



Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: John Stufflebean
David Sykes

SUBJECT: SEE BELOW

DATE: 05-13-11

Approved

Date

5/13/11

COUNCIL DISTRICT: Citywide

**SUBJECT: SAN JOSE/SANTA CLARA WATER POLLUTION CONTROL PLANT
(PLANT) – ODOR STATUS AND BIOSOLIDS PROCESS TRANSITION
TIMING**

RECOMMENDATION

1. Accept the Plant's odor assessment status report and direct staff to continue with the development of a regional odor assessment study and deliver a status report in fall 2011.
2. Accept the analysis of the feasibility of implementing odor control projects in three to seven years and direct staff to continue to explore the possibility of accelerating biosolids projects and deliver a status report in fall 2011.

OUTCOME

Acceptance of the recommendations will result in staff: 1) Continuing to develop a scope of work and budget for a regional odor assessment study; and 2) Continuing analysis of the implementation timeline of the biosolids transition after completion of the Plant Master Plan Environmental Impact Report (EIR).

EXECUTIVE SUMMARY

The Preferred Alternative for the Plant Master Plan was approved by Council on April 19, 2011. The Preferred Alternative includes process changes that will reduce odors and shrink the Plant's footprint, thereby enabling new land uses along the South San Francisco Bay shoreline. Council directed staff to return in May 2011 with additional information on reducing odors from the Plant and an analysis of the feasibility to implement the transition to a new biosolids process in three to seven years.

Staff has been working with other facilities in the vicinity of the Plant to develop a comprehensive odor study that would provide a better understanding of the full extent of how nearby communities are currently affected by odors and will continue to coordinate with stakeholders on the development of this study.

Staff performed a preliminary analysis of all the elements associated with a transition to a new technology for processing biosolids which consists of environmental clearance, site preparation, project development and delivery and cleaning up of the existing lagoons and drying beds. Due process requirements associated with some of these elements appear to be rigid and incompressible. Alternative delivery options such as design/build and design/build/operate could allow for some schedule compression along with some cost and risk implications. Staff will continue to explore these options and work with interested stakeholders in further analyzing options to accelerate the timeline and come back to Council in fall 2011 with a status update.

BACKGROUND

On April 19, 2011, the Council approved the Preferred Alternative for the San Jose/Santa Clara Water Pollution Control Plant Master Plan (Plant Master Plan). Council directed staff to return in May 2011 with additional information to address stakeholder concerns regarding the odors that may be generated by the Plant as well as an analysis of the “feasibility of implementing odor mitigation work in three to seven years” (April 19, 2011 Memo from Mayor Reed, Vice Mayor Nguyen, and Council members Chu, Rocha, and Liccardo).

In addition, at the December 14, 2010, Council meeting, staff was directed by Council to “prioritize the identification of sources and potential solutions for elimination of odors coming from the Plant and present options for the elimination of odors, with timelines and cost estimates to do so.” The April 19, 2011 staff report included estimated costs and timelines for elimination of identified odors in the future. This report provides additional information regarding odors and a planned regional odor assessment study that would include the Plant as well as other potential odor sources in the region.

Current Odor Control Activities

The Plant has been identified as an odor source in only one confirmed odor complaint registered with the Bay Area Air Quality Management District (BAAQMD) database over the last five years. This is a result of ongoing staff operating procedures aimed at reducing offsite odors as much as possible. These odor reduction efforts were recognized in the 2008 Milpitas Odor Control Action Plan.

The odor control practices implemented at the Plant include:

- Adding hydrogen peroxide at several locations in the liquids treatment process;
- Construction and commissioning of a new headworks which utilizes covered grit chambers instead of the aerated open tank grit chambers that are part of the existing headworks;

- Implementing best management practices for the operation of the drying beds; and
- Implementing best management practices for the final truck loading and hauling of dried biosolids to the neighboring Newby Island landfill in the fall, including discontinuing the practice of biosolids stockpiling, limiting biosolids hauling to morning hours during low wind conditions, and monitoring weather conditions.

The Plant is part of BAAQMD's rapid notification system and immediately follows up on any odor complaints that may be attributable to its operations. The services provided by Republic Services at Newby Island Landfill are also part of the BAAQMD's rapid notification system. Republic Services has informed staff that they also work to minimize off-site odors and have implemented programs beyond current best management practices.

