to reduce odors and attraction of vectors that could transmit pathogens and diseases. Class A biosolids are essentially pathogen free.

Recommendations related to the Biosolids Management Program per the adopted PMP include:

- Rehabilitation of the existing thickening facilities and mesophilic digesters and an evaluation of whether a different type of digestion process should be implemented
- Mechanical dewatering for all biosolids in an enclosed, odor-controlled facility to concentrate digested biosolids which reduces the volume and weight of material requiring transport to off-site processing and beneficial re-use locations
- Drying a portion of the dewatered biosolids using both thermal drying in an enclosed facility (20% of the biosolids) utilizing waste heat from a planned cogeneration facility and solar drying in enclosed greenhouses (10% of the biosolids)
- Decommissioning the existing open sludge lagoons and drying beds
- Additional processing and beneficial re-use at off-site composting facilities, land application sites and landfills

The adopted PMP also specified the following goals for the biosolids transition:

- Reduce odors in the community
- Position the RWF to have multiple and diversified disposition options
- Reduce the footprint of the biosolids processing area from 750 acres to about 160 acres to enable other land uses
- Create flexibility to respond to future regulatory changes governing the disposal of treated biosolids at landfills as well as changing market conditions related to beneficial reuse of treated biosolids.

Implementation of the BMP as envisioned by the adopted PMP assumed using a phased approach to implement new mechanical dewatering facilities, thermal drying facilities, and greenhouse drying facilities by 2023 and 2033, respectively; and to retire the lagoons and drying beds by 2025 (which included an assumption to use contract dewatering).

2011 Council Direction to Accelerate the Biosolids Transition

In response to community and stakeholder concerns (including those identified in Milpitas Guiding Principles) about odors emanating from the lagoons and drying beds, TPAC recommended (in May 2011) and Council directed (in September 2011) staff to accelerate the biosolids transition effort specifically calling for the RWF to cease discharging biosolids to the lagoons by 2018 followed by emptying of the lagoons and drying beds by 2024. This direction assumed the use of alternative project delivery methods (i.e., design-build and/or design-build-

operate) to achieve schedule acceleration, contract dewatering resulting in significant operating cost to the RWF, and foregoing field verification of dewatering process technologies.

After receiving this direction, staff retained Brown and Caldwell to initiate an in-depth study and implementation strategy for the biosolids transition, including conducting market surveys to assess the demand for biosolids, market interest and available capacities for accepting the large volume of biosolids generated by the RWF, cost paid by other agencies for off-site processing and disposition of biosolids, and private interest in the development of off-site biosolids processing facilities. Several other concurrent activities ensued during development of the Biosolids Transition Strategy, including a validation of the PMP projects, adoption of an Odor Control Strategy, completion of an Odor and Corrosion Control Study and Odor Implementation Plan for the RWF. These items are further discussed below.

2014 PMP Validation

In early 2014, the City completed a detailed project validation review process of all projects recommended in the adopted PMP, including those projects associated with the biosolids transition:

- Co-thickening of various sludge streams to increase digester feed concentration and include covers, ventilation, and odor control facilities for the system
- Addition of fine screening of sludge to reduce the maintenance effort required for all downstream biosolids treatment processes
- Rehabilitation of up to 10 anaerobic digesters, including upgrades to the gas mixing system, gas piping system, etc.
- Mechanical dewatering for all biosolids in an enclosed, odor-controlled facility
- Drying a portion of the dewatered biosolids using both thermal drying and solar drying in enclosed greenhouses
- Decommissioning of the existing open-air sludge lagoons and solar drying beds
- Pursuing multiple disposition options for beneficial re-use of biosolids at off-site facilities (i.e., composting, land application, soil amendment, ADC)
- Providing 180-day sludge lagoon storage

With the exception of one project, the validation effort confirmed the need to implement all of the projects recommended by the adopted PMP as related to the biosolids transition. The exception was to replace the PMP recommendation to build in 180-day sludge lagoon storage with a recommendation to build an enclosed four-day storage facility, which is more in line with best practices at other wastewater facilities.

Biosolids Transition Strategy, Odor Control Strategy and Implementation Plan (2014 - 2015)

On April 10, 2014, staff presented preliminary information on the Biosolids Transition Strategy to TPAC at a Biosolids Study Session. The Study Session provided an opportunity for TPAC and other stakeholders to provide input on the transition strategy. Discussion topics included a

summary of recommendations from the adopted PMP, an overview of biosolids management approaches, and various disposition options including potential options specific to the RWF. Staff also outlined steps to solicit interest from the open market and the methodology for conducting business case evaluations in order to bring back recommendations to TPAC and Council in fall 2014. Feedback from TPAC at the Study Session included consideration of odor impacts, expandability of the facility in the future, possibility of producing Class A biosolids instead of Class B biosolids, and impact on operation and maintenance costs.

Following the April 10, 2014 Study Session, staff returned to present a status update on the Biosolids Transition Strategy to the Transportation & Environment Committee (T&E), TPAC (special meeting), and Council on October 22, 2014, November 20, 2014, and December 2, 2014, respectively.

The outcome of these meetings included approval to proceed with temperature phased anaerobic digestion (TPAD) upgrades and deferral of thermal and greenhouse drying facilities, and direction to staff to return with additional odor and cost information for transitioning out of the lagoons and drying beds to help inform decision making on both the incremental cost benefit for various alternatives and timing of the biosolids transition, particularly with regards to then pending actions by the San Jose Planning Commission to allow the Newby Island Landfill to extend its height and continue operations beyond 2025 to 2041. Staff also recommended performing additional analysis on other potential siting locations for the new Dewatering Facility within the RWF's main operational footprint. Staff was also asked to bring back potential alternatives, if any, that would retain the use of the current lagoon and drying bed process and still meet the desired odor goal. Staff was directed by Council to perform the additional analyses and to bring back the remaining recommendations in spring 2015.

The staff report can be found at: http://sanjoseca.gov/DocumentCenter/View/37716

On May 14, 2015 and June 2, 2015, TPAC recommended and Council and approved the final Biosolids Transition Strategy Report. The approved biosolids transition strategy recommendations include:

- Proceed with implementation of the Digested Sludge Dewatering Facility and the Lagoon and Drying Bed Retirement projects
- Locate the Digested Sludge Dewatering Facility at a selected site across Zanker Road
- Direct staff to bring back recommendations on the size and makeup of the Biosolids Management Team (BMT) for City Council consideration as part of the annual budget process for 2016-2017
- Implement any future on-site processing facilities considering conditions at the time including starting small with pilots, demonstrations, and phasing and potentially participating in regional facilities and emerging technologies

In conjunction with making a recommendation to proceed with constructing a new dewatering facility sized to process 100 percent of sludge volume generated by the digestion process and decommissioning of the lagoons and drying beds, staff also recommended a new timeline for implementation these projects to allow for proper planning, environmental clearance, permitting,

procurement, design, construction, start-up and commissioning. The revised schedule, which was recommended by TPAC and approved by Council, shows a completion date of 2022 for the new dewatering facility and decommissioning of the existing lagoons and drying beds by 2027. In comparison, the adopted PMP assumed a completion timeline of 2023 for the first phase of the dewatering facility, and 2025 for decommissioning of the lagoons and drying beds.

The staff report can be found at:
http://sanjose.granicus.com/MetaViewer.php?view_id=&event_id=732&meta_id=516437

In parallel, an Odor Control Strategy was developed to establish an odor fence line and odor goals for the RWF. The Odor Control Strategy for the RWF was presented at the November 20, 2014 TPAC special meeting. TPAC recommended and Council approved the Odor Control Strategy at the December 2, 2014 City Council meeting. The staff report can be found at: http://sanjoseca.gov/DocumentCenter/View/37729.

After this, an Odor Implementation Plan was presented at the October 8, 2015 TPAC meeting. TPAC recommended and Council approved the Odor Implementation Plan at the October 27, 2015 City Council meeting. The staff report can be found at:
http://sanjose.granicus.com/MetaViewer.php?view_id=&event_id=1470&meta_id=539026

As part of the approval of the Odor Control Implementation Plan, staff was directed to defer odor control improvements for the Digested Sludge Dewatering Facility project because it was not necessary to mitigate on-site impacts at the southern odor fence line. However, for construction efficiency, ductwork elements necessary for building ventilation and the future odor control system would be included as part of the new dewatering facility. Construction of the actual odor scrubber system would be deferred until funding for this improvement could be identified, possibly as part of future development. The estimated capital cost related to odor control improvements for the dewatering facility is $6.59 M (2015 dollars), of which the odor control scrubber technology is the majority portion.

ANALYSIS

This section provides an update on the key biosolids transition projects (Digester and Thickener Facilities Upgrades Project, Digested Sludge Dewatering Facility Project, Lagoons and Drying Bed Decommissioning Project, and implementation of the Biosolids Management Team) since the June 2015 City Council direction. In addition, it summarizes changes and updates to existing conditions as well as current and future legislation that may affect the biosolids transition.

Updates on Key Biosolids Transition Projects

Digester and Thickener Facilities Upgrade Project (2013 to present)

The Digesters and Thickener Facilities Upgrade Project is currently under construction and expected to be substantially complete by fall 2020. This project will improve the anaerobic

digestion, digester gas conveyance system, and dissolved air flotation thickening systems. It also includes the construction of a new primary sludge screening facility. Based on the recommendations of the Biosolids Transition Strategy, this project will rehabilitate four existing mesophilic digesters facilities to operate as a TPAD system for improved biogas production and pathogen destruction as well as position the RWF to produce Class A biosolids (with the addition of batch tanks in the future) when there is increased market demand for Class A biosolids.

Digested Sludge Dewatering Facility Project (2015 to present)

Per the June 2015 Council direction, staff initiated the Digested Sludge Dewatering Facility Project, which will be delivered using a progressive design-build delivery method. The staff memo for this delivery method selection can be found in Attachment B.

In 2016, the City selected Brown and Caldwell to serve as the Owner's Advisor (OA). The staff report can be found at:
http://sanjose.granicus.com/MetaViewer.php?view_id=&event_id=2159&meta_id=597108

The OA has prepared technical memoranda evaluating alternatives and is preparing a Project Definition Report and CEQA documents. Staff is also currently preparing a Request for Qualifications for procurement of a Design Build (DB) entity, and anticipates advertising in spring 2018. Staff anticipates bringing forward a recommendation for selection of a DB entity to Council for approval in early 2019, followed by beginning of design phase. Construction is anticipated to begin in mid-2020, and substantial completion is expected by late 2022.

Lagoons and Drying Bed Decommissioning Project (2015 to present)

After Council approval in June 2015, staff conducted project scoping for the lagoon and drying beds decommissioning project, and recommended that O&M perform sludge removal and land maintenance of the decommissioned lagoon and drying beds until a future land use has been identified for that area. Future land use considerations will be looked at as part of the next major update to the PMP, which is anticipated to initiate in the 2023-2024 timeframe. Staff also recommended reducing the capital improvement scope to only construction of access ramps for lagoons. This re-scoping effort is anticipated to substantially reduce the project construction cost and annual O&M cost. Decommissioning of the lagoons and drying beds is expected to be completed by 2027.

Implementation of Biosolids Management Team (2016 to present)

After Council approval in June 2015, staff conducted surveys of six other peer large municipal agencies on the roles and responsibilities, makeup, and qualifications of their BMTs, as well as identified types and durations of typical biosolids contracts at these agencies. Staff has submitted a budget proposal to add an Environmental Service Program Manager position in FY 2018-19 to develop and lead the BMT; additional support positions be recommended in future years. This position add was initially planned for FY 2016-17, but was deferred to FY 2018-19 based upon the updated implementation schedule.

Over the next few months, staff will be further refining the implementation plan for the biosolids transition including developing a comprehensive contracting strategy and updating the previously identified dispositions options and market analysis in light of recently passed legislation related to biosolids disposition (discussed in the following section).