ANALYSIS

The mission of the Plant is to treat the wastewater of 1.4 million residents to protect our health, Bay, and economy. One vital element of this mission is to maintain the quality of life for the Plant's immediate neighboring communities in San José and Milpitas by minimizing odor, noise, and traffic impacts. The Plant Master Plan Preferred Alternative includes the following objectives related to odor reduction and biosolids:

- Maximize the long-range efficient use of the Plant's existing facilities and reduce the footprint of the existing biosolids treatment area.
- Maintain cost-effective Plant operations and competitive sewer rates through enhanced operations, flexibility, and rigorous evaluation of new technologies.
- Reduce visual, noise, and odor impacts from Plant operations to neighboring land uses to the extent practicable.
- Promote additional resource recovery from Plant operations by supporting recycled water production, increasing biogas production, and diversifying biosolids reuse options.
- Pursue energy self sufficiency and reduced greenhouse gas emissions by promoting renewable energy generation, increased energy efficiency, and enclosed biosolids processing.

These objectives have guided the development of the Preferred Alternative accepted by Council on April 19, 2011, and the proposed approach to long-range odor and biosolids capital improvements.

A Regional Odor Assessment Study Would Enable Sound Decision Making

Following the discussion at the Treatment Plant Advisory Committee (TPAC) Special Study session on November 19, 2010, and direction given by Council on December 14, 2010, staff and Carollo Engineers (the Plant Master Plan consultant) further investigated possible sources of odor near the Plant. The following sites were visited: Republic Services facilities at Newby Island; the Zanker Road Landfill and Zanker Material Processing Facility; the Milpitas Raw Sewage Pump Station; the San José sanitary sewer collection system junction boxes along

Zanker Road; and the Bay itself. The site visits confirmed that there are multiple odor sources in the area.

A comprehensive odor study would provide a better understanding of the full extent of how nearby communities are currently affected by odors. Newby Island and the Plant would be analyzed in greater detail; however, all potential odor sources would be included. All of the organizations that manage these potential odor sources have agreed in principle to be part of a regional study.

The odor study would also provide needed information for the Plant to help refine the appropriate level of investment associated with the implementation of odor control technologies for specific areas of the Plant. As part of the Plant Master Plan effort, Carollo Engineers performed a preliminary analysis of likely odor sources at the Plant that could result in off-site odors and identified possible odor control improvements for several process areas. The capital projects that would be needed to address potential odor sources at the Plant are included in the Plant Master Plan Preferred Alternative. These consist of around \$70 million of capital investment to cover and treat captured air from the headworks, primary, and thickening processes. Data from the odor study could be used to help size this equipment appropriately if these projects are approved. The approximately \$230 million biosolids transition proposed as a part of the Plant Master Plan Preferred Alternative also is anticipated to reduce the Plant's potential off-site odors. The proposed timeline of this transition will be discussed later in this report. Data provided by an odor control study would ensure that any investments in odor control systems, such as the elimination of open-air biosolids drying beds, will result in odor reductions for the area. However, without a regional commitment to odor control from all potential regional odor sources, the Plant's odor control improvements may not noticeably reduce the overall odors experienced in the neighboring communities.

A regional study would include nearby facilities - Republic Services facilities at Newby Island, the Zanker Road Landfill and Zanker Material Processing Facility, the Milpitas Raw Sewage Pump Station, and the San José sanitary sewer collection system - to establish a one-year regional odor assessment program to better understand the current status of generation and distribution of odors in the surrounding communities. The assessment would more clearly identify how and where odor generation occurs; what the nature and properties of odors are; and what type of odor sources currently may present issues in commercial and residential communities near the Plant.

A scope is being developed for consultant support for this proposed assessment, which would include

- The development and management of a stakeholder process with the participating facilities to obtain consensus on the objectives and scope of the study.
- The development of a methodology for air sampling and monitoring, field measurements, data analysis, and air dispersion modeling.