Changes to Existing Conditions and Future Regulations affecting Biosolids Transition

Extension of Newby Island Landfill Operation (2016 to present)

The City's contract with Newby Island Landfill expires in December 2020. During the development of the PMP and the Biosolids Transition Strategy, the potential closure of the adjacent Newby Island Landfill in 2025 was one of the drivers of the biosolids transition. In December 2016, the City of San José Planning Commission approved a plan to allow the landfill to increase in height and continue operation through 2041. A synopsis of the Planning Commission's action items can be found at:
http://www.sanjoseca.gov/DocumentCenter/View/63168

While the Newby Island Landfill operation has been extended, recent legislation could potentially limit the disposal of biosolids (considered an organic) to landfills (further discussed below).

Increased Focus on RWF Odors by BAAQMD (2015 to present)

The Bay Area Air Quality Management District (BAAQMD) has increased its focus on monitoring odors from the RWF biosolids operation, and is working closely with RWF staff when biosolids are hauled to Newby Island Landfill. BAAQMD has also placed strict requirements on other RWF Projects including Iron Salt Feed Station, Cogeneration Facility, and Digester and Thickener Facility Upgrades for fugitive emissions, particulates, and hydrogen sulfide emissions.

Regulatory Drivers affecting Biosolids Disposition (2016 to present)

Legislation recently enacted in California has introduced uncertainty for Publicly Owned Treatment Works (POTWs), including the RWF, on the long-term viability of disposition of biosolids as ADC at landfills which is, at present, the sole biosolids disposition practiced at the RWF. The key legislation impacting the disposition of biosolids at RWF is Senate Bill SB 1383 (2016) that sets a goal of diverting 50% of organic waste from landfills by 2020, and mandates diverting 75% of organic waste from landfills by 2025. Biosolids, such as those produced at the RWF, are included within the definition of organics to be diverted from landfills.

The text for Senate Bill 1383 can be found here:
https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=2t01520160SB1383

CalRecyle and California Air Resources Board (CARB) have developed draft regulatory text to enact this legislation, and are considering the complete diversion of biosolids from landfills (including ADC) to reduce organic waste to landfills. Once finalized, this legislation could preclude the RWF from continuing to dispose of its biosolids at Newby Island Landfill (or any other California landfill) as soon as 2020. Regardless of the Newby Island Landfill extension, there is no guarantee that Newby Island Landfill will continue to accept the RWF's biosolids once the regulation is enacted.

Construction of the new Digested Sludge Dewatering Facility will position the RWF to have diversified and multiple disposition options for its biosolids. Dewatered cake is a desirable end-product based on previously completed market surveys and will ensure that the RWF has biosolids disposition options in compliance with the pending SB 1383 regulations. It is noted that the dewatering facility is not slated be operational until 2022, with the lagoon and drying bed sludge disposition continuing through 2027.

In November 2017, CalRecycle and CARB recently sought informal input from stakeholders, and the City provided comments to seek a waiver for RWF biosolids from being considered as organic material due to their low moisture and organic content and low potential to generate SLCPs. The intent of seeking this waiver is to allow the RWF sufficient time to come into compliance with the new regulations while the new dewatering facility is being constructed. Formal regulatory review on SB 1383 is expected to take place throughout 2018, with adoption of regulation in early 2019 and implementation in early 2020. The City is actively providing input to CalRecycle and CARB on this draft regulatory text.

Conclusion

This biosolids transition is driven by goals identified in the previously approved Biosolids Transition Strategy and the adopted Plant Master Plan. These include reducing odors in the community; positioning the RWF to have multiple and diversified disposition options for its biosolids with the potential closure of Newby Island Landfill; reducing the footprint of the biosolids processing area and enabling other land uses; and creating flexibility to respond to future regulatory changes governing the disposal of treated biosolids at landfills as well as changing market conditions related to beneficial reuse of treated biosolids.

While the Newby Island Landfill operation has been extended to 2041, it is still prudent for the RWF to have multiple diversified disposition options for biosolids. Reducing odors and enabling other land uses for the lagoon and drying bed area are still valid goals for the RWF. Furthermore, with imminent future regulation based on SB 1383, it is possible that the current biosolids disposition practiced at the RWF would not be in compliance as early as 2020.

The current RWF biosolids have a very limited disposition market due to its low moisture content. The adopted PMP had previously identified only one non-landfill disposition option (i.e., land application) for the RWF's dried biosolids; however, this option was deemed not viable due to limited receiving capacity and the need for special permits. Other possibilities, such

as hauling sludge directly from the digesters would require third-party contract dewatering and hauling, which is very cost-prohibitive due to the large volume of sludge generated by the RWF. A biosolids end-product with 20 to 30 percent moisture content, which can be achieved through dewatering, is most suitable for the biosolids disposition options allowable under SB 1383 (land application, composting, etc.).

Furthermore, the sites with allowable biosolids disposition (composting, land application etc.) under SB 1383 for future dewatered cake have limited capacity in the San Francisco bay area, and there is a potential for increased competition for this capacity from other POTWs. The RWF would benefit from continued implementation of the BMT at the earliest to allow for planning and negotiation of disposition contracts with these sites.

In summary, although the drivers for the biosolids transition may have changed slightly, they still remain valid and provide a rationale for continuing to implement the biosolids transition plan.

COORDINATION

This memorandum has been coordinated with the Office of the City Attorney and City Manager's Budget Office.

/s/
KERRIE ROMANOW
Director, Environmental Services

For questions please contact Ashwini Kantak, Assistant Director of the Environmental Services Department at (408) 975-2553.

Attachments:

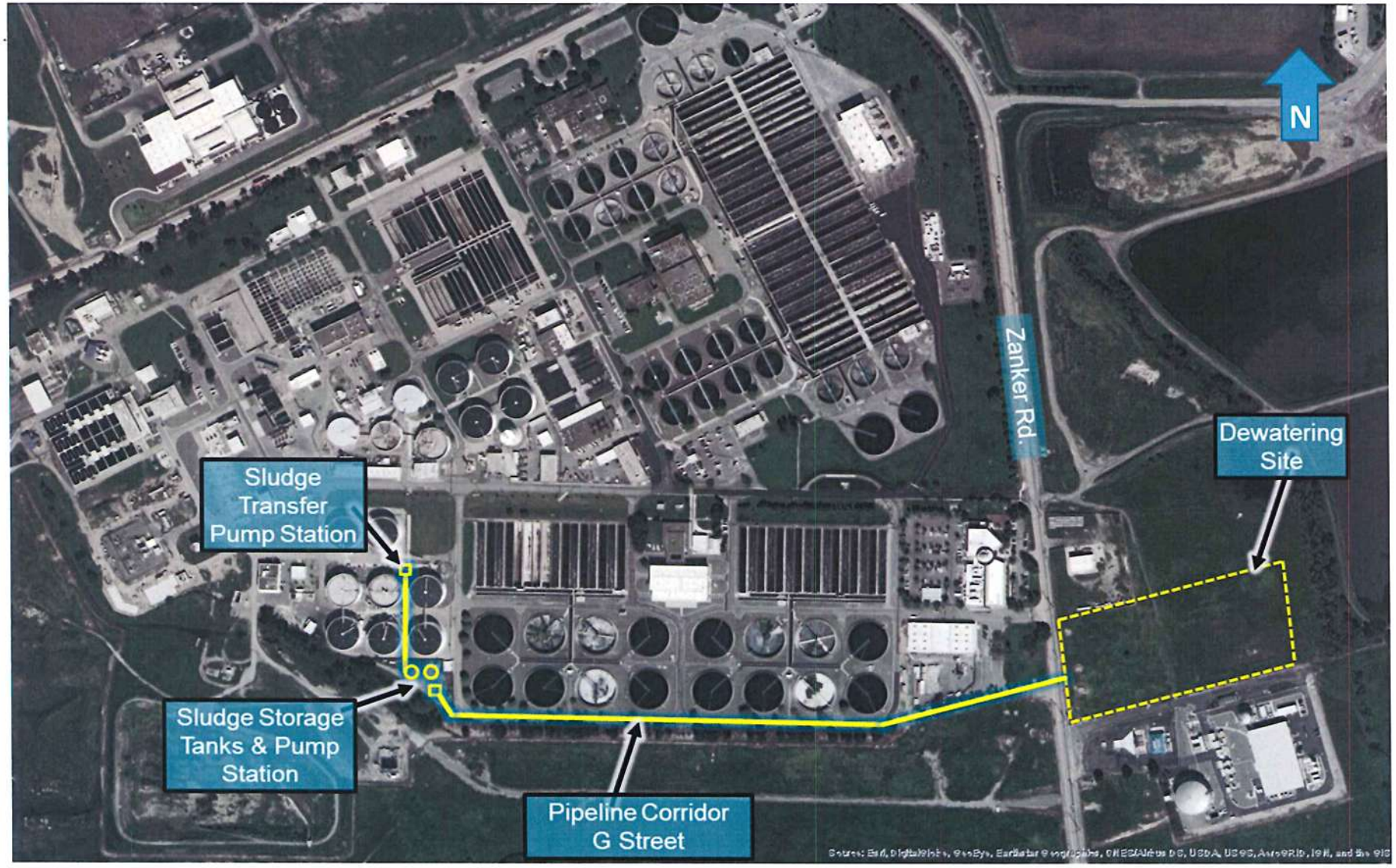
- Attachment A: Summary of items related to Biosolids Transition and Odor brought to TPAC and San José City Council
- Attachment B: Staff report on Decision to use Progressive Design-Build delivery method for the Digested Sludge Dewatering Facility Project

Attachment A: Summary of items related to Biosolids Transition and Odor brought to TPAC and San José City Council

Item	Date presented to TPAC	Date presented to City Council
Review of the Milpitas Guiding Principles for Plant Master Plan Reconstruction and Land Use Alternatives	December 9, 2010	December 14, 2010
Presentation of Preferred Alternative for the Plant Master Plan including biosolids transition	April 7, 2011	April 19, 2011
Preliminary information regarding odors and planned regional odor assessment study and accelerating schedule for biosolids projects. Supplemental Memo to Council to provide status update on working with stakeholders (City of Milpitas, McCarthy Ranch) in response to TPAC direction	May 19, 2011, August 11, 2011	September 13, 2011
Presentation of a packaged delivery approach for CIP and proposed timeline for Biosolids Transition Program	December 13, 2012	-
Update on packaged delivery approach for CIP and proposed timeline for Biosolids Transition	February 9, 2012	February 14, 2012
Adoption of Plant Master Plan	November 14, 2013	November 19, 2013
Presentation of RWF Odor Control Strategy	November 20, 2014	December 2, 2014
Biosolids Study Session	April 10, 2014	-
Biosolids Transition Strategy	November 20, 2014	December 2, 2014
Updated Biosolids Transition Strategy	May 14, 2015	June 2, 2015
RWF Odor Control Implementation Plan	October 8, 2015	October 27, 2015
Delivery Method for Digested Sludge Dewatering Facility Project	Information Memorandum dated January 19, 2016	Information Memorandum dated January 19, 2016
Approval of Master Consultant Agreement With Brown And Caldwell as Owner's Advisor for Digested Sludge Dewatering Facility Project	October 13, 2016	October 25, 2016

ATTACHMENT B
Dewatering Project Extents

New Digested Sludge Dewatering Facility and Project Extents
for the San José-Santa Clara Regional Wastewater Facility



ATTACHMENT C

Key Contract Elements and Terms

1. Preliminary Services –These services include preliminary investigations of existing site conditions, development of the Basis of Design Report, detailed design to a 60-percent level of completion, and development of the Definitive Project Submittal (DPS), which will include the GMP, and lead to the DCA, which will contain the terms and conditions for the Design-Build Work to complete the Project.