- Air sample collection and analysis at an estimated 30 process areas/sources at the Plant and the other potential odor generating sites in the area with multiple sampling points at some sources that cover a large area (e.g. biosolids drying beds).
- Sampling during the dry season and wet season to account for weather impacts on odor generation and dispersion.
- Laboratory analysis of over 350 samples collected at special labs that analyze odor samples.
- Data analysis and modeling for potential impacts of the odor on surrounding communities.

Preliminary estimates and cost information received suggests this study could cost up to \$1 million, depending on the number of sites, sampling methodology, laboratory costs, and modeling effort. It is expected to take one year to complete this study.

As staff is developing the scope for this effort, it has become evident that further coordination among stakeholders, including Milpitas and the nearby facilities, is needed for the development of the study. Given that the proposed study is regional in nature and attempts to account for the implications of the odor from multiple sources in close proximity, staff would need to pursue funding from sources other than the Sewer Service and Use Charge (SSUC) for a portion of the study, develop a memorandum of understanding with the study participants, and engage consultant services to perform the study. In fall 2011, staff will update Council on the progress of odor study development and the stakeholder process.

Biosolids Transition – Feasibility of implementing biosolids projects in three to seven years

The approved Plant Master Plan Preferred Alternative includes a proposal to use a new, enclosed mechanical dewatering and greenhouse drying processes that is anticipated to minimize odors, and result in a smaller footprint of approximately 160 acres, rather than the current open-air lagoons and drying beds. The new process was included in the Preferred Alternative to help prepare the Plant for future greenhouse gas regulations, landfill closure, and possible diversification of biosolids disposal and reuse opportunities, in addition to the odor minimization benefits.

Staff had performed an analysis of a temporary contract dewatering option to eliminate the need for lagoons and drying beds 12 years sooner while constructing permanent facilities. As presented in the update to the Transportation and Environment Committee on December 6, 2010, this option would increase expenditures by \$178 million to 2025. For San Jose, this would mean an 8 percent one-time rate increase. Further, the contract dewatering option would require California Environmental Quality Act (CEQA) clearance and possibly site preparation as well.

The current proposed approach for the construction and implementation of the biosolids transition utilizes a traditional *design, bid, build* process, which includes smaller scale field testing to better ensure that the capital investment is successful, reliable, and results in optimized future operating costs. Some stakeholders are concerned with the proposed timeline of phasing out the drying

beds and lagoons by 2025 and requested a shorter timeline. Staff reviewed the proposed timeline for the biosolids transition and found that this process could be completed about four years sooner by limiting the extent of pilot testing. However, a limited pilot testing effort will increase the risk of potential failure or may yield a less cost efficient and potentially poorly performing biosolids treatment process.

McCarthy Ranch representatives, a neighboring stakeholder also represented on the Community Advisory Group, has suggested that the biosolids transition could be completed even faster. Presented to TPAC in November 2010, the analysis provided by a consultant for McCarthy Ranch did not include sufficient data to compare the assumptions to the thorough analysis completed by the Plant Master Plan consultant team (Carollo Engineers et al). The McCarthy Ranch consultant's report relied on limited information from a small set of vendors contacted for pricing and did not consider all the implementation issues for a facility of this size, including the required environmental analysis. Staff will continue to work with McCarthy Ranch and other interested stakeholders on opportunities to accelerate a timeline during the development of the odor study.

As described in the staff report on April 19, 2011, the magnitude and complexity of a transition to a new biosolids process for the Plant that treats the wastewater of 1.4 million people would make this effort one of the largest in the country. As noted earlier, a phased approach to implementation is anticipated to include pilot testing of potential processes to ensure that the significant investment will be successful and the performance and reliability are optimized. Each treatment plant's solids are unique and processes must be chosen and fine-tuned to ensure successful operation and optimized to minimize operational expenses. In addition, this approach would allow the Plant to take advantage of emerging and green technologies, such as gasification for ultimate re-use and disposal, currently being analyzed in collaboration with Harvest Power and the California Energy Commission (CEC).

The following is staff and consultant analysis on the "feasibility of implementing odor mitigation in three to seven years" if a Plant Master Plan is approved, as requested by Council members on April 19, 2011.