   As part of the procurement process, proposers were required to submit a lump-sum fee for the Preliminary Services, which was incorporated into the proposal rankings and further reviewed during contract negotiations. The agreed upon amount for Walsh Construction (Walsh) to perform the Preliminary Services is $7,492,564.

2. Definitive Project Submittal – As part of the Preliminary Services, Walsh is required to advance the design of the Project to a level (beyond the 60% level of completion) sufficient to produce the DPS, which will be completed and submitted to the City and will remain a firm offer by Walsh for at least 90 days. The DPS will include and be based on the technical specifications, acceptance standards, and other information, analysis, findings, and reports developed by Walsh during performance of the Preliminary Services, and will be prepared in accordance with the contract standards. The DPS will include a price submittal, a technical submittal, a commercial terms submittal, and an additional information submittal.

3. Definitive Contract Amendment - The Design-Build Work to be performed following the completion of Preliminary Services will be defined in the DCA, which will: (1) set a GMP for the Design-Build Price, (2) set a schedule for completion of the Design-Build Work; (3) define the technical specifications and guaranteed performance requirements for the Project, (4) identify Transition Services and associated fee; (5) establish the insurance requirements for the Design-Build Work; and (6) amend other terms and conditions of the contract necessary to accomplish the foregoing. The parties may, at the City's discretion, agree to convert the GMP into a lump sum price, subject to the not-to-exceed Project costs authorized by City Council.

   Should the parties fail to agree on the DCA, the City is under no obligation to proceed with any further work by Walsh, except in accordance with unfinished EWPs. The parties may, however, negotiate to enter into a separate agreement to fully complete the design (discussed previously as EWP No.2) and/or provide other City-requested services so the City can solicit bids for construction of the Project by separate contractors using the design-bid-build delivery method.

4. Early Work Packages (EWPs) - The contract allows the City to issue Early Work Packages before the parties execute the DCA if the Work can be done prior to design completion and if the EWPs will reduce City risk and/or shorten the Project schedule. In addition to the first two EWPs; 1) site preparation, and 2) final design, additional EWPs for the Project may be identified, if they can reduce City risk and/or shorten the Project

schedule, both of which can have potential for significant Project cost reduction. Additional EWPs will require separate amendments to the contract, and will contain terms and conditions for Walsh's performance of the Work and obligations should the parties fail to agree on the DCA.

5. Design-Build Work (Work) – The DPS and DCA define the price and contract terms for the Work, which will include construction of the Project. At the City's discretion, the Work may also include Transition Services in the form of assistance with operating the new facility for a specified period. Additional EWPs may be issued during the Preliminary Services phase in order to reduce City risk and/or shorten the Project schedule, both of which have potential for significant Project cost reduction.

6. Guaranteed Maximum Price (GMP) - The contract sets forth a process to allow the City and Walsh to negotiate a GMP for the Work. The GMP includes all costs for the performance of the Work, and cannot be adjusted except for specified reasons such as uncontrollable circumstances, changes to the contract's technical specifications, and City-directed changes. Except for funding of the EWPs, the City will not commit construction funds until the GMP has been successfully negotiated.

7. Design-Build Price – The Design-Build Price will be an amount equal to the sum of 1) Design-Build Costs, 2) Design-Builder Fee, and 3) General Conditions Fee, and it cannot not exceed the GMP. Further definition of these terms is provided below:

   a. Design-Build Costs – These costs include costs paid or incurred by Walsh in the proper performance of the Work, including third party professional service fees, subcontractors, Walsh's labor, materials equipment, supplies, Project-specific insurance premiums, and performance and payment bond premiums,

   b. Design-Builder Fee – The Design-Builder Fee is an amount equal to 8.9% of the Design-Build Costs (excluding Project specific insurance premiums, sales taxes, and performance and payment bond premiums), and is the amount attributable to profit, risk, mark-up and general or indirect overhead with respect to the Work.

      As part of their submittals, proposers were required to submit a Design-Builder Fee percentage, which was considered during proposal evaluations and ranking. Staff believes this fee is competitive based on a comparison with the Design-Build Fee proposed by the other proposers.

   c. General Conditions Fee – The "General Conditions Fee" is an amount equal to 11.2% of the Design-Build Costs, other than sales taxes. In general, this includes the general conditions costs, including Walsh's supervisory wages, field office and supplies and temporary utilities, as well as general conditions-related profit, risk, mark-up, and overhead.

      As part of their submittals, proposers were required to submit a General Conditions Fee percentage, which was considered during proposal evaluations and ranking. Staff believes this fee is competitive based on a comparison with the General Conditions Fee proposed by the other proposers.

8. Shared Savings – If the Work is completed under the GMP, the contract entitles Walsh to a 30% share of the difference. The City will retain the remaining 70% of this amount. This serves as an incentive to minimize costs and manage Design- Builder contingency use appropriately.

9. Liquidated Damages - The contract includes liquidated damages for delay. The daily amount for liquidated damages will be negotiated as part of the DCA. Currently the contract states: "The aggregate liability of the Design-Builder, with respect to any liquidated damages…shall not exceed an amount equal to 25% of the Design-Build Price."

10. Dispute Resolution – This contract requires formal partnering between the City and Walsh for the duration of the Project. Consistent with the City's Dispute Avoidance and Dispute Resolution Policy (S.J.M.C. Chapter 14.06), the contract provides that either the City or Walsh may voluntarily initiate a request for non-binding mediation in the event that other partnering opportunities available under the contract are unsuccessful. Mediation is not mandatory and either the City or Walsh may elect to proceed with litigation if a dispute cannot be resolved by the project team. Because of the collaborative nature of design-build contracts, significant disputes are less likely to occur, and it is anticipated that mediation and/or litigation is unlikely and would only occur if all other cooperative efforts by the project team fail.

11. Project Contingencies – The contract includes provisions for three contingencies.

    The two City-controlled Contingencies are: (1) a design contingency to cover costs for City-approved changes to the scope of Preliminary Services, and (2) a construction contingency to cover unanticipated costs of the Work that are not Walsh's responsibility under the contract. The construction contingency covers typical construction issues such as differing site conditions, force majeure events, and City-directed change orders. Expenditure of the City-controlled contingency will require a change order to be negotiated and executed by the City Manager or his designee.

    The contract also provides for a Design-Builder Contingency, which will be negotiated by the parties and established as part of the DCA. It covers unforeseen costs of the Work that neither Walsh's design manager nor the contractor could predict when the GMP was established. Walsh is entitled to receive payment from the Design-Builder Contingency with the City's right to monitor and verify the use of the funds. The Design-Builder Contingency is contained within the GMP. Walsh will be responsible for costs in excess of this contingency unless the contract otherwise entitles them to compensation. The amount not expended from the Design-Builder Contingency will return to the City.

12. Insurance – Walsh will be required to enroll in the City's Owner Controlled Insurance Program (OCIP) approved by City Council in June 2017. The OCIP provides commercial general/excess liability and workers' compensation insurance for all Contractors, regardless of tier, that are approved for participation in the insurance program. Additional coverages for builder's risk and pollution liability insurance are provided by the City outside of the OCIP:

Contractors of any tier are required to maintain insurance coverage that protects the City from liabilities arising from the Contractor of any tier's operations performed away from the Project site, for types of coverage not provided by the OCIP, and for operations performed in connection with excluded parties operating under Contractor or any tier's operations control or direction.

The City will pay all premiums associated with the OCIP coverages and the other coverages provided by the City. Walsh will pay all other premiums, including the premiums for the Additional Insurance Required from Enrolled Parties and Excluded Parties. The Required Insurance will be in place concurrent with the execution and delivery of this contract and remain in effect for the periods specified in the contract. Walsh's liability insurance, including professional liability, will not include any design-build or similar exclusions that would compromise coverages because of the design-build nature of the Work to be performed pursuant to this contract.

13. Subcontracting and Self-Performance – Walsh has submitted a draft subcontracting plan, which will be included in the contract and further developed during the Preliminary Services. This plan provides an overview of Walsh's proposed approach to engage subcontractors and to support them during execution of the Work; identifies the type of work or trades that will be required to complete the Project; describes the methods Walsh will utilize to engage local subconsultants and subcontractors; and describes the methods Walsh will utilize to engage with subconsultants and subcontractors classified as disadvantaged business enterprises.

    Walsh intends to maximize, to the greatest extent possible, local San José and Santa Clara County firms' participation in the Project through an outreach program that will be coordinated with the City's existing outreach program. Walsh intends to ensure that local firms and small, disadvantaged and women-owned business enterprises are made aware of all opportunities available to them to subcontract on the Project in-line with their interest, capabilities and areas of expertise, and to utilize such firms to the maximum extent possible consistent with this plan. This plan is intended to provide sufficient information on Project opportunities that will be available and communicate how local firms can participate or express an interest in bidding for those opportunities.

    As identified in its proposal, Walsh has identified Black & Veatch as their engineering partner for the Project. Walsh and Black & Veatch intend to self-perform approximately 50% of the construction work with market price validation by the Owner's Advisor. The balance of the Work will be competitively bid out by Walsh in accordance with contract requirements. Walsh's subcontracting plan will outline all work items to be self-performed and work to be bid out and awarded to subcontractors. Notwithstanding proposals to self-perform work, the contract allows the City to require Walsh to competitively bid out any or all of the Work in compliance with applicable law.

14. Skilled/Trained Workforce and Labor Peace Plan - Part of the RFP process to select a design-builder was the evaluation of the proposer's strategy for local subcontracting, commitment to providing a skilled and trained workforce, and labor peace plan. A representative of and a local labor union was a member of the interview panel that selected Walsh and Black & Veatch as the top ranked design-builder.

Ensuring a skilled and available workforce will be critical to successfully delivering the Project. Walsh and Black & Veatch possess a large skilled labor pool that will be key to ensuring on time project delivery with the highest levels of quality and craftsmanship. Black & Veatch maintains agreements with California registered apprenticeship programs and has successfully placed apprentices from various programs on their jobs. State Law, under which the Project will be performed, mandates certain apprenticeship requirements that will be adhered to under the contract.

Avoiding labor disputes and disruptions is another significant factor in delivering the Project in a timely manner. The Project requires the payment of local prevailing wages and requirements regarding prevailing wage are included in the contract. Black & Veatch is signatory to the trade unions required to complete the Project and has delivered more than a dozen union-staffed water and wastewater projects in the Bay Area, each of which was completed with no labor disruptions. A PLA is not required under the contract however the Walsh provided a detailed plan in their proposal to prevent labor disputes, conflicts and work stoppages on the Project.

15. Acceptance – Acceptance means demonstration by Walsh that the Acceptance Test has been conducted, the Acceptance Standards have been demonstrated and all other Acceptance Conditions have been achieved.

16. Transition Services - The contract includes provisions for providing Transition Services, following Project acceptance if desired by the operations and maintenance staff. In this event, Walsh would provide services generally consisting of advising and monitoring the City's operation and maintenance of the new Facility for a six-month or one-year period. Establishment of the Transition Services and the fee will be negotiated as part of the DCA. Payment for the Transition Services will be made from the construction contingency.

Attachment D

MITIGATION MONITORING AND REPORTING PROGRAM

San José-Santa Clara Regional Wastewater Facility Digested Sludge Dewatering Facility Project Addendum

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

August 2019

Planning File No. PP18-018

PREFACE

Section 21081 of the California Environmental Quality Act (CEQA) requires a Lead Agency to adopt a Mitigation Monitoring and Reporting Program whenever it approves a Project for which measures have been required to mitigate or avoid significant effects on the environment. The purpose of the monitoring or reporting program is to ensure compliance with the mitigation measures during Project implementation.

The Addendum to the Environmental Impact Report for the San José-Santa Clara Water Pollution Control Plant Master Plan concluded that implementation of the Project could result in significant effects on the environment and mitigation measures are required as a condition of Project approval. This Mitigation Monitoring and Reporting Program addresses those measures in terms of how and when they will be implemented.

This document does *not* discuss those subjects for which the Addendum concluded that the impacts from implementation of the Project would be less than significant.

The City of San José hereby agrees to fully implement the Mitigation Measures described below which have been developed in conjunction with the preparation of an Addendum for the proposed project. The City understands that these mitigation measures or substantially similar measures shall be adopted as conditions of approval to avoid or significantly reduce potential environmental impacts to a less than significant level.

The following abbreviations are used:

BAAQMD = Bay Area Air Quality Management District
CCR = California Code of Regulations
CDFW = California Department of Fish and Wildlife
CEQA = California Environmental Quality Act
CFR = Code of Federal Regulations
CM = Construction Management Resources Team
DTSC = Department of Toxic Substance Control
ESD = Environmental Services Department
ET= Environmental Team Project Lead
HASP = Health and Safety Plan
HCP = Santa Clara Valley Habitat Conservation Plan
NAHC = Native American Heritage Commission
OSHA = Occupational Safety and Health Administration
PM = San José-Santa Clara Regional Wastewater Facility Capital Improvements Program - Project Manager
PBCE = Planning, Building and Code Enforcement
RWQCB = Regional Water Quality Control Board
SCCDEH = Santa Clara County Department of Environmental Health
SCVHA = Santa Clara Valley Habitat Agency
SVOCs = semi-volatile organic compounds
USACE= U.S. Army Corps of Engineers
USFWS = U.S. Fish and Wildlife Service
VOCs = volatile organic compounds

MITIGATION MONITORING AND REPORTING PROGRAM DIGESTED SLUDGE DEWATERING FACILITY						
Impact No.	Impact Summary	Mitigation Measures	Implementation Actions	Implementation Schedule	Responsible Party/Actions	Reviewing and Approving Party/Actions
AIR QUALITY						
AQ-1	The Project could violate an air quality standard or contribute substantially to an existing or projected air quality violation.	**Bay Area Air Quality Management District (BAAQMD) Basic Control Measures** • 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. • All visible mud or dirt track-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 is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 mph. • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator. • Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours.	1. Ensure that contract documents include a requirement for BAAQMD Basic Construction Measures. 2. Monitor to ensure that contractor implements measures in contract documents: • Include discussion of this mitigation measure in contractor environmental training sessions. • Post signage. • Maintain site inspection checklists. • Review contractor's equipment tune-up and emissions logs. • Notify PM and ET of non-compliance and ensure corrective action.	1. Design 2. Construction	1. Project Manager (PM) 2. Construction Management (CM)	1. Environmental Team (ET) 2. ET
BIOLOGICAL RESOURCES						
BIO-1	The Project could have a substantial adverse effect, either directly or through habitat modifications, on Congdon's tarplant and pappose tarplant.	**Mitigation Measure BIO-1: Reduce Impacts to Tarplant.** For purposes of reducing direct impacts to Congdon's tarplant and pappose tarplant, the project proponent shall: • Conduct surveys for Congdon's tarplant and pappose tarplant May 1st through October 31st (inclusive). This shall be conducted by a qualified biologist. • Avoid damaging or removing individuals of Congdon's tarplant and pappose tarplant while conducting the above activities whenever possible. • When mowing is necessary, conduct mowing in areas occupied by Congdon's and pappose tarplant (known natural and reseeded locations) before May 1st (to avoid the blooming season [May to mid-November]) or after seeds have been set (mid-November). Do not mow in areas with Congdon's and pappose tarplant from May to mid-November, even if those areas have burrowing owls or are part of the burrowing owl habitat management area. Mow no lower than 6 inches	The Project proponent shall prepare and submit to the satisfaction of the Planning Environmental Division Manager the following: • Signed electronic copies (pdf) of the plant survey; • Signed documentation of seed collection and post-construction seeding results if required; • Signed documentation of mowing and annual weed control activities; and • If reseeding is required, annual monitoring reports documenting success of the planted population. • Signed documentation of appropriate trail signage. • A report of any instance of noncompliance with these measures.	Prior to, during, and after ground disturbing activities	ET and qualified biologist	Department of Planning, Building and Code Enforcement (PBCE)

Impact No.	Impact Summary	Mitigation Measures	Implementation Actions	Implementation Schedule	Responsible Party/Actions	Reviewing and Approving Party/Actions
		in areas with Congdon's tarplant in order to minimize removal of tarplant foliage prior to flowering. Conditions in areas occupied by burrowing owl, and Congdon's tarplant and pappose tarplant will change over time, and conflicts between measures to reduce impacts to the tarplant and burrowing owl habitat management strategies (e.g., mowing) may arise. To adapt to changing conditions, this measure may require refinement by a qualified biologist in coordination with CDFW to ensure adequate protection of these species. If individuals of Congdon's tarplant and pappose tarplant cannot be avoided through the provisions listed above, the permanent loss of Congdon's and pappose tarplants shall be mitigated at a minimum mitigation-to-impact ratio of 1:1. To address permanent loss of Congdon's tarplant and pappose tarplant individuals, the following measures shall be implemented: • During October 1st and November 30th (inclusive) the project proponent shall track Congdon's tarplant and pappose tarplant within the area to determine when plants have set seeds. Once seeds have set, seeds from individuals of Congdon's tarplant and pappose tarplant from within the area shall be collected during October 1st or November 30th, inclusive prior to initiation of activities that will impact individuals, and immediately sown at reseeding location(s) to allow the plant to flower and produce seed before the end of the next blooming period, thereby avoiding a temporal loss (i.e., the species missing a flowering cycle). • Seed of Congdon's tarplant and pappose tarplant shall be applied either alone or as a component of the revegetation mix within the impact area for any temporary impacts and within a proposed replacement area for permanent impacts. The replacement area shall be determined in consultation with CDFW. • Areas seeded with Congdon's tarplant and pappose tarplant shall be monitored during the first 5 years following reseeding. Monitoring shall be conducted during the peak blooming period (May1 st – November 30th, inclusive). The planted population will be compared to a known reference population each time monitoring is conducted to accurately verify the degree of success of the planted population. • During the first year of monitoring, revegetation shall be considered successful if the species in 70% of the reseeded area are occurring at densities comparable to the reference population. If unsuccessful, seed shall be collected and sown in the unsuccessful areas prior to the rainy season that year. If reseeding is necessary at any point during the				

MITIGATION MONITORING AND REPORTING PROGRAM DIGESTED SLUDGE DEWATERING FACILITY						
Impact No.	Impact Summary	Mitigation Measures	Implementation Actions	Implementation Schedule	Responsible Party/Actions	Reviewing and Approving Party/Actions
		monitoring period, the monitoring period shall reset (extended by five years) for the affected area. • During each subsequent year of monitoring, revegetation will be considered successful if the species is found to be occurring in 80% of the reseeded area at densities comparable to the reference population. If revegetation is unsuccessful for two consecutive years, seed will be collected and sown in the unsuccessful areas prior to the rainy season that year. • During the final two years of monitoring, if seeding of previously unoccupied habitat is successful (plants occur in 80% of the reseeded area at densities comparable to the reference population), then the mitigation will be deemed successful and no additional monitoring will be required. If unsuccessful, the area will be deemed unsuitable habitat. In this case, revegetation of additional areas, determined in consultation with CDFW will occur, and an additional two years of monitoring will be conducted. For purposes of reducing indirect impacts on Congdon's tarplant and pappose tarplant, the project proponent shall: • Modify weed control activities, in areas of occupied Congdon's tarplant and pappose tarplant habitat. Broadcast herbicides will not be used in or around areas supporting Congdon's tarplant and pappose tarplant. In areas supporting Congdon's tarplant and pappose tarplant, herbicides will only be applied through spot treatment. Herbicide applications will be conducted by persons familiar with Congdon's tarplant and pappose tarplant and able to identify the species to avoid it. • Install informational and warning signs in areas adjacent to habitat occupied by Congdon's tarplant and pappose tarplant instructing people utilizing the site to stay clear of known occurrences.				
BIO-2	The Project could have a substantial adverse effect, either directly or through habitat modifications, on raptors and migratory birds.	**Mitigation Measure BIO-2d: Raptor and Migratory Bird Nest Measures.** If possible, construction shall be scheduled between September 1st and January 31st (inclusive) to avoid the nesting season. If Project construction is scheduled during breeding bird season (February 1st–August 31st, inclusive), City's Environmental Services Department (ESD) or its contractor shall retain a qualified wildlife biologist to conduct a survey for nesting raptors and	1. If possible, schedule construction between September 1st and January 31st (inclusive).	1. Construction	1. PM	1. ET

Impact No.	Impact Summary	Mitigation Measures	Implementation Actions	Implementation Schedule	Responsible Party/Actions	Reviewing and Approving Party/Actions
		migratory bird nests within 7 days of the start of construction or after any construction breaks of 14 days or more, within 7 days prior to the resumption of construction. Surveys shall be performed for the Project areas and for suitable habitat within 300 feet. If an active nest is discovered, a no-disturbance buffer zone around the nest tree (or, for ground-nesting species, or nests identified on Facility buildings, the nest itself) shall be established. The no disturbance zone shall be marked with flagging or fencing that is easily identified and avoided by the construction crew, and shall not affect the nesting birds. In general, the minimum buffer zone widths shall be as follows: 100 feet (radius) for non-raptor species and 300 feet (radius) for raptor species; however, the buffer zone widths may be adjusted if an obstruction, such as a building, is within line-of-sight between the nest and construction. Buffer zone widths and other avoidance measures may be modified based on consultation with CDFW and the USFWS. Buffer zones shall remain in place as long as the nest is active or young remain in the area and are dependent on the nest. Construction activities that are scheduled to begin outside the breeding season (September 1st through January 31st, inclusive) can proceed without surveys. If possible, all necessary tree and vegetation removal shall be conducted before the start of breeding bird season to minimize the opportunity for birds to nest at the Project site and conflict with Project construction activities. ESD shall notify the PBCE Senior Environmental Planner when the mitigation actions will occur for approval prior to the start of construction.	2. Contract a qualified biologist to conduct surveys for nesting raptors and migratory birds within 7 days of start of project construction or within 7 days of start of construction after any construction breaks of 14 days or more (if construction commences between February 1st and August 31st, inclusive). If active nests are located during survey, establish buffer zones and consult with USFWS/CDFW as required.	2. Within 7 days prior to construction	2. ET and qualified biologist	2. CDFW, USFWS
			3. Monitor to ensure that contractor implements measures in contract documents regarding buffer zones and avoidance measures established by biologist and/or USFWS/CDFW: • Include discussion of this mitigation measure in environmental training sessions. • Maintain site inspection logs. • Notify PM and ET of non-compliance and ensure corrective action.	3. Construction	3. ET or biological monitor	3. ET
			4. Submit reports, if applicable, to USFWS/CDFW per consultation requirements.	4. Construction	4. ET	4. USFWS, and/or CDFW
			5. Submit survey reports and any final compliance report, if applicable.	5. Construction	5. ET	5. PBCE
BIO-2 (cont.)	The Project could have a substantial adverse effect, either directly or through habitat modifications, on Western burrowing owls located at or near the Project site.	**Mitigation Measure BIO-2e: Western Burrowing Owl Measures.** To avoid or minimize direct impacts of Project activities on western burrowing owls, the City shall ensure the following procedures are implemented consistent with the HCP. This survey methodology is consistent with accepted survey protocols for this species. *a Habitat Survey* i Western burrowing owl habitat surveys shall be required in the Project area in all HCP modeled occupied habitat. Surveys are not required in sites that are mapped as potential burrowing owl nesting or only overwintering habitat. Modeled habitat types may change throughout the permit term based on the best available scientific data. Habitat surveys are required in both breeding and non-breeding seasons.	1. Retain a qualified biologist to conduct a habitat survey to map areas with burrows or burrow complexes that could support burrowing owls or occupied burrows in all HCP mapped occupied habitat. If suitable habitat is identified, perform two pre-construction surveys within 250 feet of construction activities, between 2 to 14 days prior to ground disturbing activities pre-construction surveys and establish buffer zones around active nests.	1. Pre-construction	1. ET/Qualified Biologist	1. ET/Habitat Agency, (CDFW)
			2. If suitable habitat is identified, ensure that requirements for compliance with nesting bird	2. Design	2. PM	2. ET

MITIGATION MONITORING AND REPORTING PROGRAM DIGESTED SLUDGE DEWATERING FACILITY						
Impact No.	Impact Summary	Mitigation Measures	Implementation Actions	Implementation Schedule	Responsible Party/Actions	Reviewing and Approving Party/Actions
		ii Qualified biologist(s) shall conduct a pedestrian survey of the Project area and accessible areas within 250-feet of the Project area. Pedestrian survey transects shall be spaced to allow 100 percent visual coverage of the ground surface. The distance between transect center lines shall be no more than 50 feet and can be reduced to account for differences in terrain, vegetation density, and ground surface visibility. Poor weather may affect the biologist's ability to detect burrowing owls; therefore, the biologist shall avoid conducting surveys when wind speed is greater than 20 kilometers per hour and there is precipitation or dense fog. The biologist shall map areas with burrows or burrow complexes that could support burrowing owls and all burrows that may be occupied (as indicated by tracks, feathers, egg shell fragments, pellets, prey remains, or excrement).	buffer zones, if needed, are included in contract documents.			
			3. If avoidance of active nests is not feasible and construction occurs in breeding season, prepare an Avoidance, Minimization and Monitoring Plan for CDFW approval. If avoidance measures are not feasible, coordinate with CDFW for passive relocation.	3. Pre-construction	3. ET/Qualified Biologist	3. CDFW
BIO-2 (cont.)		iii To avoid impacts to owls from surveyors, owls and/or occupied burrows shall be avoided by a minimum of 150 feet wherever practical to avoid flushing occupied burrows. Disturbance to occupied burrows shall be avoided during all seasons. iv If suitable habitat is identified during the habitat survey, and if the Project does not fully avoid impacts to the suitable habitat, preconstruction surveys shall be required. Suitable habitat is fully avoided if the project footprint does not impinge on a 250-foot buffer around the suitable burrow. *b Preconstruction Surveys* i A qualified biologist shall conduct preconstruction surveys in all suitable habitat identified in the habitat surveys within 250 feet of construction activity, between 14 and 4 days prior to initiating ground disturbance related to Project construction activities. The 250-foot buffer zone shall be surveyed to identify burrows and owls outside of the Project area which may be impacted by factors such as noise and vibration (heavy equipment) during project construction. As burrowing owls may recolonize a site after only a few days, time lapses between Project activities shall require subsequent take avoidance surveys including but not limited to a final survey conducted no more than 2 days prior to ground disturbance to ensure absence. A minimum of two surveys shall be conducted (if owls are detected on the first survey, a second survey is not needed). ii The preconstruction survey shall be a minimum of 3 hours, beginning 1 hour before sunrise and continuing until 2 hours after sunrise (3 hours total) or beginning 2 hours before sunset and continuing until 1 hour after sunset. Additional time may be required for large project sites. *c Avoidance Measures* The City shall employ avoidance measures described below to avoid direct take of individual burrowing owls during Project construction. *Breeding Season Avoidance Measures - February 1 to August 31 (inclusive)* i If preconstruction surveys identify evidence of Western burrowing owls within 250 feet of the Project area during the breeding season, the Project proponent shall avoid all nest sites that could be disturbed by Project construction activities during the remainder of the breeding season or while the nest is occupied by adults or young (occupation includes individuals or family groups foraging on or near the site following	4. Monitor prior to and during Project construction as required by the mitigation measure.	4. Pre-construction and Construction	4. CM/Qualified Biologist	4. ET
			5. Monitor to ensure that contractor implements measures in contract documents regarding avoidance measures established by the biologist: • Include in environmental training. • Monitor site inspection logs. • Notify PM and ET of non-compliance and ensure corrective actions.	5. Construction	5. CM/ET	5. ET
			6. Submit final compliance reporting documentation, if applicable	6. Post-construction	6. ET/CM	6. PBCE
			7. Submit Avoidance, Minimization and Monitoring Plan report, if required, to CDFW.	7. Post-construction	7. ET	7. PBCE

MITIGATION MONITORING AND REPORTING PROGRAM DIGESTED SLUDGE DEWATERING FACILITY						
Impact No.	Impact Summary	Mitigation Measures	Implementation Actions	Implementation Schedule	Responsible Party/Actions	Reviewing and Approving Party/Actions
		fledging). Avoidance shall include establishment of a 250-foot no-disturbance buffer zone around active nest sites by a qualified biologist. ii If active nests cannot be avoided, construction may occur within 250 feet of active nest sites if 1) the nest is not disturbed, and 2) the Project proponent develops and implements an Avoidance, Minimization, and Monitoring Plan, subject to approval by CDFW the Habitat Agency overseeing the HCP. The plan shall incorporate the following criteria: 1. A qualified biologist shall monitor the owls for at least 3 days prior to Project construction to determine baseline nesting and foraging behavior (i.e., behavior without construction). The same qualified biologist shall monitor the owls during construction and find no change in owl nesting and foraging behavior in response to construction activities.				
BIO-2 (cont.)		2 If there is any change in owl nesting and foraging behavior as a result of Project construction activities, these activities shall cease within the 250-foot buffer. Construction shall not resume within the 250-foot buffer until the adult owls and juveniles from the occupied burrows have moved out of the project site. 3. If monitoring indicates that the nest is abandoned prior to the end of nesting season and the burrow is no longer in use by owls, the no-disturbance buffer zone may be removed. The biologist shall excavate the burrow to prevent reoccupation after receiving approval from CDFW. *Non-Breeding Season Avoidance Measures – September 1st to January 31st (inclusive)* i If preconstruction surveys identify evidence of Western burrowing owls within 250 feet of the Project area during the non-breeding season (September 1st to January 31st, inclusive), the Project proponent shall establish a 250-foot no-disturbance buffer around occupied overwintering burrows as determined by a qualified biologist. ii If occupied burrows cannot be avoided, construction may occur within 250 feet of overwintering burrows sites if: 1. A qualified biologist monitors the owls for at least 3 days prior to construction to determine baseline foraging behavior (i.e., behavior without construction). 2. The same qualified biologist monitors the owls during construction and finds no change in owl foraging behavior in response to construction activities. 3. If there is any change in owl nesting and foraging behavior as a result of construction activities, these activities shall cease within the 250-foot buffer. 4. If the owls are gone for at least one week, the Project proponent may request approval from the HCP Habitat Agency for qualified biologist to excavate usable burrows to prevent owls from re-occupying the site. After all usable burrows are excavated, the no-disturbance buffer zone shall be removed and construction may continue. Monitoring must				

MITIGATION MONITORING AND REPORTING PROGRAM DIGESTED SLUDGE DEWATERING FACILITY						
Impact No.	Impact Summary	Mitigation Measures	Implementation Actions	Implementation Schedule	Responsible Party/Actions	Reviewing and Approving Party/Actions
		continue as described above for the non-breeding season as long as the burrow remains active. *d Construction Monitoring* During construction, the no-disturbance buffer zones shall be established and maintained where applicable and based on the Project Avoidance, Minimization, and Monitoring Plan. A qualified biologist shall monitor the site consistent with the requirements described in the Avoidance Measures, described above, to ensure that buffers are enforced and owls are not disturbed. The qualified biological monitor shall prepare and perform an environmental training for all Project personnel on the avoidance procedures, buffer zones, and protocols in the event that a burrowing owl flies into an active construction zone. *e Passive Relocation* If avoidance measures described above cannot be implemented with the Project, Passive Relocation shall be implemented according to the protocol described in the HCP and in coordination with, and approval by CDFW.				
BIO-2 (cont.)	The Project could have a substantial adverse effect, either directly or through habitat modifications, on Western pond turtles located at or near the Project site.	**Mitigation Measure BIO-2b: Western Pond Turtle Measures.** a. Prior to the start of construction activities, the project proponent shall retain a qualified biologist to conduct preconstruction surveys for pond turtles in all suitable habitats (aquatic and upland) in the vicinity of the work site. Surveys shall take place no more than 72 hours prior to the onset of site preparation and construction activities with the potential to disturb turtles or their habitat. b. If preconstruction surveys identify active western pond turtle nests within the Project site, the biologist shall establish no-disturbance buffer zones around each nest using temporary orange construction fencing. The demarcation shall be permeable to allow young turtles to move away from the nest following hatching. The radius of the buffer zone and the duration of exclusion shall be determined in consultation with the CDFW. The buffer zones and fencing shall remain in place until the young have left the nest, as determined by the qualified biologist. c. A qualified biologist shall monitor construction activities in the vicinity of suitable habitat within which western pond turtle is found (either during the survey or observed during construction), and remove and relocate western pond turtles in proposed construction areas to suitable habitat outside the project limits, consistent with CDFW protocols and handling permits. Relocation sites shall be subject to CDFW approval. d. If any turtles are found in the Project site, construction activities shall halt within 50 feet and the qualified biologist shall be notified. If the biologist determines the turtle is a western pond turtle, the turtle shall be relocated into nearby suitable habitat consistent with CDFW protocols and handling permits.	1. Ensure that requirements for compliance with any biological resources buffer zones and species protection are included in contract documents.	1. Design	1. PM	1. PBCE
			2. Retain a qualified biologist to perform preconstruction surveys. If active nests are located during the survey, establish buffer zones with fencing in consultation with CDFW.	2. Within 72 hours prior to onset of construction	2. ET and qualified biologist	2. N/A
			3. Monitor to ensure that exclusion fencing and buffer zones are implemented: • Include in environmental training. • Relocate turtles to suitable habitat, if encountered. • Maintain site inspection and monitoring logs, results of any consultation with CDFW. • Notify PM and ET of non-compliance and ensure corrective action.	3. Construction	3. CM and qualified biologist	3. ET
			4. Submit reports, if applicable, to CDFW per consultation requirements. Submit final compliance monitoring report.	4. Post-construction	4. ET	4. ET/PBCE sign off

MITIGATION MONITORING AND REPORTING PROGRAM DIGESTED SLUDGE DEWATERING FACILITY						
Impact No.	Impact Summary	Mitigation Measures	Implementation Actions	Implementation Schedule	Responsible Party/Actions	Reviewing and Approving Party/Actions
BIO-3	The Project could have indirect impacts on the riparian wetland community.	**Mitigation Measure BIO-3a: Riparian Woodland Habitat Avoidance Measures.** Design of program-level Regional Wastewater Facility (RWF) improvements and planned land uses will avoid areas of riparian woodland habitat to the extent feasible. Riparian habitat impact avoidance shall be consistent with the City's General Plan Riparian Habitat Policy and HCP setbacks. To reduce impacts on riparian woodland habitat during development east of Zanker Road construction and maintenance activities, the project proponent and/or its contractor shall implement the following measures: • Minimize cutting and trimming of adjacent shrubs and trees during construction and maintenance activities to the maximum extent possible. Shrubs that need to be trimmed should be cut at least 1 foot above ground level to leave the root systems intact and allow for regeneration. • Contract a certified arborist to perform or oversee necessary trimming of riparian trees. Install orange construction barrier fencing around the boundaries of riparian habitat to be avoided prior to initiation of construction activities. The protected area shall be designated an environmentally sensitive area and would be clearly identified on the construction specifications. Fencing shall be maintained throughout the construction period.	The project proponent shall prepare and submit to the satisfaction of the Planning Environmental Division Manager contract language meeting the requirements of this mitigation measure as well as documentation of the qualifications of the certified arborist. Construction inspector shall monitor contractor compliance, report non-compliance and ensure corrective action.	Pre-construction (especially any ground disturbance including vegetation removal, grading, soil hauling etc.)	PBCE, CM, CDFW, U.S. Army Corps of Engineers (USACE), ESD	
BIO-3 (cont.)		**Mitigation Measure BIO-3c: Control of Non-Native Invasive Plant Species.** To minimize introduction and spread of non-native invasive plant species, the project proponent or its contractor shall implement the following: a. A qualified biologist or botanist shall conduct field training for construction workers to inform them about invasive species and methods to minimize spread of invasive species for the duration of all associated project and program activities mentioned above.	1. Ensure that requirements for control of non-native invasive species and revegetation are included in contract documents. **(Spec. BIO-3c)**	1. Design	1. PM	1. PBCE

MITIGATION MONITORING AND REPORTING PROGRAM DIGESTED SLUDGE DEWATERING FACILITY						
Impact No.	Impact Summary	Mitigation Measures	Implementation Actions	Implementation Schedule	Responsible Party/Actions	Reviewing and Approving Party/Actions
		b. Revegetate areas disturbed during construction with approved native plant species. c. Remove invasive plant seeds and plant parts from all clothing, shoes, vehicles, and equipment prior to entering or working in or near any environmentally sensitive area, including riparian woodland habitat. d. Stage construction and maintenance equipment in weed-free areas. e. Gather and bag invasive plant seeds or plant parts found in the containment area and take them to an appropriate disposal facility. f. Implement the following measures to prevent the spread of noxious weeds and invasive plants when present. g. Educate crews in the use of weed-free materials when available, ensure vehicles leaving paved roads do not spread weeds in sensitive habitats (including salt marsh or upland refugia habitat for salt marsh harvest mouse, salt marsh wandering shrew, California clapper rail, California black rail, dusky footed woodrat, and all aquatic and wetland habitat); and h. Avoid entering patches of invasive plants to the maximum extent possible.	2. Monitor to ensure that contractor implements measures in contract documents regarding invasive plants and revegetation: • Include in environmental training. • Maintain site inspection logs. • Approve contractors's planting mix. • Notify PM and ET of non-compliance and ensure corrective action.	2. Construction	2. CM	2. ET
			3. Submit final compliance report, including documentation of revegetation.	3. Post-construction	3. ET	3. ET/PCBE sign off
BIO-4	The Project could have a substantial adverse effect on wetlands through direct removal, filling, hydrological interruption, or other means.	**Mitigation Measure BIO-4a: Wetland Avoidance Measures** Access roads, work areas, and infrastructure shall be sited to avoid and minimize direct and indirect impacts to jurisdictional features. Prior to the beginning of any construction-related activities, the following measures shall be applied to protect potential jurisdictional features: 1. A protective barrier (such as silt fencing) shall be erected around water features adjacent to the Project at the "top of bank" or at the feature boundary to isolate them from Project activities and reduce the potential for incidental fill, erosion, or other disturbance; 2. Signage shall be installed on the fencing to identify sensitive habitat areas and restrict construction activities; 3. No equipment mobilization, grading, clearing, or storage of equipment or machinery, or similar activity shall occur at the Project site until a representative of the City has inspected and approved the protection fencing; and 4. The City shall ensure that the temporary fencing is continuously maintained until the Project is completed. 5. Drainage from all proposed facilities where chemical spills could occur during Project operation shall be directed away from sensitive resources and/or include other measures to minimize potential for release of potential pollutants to the environment.	1. Ensure that wetlands are clearly designated on site plans and requirements for minimizing impacts to wetlands are included in contract documents.	1. Design	1. PM	1. ET
			2. Install construction fencing around designated wetlands according to delineation created by qualified biologist, and ensure that contractor erects signage for protection of environmentally sensitive areas.	2. Construction	2. CM/ET	2. ET
			3. Monitor to ensure that contractor implements measures in contract documents: • Include in contractor environmental training. • Maintain site inspection logs. • Notify PM and ET of non-compliance and ensure corrective action.	3. Construction	3. CM/ET	3. ET
			4. Submit final compliance reporting documentation, if applicable.	4. Construction	4. ET	4. PBCE
			1. If wetlands cannot be avoided, retain a qualified biologist or permitting specialist to assist with preparation of resource agency permit applications to USACE, RWQCB, and	1. Design (and at least one year prior to construction)	1. ET	1. PBCE

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		Mitigation Measure BIO-4b: Wetlands Restoration for Project-Level Improvements. If it is determined during the design phase that impacts on wetland habitat cannot be avoided, the City's ET shall obtain permits and approvals from the SCVHA, USACE, Regional Water Quality Control Board (RWQCB), and/or CDFW, as applicable. In order to ensure that the Project results in no net loss of wetland habitat functions and values, the City shall compensate for the loss of wetland resources through on-site restoration/creation, off-site protection and enhancement of riparian and wetland habitat, and/or purchase of mitigation credits consistent with the terms and conditions of USACE Regional General Permit 18 for implementation of covered activities in the HCP. On-site or off-site habitat restoration/creation and/or purchase of mitigation credits consistent with the terms and conditions of USACE Regional General Permit 18 shall be determined in consultation with the resource agencies, as applicable. The City shall prepare a mitigation plan, which shall include monitoring applicable requirements and success criteria.	CDFW. This may include preparation of a Restoration Mitigation Monitoring Plan (RMMP).			
			2. Ensure that requirements for compliance with resource agency permits are included in contract documents (specifications to be determined). This may include site restoration according to RMMP.	2. Design	2. PM	2. PBCE
			3. Monitor to ensure that contractor implements measures in contract documents regarding permit requirements: • Include in environmental training. • Maintain site inspection logs. • Notify PM and ET of non-compliance and ensure corrective action.	3. Construction	3. CM and biological monitor	3. ET
			4. Submit reports, as applicable, to resource agencies per permit requirements.	4. Post-construction	4. ET and biological monitor	4. PBCE
			5. Perform post-construction compliance monitoring and corrective actions, as needed.	5. Post-construction / restoration	5. ET and biological monitor	5. PBCE, agencies
			6. Submit final compliance report to resource agencies, if applicable.	6. Post-restoration monitoring period	6. ET	6. PBCE
BIO-5	The Project could conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	**Compensate for Removal of Protected Trees.** As part of the project condition of approval, the trees to be removed shall be replaced on-site or off-site at the accepted ratios or through payment of an in-lieu fee to Our City Forest to compensate for the loss of the trees. Protected trees that are lost shall be replaced at a minimum of four 24-inch box trees per tree removed. Tree replacement amounts shall be subject to the City's Arborist and/or PBCE, who would determine the final mitigation for impacts to protected trees. Replacement trees shall be planted in a suitable location on Facility property or on other City property, to be identified by the City Arborist and approved by PBCE.	1. Requirements for tree replacement or payment of in-lieu fees in accordance with City policies and guidelines shall be included in contract documents. Include the City's Tree Replacement Ratio information in the contract documents, if applicable.	1. Design	1. PM	1. ET
			2. Monitor contractor for compliance with tree replacement as specified by City policies and guidelines.	2. Construction	2. CM	2. ET
			3. Submit final compliance reporting documentation, if applicable.	3. Construction	3. ET	3. PBCE
		Mitigation Measure BIO-5b: Minimize Construction Effects on Protected Trees to be Retained. The project proponent shall implement the following tree-protection measures prior to and during project construction. • Retain a certified arborist to oversee protection of native trees to be retained on the project site.	1. Retain a qualified arborist to perform tree survey to identify ordinance trees, native trees, in project area and evaluate appropriate tree protection measures for trees to be retained.	1. Feasibility / Development	1. ET	1. N/A
			2. If trees in project area require pruning and/or protection, ensure that requirements related to tree protection are included in contract documents. **(Spec. BIO-5b)**	2. Design	2. PM	2. PBCE

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		• Require that any tree or root pruning occurring for construction is first approved by the certified arborist. • Require that the certified arborist evaluate injuries to retained trees as soon as possible for appropriate treatment. With implementation of these conditions and measures, the Project would not result in any new or more significant impacts than those identified in the certified Plant Master Plan EIR.	3. If trees in project area to be protected, monitor to ensure that contractor implements measures in contract documents: • Include in environmental training. • Maintain site inspection checklists. • Notify PM and ET of non-compliance.	3. Construction	3. CM	3. ET
			4. Submit final compliance report, if applicable.	4. Post-construction	4. ET	4. PBCE
BIO-5	The Project could conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	**Mitigation Measure BIO-2: Western Burrowing Owl Measures**, as described above.				
CULTURAL RESOURCES						
CUL-1	Implementation of the Project could cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.	**Mitigation Measure CUL-1a: Inadvertent Discovery of Archaeological Resources.** If prehistoric or historic-era archaeological resources are encountered by construction personnel during Project implementation, all construction activities within 100 feet shall halt and the contractor shall notify ESD personnel and the PBCE Senior Environmental Planner. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; stone milling equipment (e.g., mortars, pestles, hand stones, or milling slabs); and battered stone tools, such as hammer stones and pitted stones. Historic-era materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. The City's ESD or its contractor shall retain a Secretary of the Interior-qualified archaeologist to inspect the findings within 24 hours of discovery. If it is determined that the Project could damage a historical resource as defined by CEQA (CEQA Guidelines §15064.5), construction shall cease in an area determined by the archaeologist until a mitigation plan has been prepared, approved by the PBCE Senior Environmental Planner, and implemented to the satisfaction of the archaeologist (and Native American representative if the resource is prehistoric, who would be identified by the Native American Heritage Commission [NAHC]). If the Native American representative identifies the find as a tribal resource, ESD or its contractor shall proceed to Mitigation Measure CUL-1b. For archaeological resources, the archaeologist, in consultation with the PBCE Senior Environmental Planner and the City's Historic Preservation Officer, shall determine when construction can resume.	1. Ensure that measures related to archaeological discoveries are included in contract documents.	1. Design	1. ET and PM	1. ET
			2. Ensure that all personnel complete environmental training prior to beginning work. Monitor to ensure that the contractors implement measures in contract document.	2. Construction	2. ET and CM	2. ET
			3. Evaluate the potential discovery and advise the ET as to the significance of the discovery. If warranted, proceed with measures that may include the following: a. On-site preservation of resource; b. Archaeological monitoring program with prior review/approval of ET; or c. Archaeological testing program with prior review/approval of ET.	3. Construction	3. CM and qualified archeologist	3. ET PBCE, in consultation with City's Historic Preservation Officer (if there are archeological or tribal resources)
			4. Prepare a Final Archaeological Resources Report if warranted. Submit to ET for review and approval.	4. Construction	4. ET and qualified archeologist	4. PBCE
			5. Ensure that contract documents include measures related to discovery of human remains.	5. Design	5. ET and PM	5. ET

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		The preferred mitigation shall be preservation in place. If preservation in place is not physically or financially feasible, mitigation shall be data recovery through excavation. If preservation in place is selected as mitigation, the mitigation shall be accomplished through one of the four following means: (1) modifying the construction plan to avoid the resource; (2) incorporating the resource within open space; (3) capping and covering the resource before building appropriate facilities on the resource site; or (4) deeding the resource site into a permanent conservation easement. If preservation in place is not feasible, a qualified archaeologist shall prepare and implement a detailed treatment plan to the satisfaction of the PBCE Senior Environmental Planner to recover the scientifically consequential information from the resource prior to any excavation at the resource site. Treatment for most of the resources that could be encountered shall consist of (but shall not necessarily be limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource to be impacted by the project. The treatment plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and state repositories, libraries, and interested professionals.				
CUL-1 (cont.)		**Mitigation Measure CUL-1b: Inadvertent Discovery of Tribal Cultural Resources.** The Native American representative shall make recommendations to the City for the appropriate measures to treat the tribal cultural resource which shall be implemented in accordance with Section 15064.5 of the CEQA Guidelines.	1. Evaluate the potential discovery and advise the ET as to the significance of the discovery.	1. Construction	1. Native American representative, ET	1. PBCE
CUL-2	Implementation of the Project could disturb human remains, including those interred outside of formal cemeteries.	**Mitigation Measure CUL-2: Inadvertent Discovery of Human Remains.** If human remains are encountered by construction personnel during project implementation, all construction activities within 100 feet shall halt and the contractor shall notify the PBCE Senior Environmental Planner. ESD shall contact the Santa Clara County Coroner to determine whether or not the remains are Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner shall contact the NAHC within 24 hours. The NAHC would then identify the person or persons it believes to be the most likely descendant from the deceased Native American, who in turn would make recommendations to the City for the appropriate means of treating the human remains and any associated funerary objects which shall be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines.	1. Include in environmental training. Monitor to ensure that the contractor implements measures in contract document including reporting human remains if encountered and suspending work in the vicinity.	1. Construction	1. ET and CM	1. ET
			2. Confirm identification of human remains, if needed. If human remains are confirmed, perform required coordination and notifications.	2. Construction	2. ET and qualified archaeologist	2. ET
			3. Monitor to ensure the appropriate disposition of human remains.	3. Construction	3. ET and qualified archaeologist	3. ET
			4. Submit final compliance report, if applicable.	4. Construction	4. ET	4. PBCE
GEOLOGY AND SOILS						
GEO-1	The Project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	**Mitigation Measure CUL-2: Inadvertent Discovery of Paleontological Resources.** If paleontological resources, such as fossilized bone, teeth, shell, tracks, trails, casts, molds, or impressions are discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find and the contractor shall notify ESD personnel and the PBCE Senior Environmental Planner. ESD or its contractor shall retain a qualified paleontologist to inspect the findings within 24 hours of discovery to assess the nature and importance of the find and, if necessary, develop appropriate treatment measures in	1. Evaluate the potential discovery and advise the ET as to the significance of the discovery.	1. Construction	1. Qualified paleontologist, ET	1. PBCE

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		conformance with Society of Vertebrate Paleontology standards, and in consultation with the PBCE Senior Environmental Planner.				
GREENHOUSE GAS EMISSIONS						
GHG-1	The Project's operational GHG emissions combined with the 30-year amortized construction emissions, would exceed the BAAQMD significance threshold for operation.	**Mitigation Measure GHG-1a: GHG Reduction Strategy Measures.** The following measures identified in the GHG Reduction Strategy shall be implemented: • An evaluation of post-2020 operational energy efficiency and associated design measures shall be completed for energy-intensive Facility improvements, such as the mechanical drying improvements. • The proposed number of parking spaces would not exceed requirements in the Municipal Code.	The project proponent shall prepare and submit to the satisfaction of the Director of PBCE or designee plans and specifications meeting the requirements of the mitigation measure. Project proponent shall submit prepare and submit to the satisfaction of the Planning Environmental Division Manager an evaluation of post-2020 operational energy efficiency meeting the requirements of this measure.	Design Post-Year 2020 Operations (for energy-intensive RWF improvements).	Director of Planning, Building & Code Enforcement	PBCE
HAZARDS AND HAZARDOUS MATERIALS						
HAZ-1	The Project could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and is 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, could create a significant hazard to the public or the environment.	**Mitigation Measure HAZ-1a: Pre-Construction Hazardous Materials Assessment.** Prior to construction, ESD or its contractor shall ensure that a limited soil and/or groundwater investigation is performed at proposed construction work areas to characterize soil and groundwater quality. If the results reveal soils and/or groundwater contamination exist in excess of applicable regulatory screening levels (Environmental Screening Levels or California human health screening levels) for the proposed site use, the City shall contact the appropriate regulatory agency (the Santa Clara County Department of Environmental Health [SCCDEH], RWQCB, or DTSC), as appropriate. ESD or its contractor shall complete subsequent site investigations and/or remedial activities required by the regulatory agency to ensure that residual impact, if any, shall not pose a continuing significant threat to groundwater resources, human health, or the environment. The results of the pre-construction hazardous materials assessment shall be incorporated into the Site Health and Safety Plan prepared in accordance with Mitigation Measure HAZ-1b, below, and the Soil and Groundwater Management	1. Evaluate project location with respect to known underground fuel tank leaks or spills and proximity to landfills. Assess need for subsurface sampling to evaluate potential presence of contaminants.	1. Feasibility / Development	1. ET and ESD's Hazardous Material Specialist	1. ET and ESD's Hazardous Material Specialist
			2. If warranted, retain a qualified environmental professional to prepare a workplan, conduct soil and groundwater sampling, and report results. Report shall provide recommendations for agency consultation and/or additional cleanup, depending upon findings.	2. Feasibility / Development	2. ET and qualified environmental professional	2. ET and ESD's Hazardous Material Specialist (RWQCB, DTSC, SCCDEH)
			3. Ensure that contract documents include site-specific sampling report and/or general information about potential soil and groundwater contaminants anticipated. If warranted, include site cleanup in project and prepare final cleanup report.	3. Design	3. PM and ET	3. ET
HAZ-1 (cont.)		Plan prepared in accordance with Mitigation Measure HAZ-1c, below, to determine whether: specific soil and groundwater management and disposal procedures for contaminated materials are required; excavated soils are suitable for reuse; and construction worker health and safety procedures for working with contaminated materials are required.	4. A copy of the pre-construction hazardous materials assessment shall be submitted to the Director of PBCE or designee for approval.	4. Construction	4. CM and ET	4. PBCE
		Mitigation Measure HAZ-1b: Health and Safety Plan. ESD or its contractor shall retain a qualified environmental professional to prepare a site-specific Health and Safety Plan (HASP) in accordance with federal OSHA regulations (29 CFR 1910.120) and Cal/OSHA regulations (8	1. Ensure that contract documents include preparation of a Health and Safety Plan and documentation of compliance in accordance with the mitigation measure.	1. Design	1. PM	1. ET

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		CCR Title 8, Section 5192). Because anticipated contaminants vary depending upon the location of proposed improvements in the Project area and may vary over time, the HASP shall address site-specific worker health and safety issues during construction. The HASP shall include the following information: • Results of sampling conducted in accordance with Mitigation Measure HAZ-1a. • All required measures to protect construction workers and the general public by including engineering controls, monitoring, and security measures to prevent unauthorized entry to the construction areas and to reduce hazards outside of the construction areas. If prescribed contaminant exposure levels are exceeded, personal protective equipment shall be required for workers in accordance with state and federal regulations. • Required worker health and safety provisions for all workers potentially exposed to contaminated materials, in accordance with state and federal worker safety regulations, and designated qualified individual personnel responsible for implementation of the HASP. • The contractor shall have a site health and safety supervisor fully trained pursuant to hazardous materials regulations be present during excavation, trenching, or cut and fill operations to monitor for evidence of potential soil contamination, including soil staining, noxious odors, debris or buried storage containers. The site health and safety supervisor must be capable of evaluating whether hazardous materials encountered constitute an incidental release of a hazardous substance or an emergency spill. The site health and safety supervisor shall implement procedures to be followed in the event of an unanticipated hazardous materials release that may impact health and safety. These procedures shall be in accordance with hazardous waste operations and regulations and specifically include, but are not limited to 1) immediately stopping work in the vicinity of the unknown hazardous materials release; 2) notifying SCCDEH, RWQCB, or DTSC; and 3) retaining a qualified environmental firm to perform sampling, remediation, and/or disposal. • Documentation that HASP measures have been implemented during construction. • Provision that submittal of the HASP to ESD, or any review of the contractor's HASP ESD, shall not be construed as approval of the adequacy of the contractor as a health and safety professional, the contractor's HASP, or any safety measure taken in or near the construction site. The contractor shall be solely and fully responsible for compliance with all laws, rules, and regulations applicable to health and safety during the performance of the construction work.	2. Review contractor's Health and Safety Plan.	2. Design / Construction	2. PM and CM	2. ET
			3. Monitor compliance by the contractor, report non-compliance or discovery of suspect hazardous materials to PM and ET. Ensure corrective action, sampling, remediation and/or disposal as warranted. (Note contractor is solely responsible for health and safety of its employees).	3. Construction	3. CM and ET	3. ET and ESD's Hazardous Material Specialist
			4. A copy of the HASP shall be submitted to the Director of PBCE or designee.	4. Construction	4. CM and ET	4. PBCE
HAZ-1 (cont.)		**Mitigation Measure HAZ-1c: Soil and Groundwater Management Plan.** If hazardous materials or contaminated soil and groundwater above regulatory screening levels are identified under the pre-construction hazardous materials assessment, done in accordance with Mitigation Measure HAZ-1a, ESD shall require the construction contractor to prepare and implement a Soil and Groundwater Management Plan, that specifies the method for handling and disposal of contaminated soil and groundwater prior to construction. The Soil and Groundwater Management Plan shall establish the sampling and laboratory analysis program which may include the following: 1)	1. Ensure that contract documents include a Soil and Groundwater Management Plan meeting the requirements of the mitigation measure and requirement for submittal of final compliance report documenting disposal of materials.	1. Design	1. PM	1. ET
			2. Review contractor's Soil and Groundwater Management Plan.	2. Design / Construction	2. PM, CM, and ESD's Hazardous Material Specialist	2. ET and ESD's Hazardous Material Specialist

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		analysis of subsurface soil samples within the Project site for total petroleum hydrocarbons (as gasoline, diesel, and waste oil), Title 22 metals, and volatile organic compounds (VOCs) or any other chemicals of concern to evaluate the potential presence of contamination; 2) groundwater samples if subsurface excavations are anticipated to require dewatering; and 3) additional analyses for VOCs and semi-volatile organic compounds (SVOCs) for groundwater samples collected at construction locations within 1,000 feet of adjacent landfills. The Soil and Groundwater Management Plan shall include all necessary procedures to ensure that excavated materials and fluids generated during construction are stored, managed, and disposed of in a manner that is protective of human health and in accordance with applicable laws and regulations. The Plan shall include the following information. • Step-by-step procedures for evaluation, handling, stockpiling, storage, testing, and disposal of excavated material, including criteria for reuse and offsite disposal. All excavated materials shall be inspected prior to initial stockpiling, and spoils that are visibly stained and/or have a noticeable odor shall be stockpiled separately to minimize the amount of material that may require special handling. In addition, excavated materials shall be inspected for buried building materials, debris, and evidence of underground storage tanks; if identified, these materials shall be stockpiled separately and characterized in accordance with landfill disposal requirements. If some of the spoils do not meet the reuse criteria and/or debris is identified, these materials shall be disposed of at a permitted landfill facility. • Procedures to be implemented if unknown subsurface conditions or contamination are encountered, such as previously unreported tanks, wells, or contaminated soils. • Procedures for containment, handling and disposal of groundwater generated from construction dewatering, the method to be used to analyze groundwater for hazardous materials likely to be encountered and the appropriate treatment and/or disposal methods. The Pre-Construction Hazardous Materials Assessment (HAZ-1a), Health and Safety Plan (HAZ-1b), and Soil Management Plan (HAZ-1c) shall be submitted to the PBCE Senior Environmental Planner for approval.	3. Monitor compliance by the contractor, report non-compliance or discovery of suspect hazardous materials to PM and ET. Ensure corrective action, sampling, remediation and/or disposal as warranted.	3. Construction	3. CM and ET	3. ET and ESD's Hazardous Material Specialist
			4. Review contractor's final compliance report and retain all manifests for hazardous waste disposal.	4. Construction	4.CM	4. ET and ESD's Hazardous Material Specialist
			5. A copy of the Soil and Groundwater Management Plan shall be submitted to the Director of PBCE or designee	5. Construction	5. ET and ESD's Hazardous Material Specialist	5. PBCE
HAZ-2	Construction requiring one lane closure of Zanker Road could interfere with the use of Zanker Road during evacuation of the Facility.	Implementation of **Mitigation Measure TR-1**, described below in Transportation and Circulation, notifying Facility personnel of the temporary closure of Zanker Road and instructing personnel to evacuate using Mike Tocce Lane.				
HYDROLOGY AND WATER QUALITY						
HYD-1	Any changes or increases in runoff from the Project sites need to be adequately characterized and drainage systems need to be planned in a manner that avoids significant impacts related to flooding	**Mitigation Measure HYD-1: Comprehensive Drainage Plan.** The City shall prepare and implement a comprehensive drainage plan for the future plant expansion area, the south and east of the Facility operational area. The plan shall be consistent with the provisions and requirements of the Municipal Regional Permit (NPDES Permit Order R2-2009-0074), as well as with the subsequent policies and guidance set forth by the relevant	1. Retain a qualified hydrologic engineer to prepare a Comprehensive Drainage Plan in accordance with the measure. The comprehensive plan will establish the framework and requirements for site drainage, and may establish phasing for development of detailed drainage design as development progresses (i.e. initially for CIP sites outside the existing operational area,	1. Feasibility / Development	1. PM	1. PCBE

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		permittee(s) (e.g., the City of San José). This plan shall incorporate the following elements: • The storm drain system and treatment capacity shall be designed in a manner to accommodate peak conditions from a design storm. The City requires that the storm drain system have the capacity for a 10-year event; however, the comprehensive drainage plan shall also plan for a 100-year event. The plan need not avoid all ponding and flooding during a 100-year event, but shall consider where water would pool and flow and include measures to avoid draining excess runoff to offsite pumps, to avoid flooding structures, and to avoid the release of untreated sewage during a 100-year runoff event. • Actions necessary to prevent exceeding Headworks capacity and/or releasing of runoff offsite, as specified in the NPDES requirements, shall be identified and implemented. Such actions may include installation of additional pumping capacity or redirection of runoff to other surface waters (so long as such discharges are in compliance with NPDES requirements). • Proposed roads (including the Dixon Landing roadway east of the operational area) and recreational trails shall be designed to allow passage of surface water drainages, avoid fill within wetland habitats, and shall incorporate measures to reduce the impact of impervious surfaces on the rate and volume of stormwater runoff. The size and design of culverts, channels, cross drains, boardwalks, and/or bridges (as applicable) shall be determined based on drainage calculations that consider both a 10-year and 100-year storm event. The drainage plan shall also identify measures to ensure that current rates of groundwater infiltration are not decreased significantly by the increase in impervious area with implementation of proposed PMP land uses to the south and east of the operational area. Where soils are suitable, such measures might include bioswales, infiltration galleries, or other measures that promote stormwater retention and infiltration rather than offsite conveyance.	and later for proposed economic development). 2. Ensure project design complies with Comprehensive Drainage Plan and the requirements of this measure. 3. Ensure that drainage requirements are included in construction contract documents. (Spec HYD-1) 4. Ensure project construction includes drainage features as designed. 5. A copy of the Comprehensive Drainage Plan shall be submitted to the PBCE Senior Environmental Planner.	2. Design 3. Design 4. Construction 5. Post-construction	2. PM 3. PM 4. CM 5. ET	2. PBCE 3. PBCE 4. ET 5. ET / PBCE sign off

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Impact No.	Impact Summary	Mitigation Measures	Implementation Actions	Implementation Schedule	Responsible Party/Actions	Reviewing and Approving Party/Actions
TRANSPORTATION AND CIRCULATION						
TR-1	The temporary closure along Zanker Road south of the Facility operational area would increase traffic volumes on the detour roadways.	**Mitigation Measure TR-4: Implement Project Traffic Control Plan.** ESD or its contractor(s) shall prepare and implement a Traffic Control Plan to reduce traffic impacts on the roadways at and near the work site, as well as to reduce potential traffic safety hazards and ensure adequate access for emergency responders. ESD or its contractor(s) shall coordinate development and implementation of this plan with City departments (e.g., Emergency Services, Fire, Police, Transportation), as appropriate. To the extent applicable, the Traffic Control Plan shall conform to the Caltrans' *California Manual on Uniform Traffic Control Devices*, Part 6 (Temporary Traffic Control)[1] and San José Public Works Department's Temporary Traffic Control Manual.[2] The Traffic Control Plan shall include, but not be limited to, the following elements: • Circulation and detour plans to minimize impacts on local road circulation during road and lane closures. Flaggers and/or signage shall be used to guide vehicles through and/or around the construction zone. • Identifying truck routes designated by City of San José and Santa Clara County. Haul routes that minimize truck traffic on local roadways shall be utilized to the extent possible. • Controlling and monitoring construction vehicle movement through the enforcement of standard construction specifications by onsite inspectors. • Scheduling truck trips outside the peak morning and evening commute hours to the extent possible. • Limiting the duration of road and lane closures to the extent possible. • Notifying Facility personnel of the temporary closure of Zanker Road and instructing personnel to evacuate using Mike Tocce Lane during Zanker Road closure. • Maintaining pedestrian and bicycle access and circulation during project construction where safe to do so. If construction activities encroach on bicycle routes or multi-use paths, advance warning signs (e.g., "Bicyclists Allowed Use of Full Lane" and/or "Share the Road") shall be posted that indicate the presence of such users. • Identifying detours for bicycles and pedestrians, where applicable, in all areas affected by project construction. • Storing all equipment and materials in designated contractor staging areas on or adjacent to the worksite, such that traffic obstruction is minimized. • Implementing roadside safety protocols. Advance "Road Work Ahead" warning and speed control signs (including those informing drivers of State legislated double fines for speed infractions in a construction zone) shall be posted to reduce speeds and provide safe traffic flow through the work zone. • Coordinating construction administrators of police and fire stations (including all fire protection agencies). Operators shall be notified in advance of the timing, location, and duration of construction activities and the locations of detours and lane closures, where applicable. • Repairing and restoring affected roadway rights-of way to their original condition after construction is completed.	1. Incorporate into contract documents a requirement that contractor prepare a traffic plan in accordance with requirements of Coordinated Transportation Management Plan and this measure.	1. Design	1. PM	1. ET
			2. Review contractor's traffic control plan.	2. Pre-construction	2. PM and CM	2. CM
			3. Monitor to ensure that contractor implements measures in contract documents. Report noncompliance to PM and ET and ensure corrective action.	3. Construction	3. CM	3. CM
			4. Submit final compliance reporting documentation, if applicable.	4. Construction	4. ET	4. PBCE

1 California Department of Transportation (Caltrans), *California Manual on Uniform Traffic Control Devices for Streets and Highways – Part 6: Temporary Traffic Control*, amended November 7, 2014.
2 City of San José, Public Works Department, *Temporary Traffic Control Manual*, September 27, 2005, available online at http://www.sanjoseca.gov/index.aspx?NID=3464, accessed October 2015.

MITIGATION MONITORING AND REPORTING PROGRAM DIGESTED SLUDGE DEWATERING FACILITY						
Impact No.	Impact Summary	Mitigation Measures	Implementation Actions	Implementation Schedule	Responsible Party/Actions	Reviewing and Approving Party/Actions
TRIBAL CULTURAL RESOURCES						
TRC-1, TRC-2	Implementation of the Project could cause a substantial adverse change in the significance of a tribal cultural resource pursuant to §21074.	Implement **Mitigation Measures CUL-1a. Inadvertent Discovery of Archaeological Resources and CUL-1b. Inadvertent Discovery of Tribal Cultural Resources** See Cultural Resources section, above.				
UTILITIES AND SERVICE SYSTEMS						
UT-1	The Project could affect other utilities during construction.	**Mitigation Measure UT-6: Coordination With Utility Service Providers and Develop Utility Avoidance Plan** Prior to construction, the project proponent shall coordinate with appropriate utility service providers and related agencies to determine the location of utilities and the City will incorporate into construction specifications the requirement that the contractor develop a plan to reduce service interruptions. The plan shall be approved by the City and submitted to appropriate utility providers. Utilities to be addressed in the plan shall include, but may not be limited to: water, recycled water, sewer, gas, electricity, telephone, cable. Coordination efforts shall include the following: • The project proponent shall coordinate with San Jose Municipal Water Supply (SJMWS) as the water purveyor to minimize or eliminate potential water interruptions. Such coordination efforts may include requiring the construction contractor to hot-tap28 existing water lines for new water line connections when possible to maintain service of existing water lines. Another option is to isolate construction areas and back feed water through alternate lines to provide continuous service.	1. Coordinate with appropriate utility service providers to determine the location of utilities.	1. Feasibility / Development	1. PM	1. ET / PBCE
			2. Incorporate into contract documents a requirement that the contractor develop a utility avoidance plan to reduce service interruptions and address potential construction effects on existing utilities. **(Spec UT-6)**	2. Design	2. PM	2. PBCE
			3. Review contractor's utility avoidance plan.	3. Pre-Construction	3. PM	3. N/A
			4. Monitor to ensure that contractor implements measures in contract documents. Report noncompliance to PM and ET and ensure corrective action.	4. Construction	4. CM	4. ET
			5. Submit compliance report, if needed.	5. Post-construction	5. ET	5. ET/PCBE sign off
CUMULATIVE IMPACTS						
C-TR-1	The Project could have transportation impacts that are individually limited, but cumulatively considerable.	**Mitigation Measure C-TR-1: Implement Coordinated Transportation Management Plan.** Prior to construction, the City's contractor(s) shall develop a Coordinated Transportation Management Plan and work with other projects' contractors and appropriate City departments (e.g., Emergency Services, Fire, Police, Transportation) to prepare and implement a transportation management plan for roadways adjacent to and directly affected by the Project as well as planned Facility improvements and land uses, and to address the transportation impact of the overlapping construction projects within the vicinity of the Project. The transportation management plan shall include, but not be limited to, the following requirements:	1. Prepare a Coordinated Transportation Management Plan to outline requirements of project-specific transportation plans.	1. Feasibility / Development	1. CM and PM	1. CM
			2. Incorporate into contract documents a requirement to ensure that contractor prepare a traffic plan in accordance with requirements of Coordinated Transportation Management Plan and this measure.	2. Design/Pre-Construction	2. PM	2. ET
			3. Monitor to ensure that contractor implements measures in contract documents. Report	3. Construction	3. CM	3. CM

MITIGATION MONITORING AND REPORTING PROGRAM DIGESTED SLUDGE DEWATERING FACILITY						
Impact No.	Impact Summary	Mitigation Measures	Implementation Actions	Implementation Schedule	Responsible Party/Actions	Reviewing and Approving Party/Actions
		• Coordination of individual traffic control plans for the Project with nearby projects. • Coordination between the Project contractor and other project contractors in developing circulation and detour plans that include safety features (e.g., signage and flaggers). The circulation and detour plans shall address: – Full and partial roadways closures – Circulation and detour plans to include the use of signage and flagging to guide vehicles through and/or around the construction zone, as well as any temporary traffic control devices – Bicycle/Pedestrian detour plans, where applicable – Parking along public roadways – Haul routes for construction trucks and staging areas for instances when multiple trucks arrive at the work sites • Protocols for updating the transportation management plan to account for delays or changes in the schedules of individual projects. • A comprehensive and continual outreach program to notify affected citizens (i.e., residents of Alviso, commuters, etc.) of all construction activity and roadway closures for the duration of the projects.	noncompliance to PM and ET and ensure corrective action.			
SOURCE: San José-Santa Clara Regional Wastewater Facility Digested Sludge Dewatering Facility Addendum, August 2019.						