Timeline Considerations

Several elements of the implementation appear to be rigid in their schedule:

- ***EIR process:*** The EIR development is projected to take about two years, assuming there is no legal challenge that could delay completion. Moving from over 500 acres of open air drying to an enclosed, more energy-intensive process will generate environmental impacts that must be analyzed along with the other elements of the Plant Master Plan Preferred Alternative. Other recent wastewater treatment plant EIRs have been challenged. The projects to reduce odors and eliminate the open-air drying beds will be analyzed at the project-level of detail in the Plant Master Plan EIR to allow implementation once the EIR is complete and if it is certified and a Plant Master Plan ultimately approved.

- Site Preparation: The site identified as part of the Preferred Alternative for the location of the future biosolids facilities, currently holds “legacy biosolids” which contain elevated levels of select heavy metals, which are generally within screening values for commercial/industrial land use, but potentially could also be designated as a California hazardous waste. A plan is being currently developed to address these biosolids and prepare the site for future use. If the Plant Master Plan EIR is completed and certified by the City, this site preparation may require 1.5 to 3 years because of the nature of the material, special handling, permitting, and regulatory oversight which will be required to remove the materials.
- Lagoon/Drying bed clean-up: If a new biosolids process is put in place, it will take up to three years to process the stored material and perform a final cleanup of the existing lagoons. Currently, after thickening and digestion, solids are stabilized for two years in lagoons and then dried for one year in drying beds. At the time new facilities are anticipated to come on line, the existing lagoons would still have two years worth of biosolids and the drying beds would have one year’s worth of biosolids that will still need to be processed. It is envisioned that the last round of processing for these stored materials could be performed while any newly built facilities begin to process incoming biosolids. Various options can be considered, including using the new biosolids process standby facilities, following the old process, or using a contractor. There do not appear to be significant time savings from these options.

Alternative Delivery Options Analysis

The currently proposed project delivery program is structured around the traditional design, bid and build approach. Staff performed further preliminary analysis of alternative delivery options to determine which option could result in the most accelerated timeline for a biosolids transition. Options that were evaluated include:

- *design-build (D/B)*
- *design-build-operate (D/B/O)*

The D/B and D/B/O options may reduce the time required to implement a biosolids transition. This is because there is typically less engineering detail in the upfront design prior to transitioning into a construction phase of a project. Since preliminary engineering is more conceptual, a detailed design proceeds in parallel with an initial construction effort and may be able to adapt to changing conditions. A D/B/O contract could be entered into only after an EIR is completed and has been certified, while a design/bid/build option can begin design-at-risk while an EIR is being prepared. D/B/O, particularly the operations portion, would also require additional analysis subject to Council Policy 0-41, “Service Delivery Evaluation” and Council Policy 0-29 “Public Private Competition Policy”. These policies require the preparation of business case analysis to evaluate the full cost implications of the transition to this alternative service delivery option and impact to current city staff operating the biosolids process. To expedite a D/B/O option, a contract could be explored to allow for only site planning and design to begin during an EIR preparation phase and then an option to be exercised for a final contracting phase once an EIR is complete and can inform this process. A figure has been

attached (Attachment A) entitled “Transition to New Dewatering and Drying,” which presents staff’s preliminary analysis of a potential implementation schedule for a D/B and D/B/O project delivery approach. Because of the schedule constraints noted earlier for completion of the CEQA process and the need to remove the legacy storage area, no schedule advantage appears to be provided by proceeding with the D/B or D/B/O approach, however, staff will continue to explore these options and work with interested stakeholders in further analyzing alternative delivery options.

Potential Benefits

The following potential benefits are associated with implementation of alternative delivery options and a possible accelerated implementation of the new biosolids processing technology.

- Stimulate construction industry: An accelerated implementation of the biosolids project could result in additional construction jobs in this area, supporting the construction industry and the local job growth, in the current climate of high unemployment.
- Increase Management Efficiency: A designer and contractor are hired and managed together via one contract for the City selected based upon price. D/B and D/B/O options provide greater and earlier cost certainty.
- Potential for Decrease of Capital Costs: In general, acceleration of a capital project may result in potential decrease of capital costs by reducing the span of escalation of costs of construction labor and materials (assumed to be a modest two percent per year), for each year that the project can be accelerated.
- Lower Management Risk: A D/B/O provider takes on design risk with significant synergies between design and construction. Continued operations and maintenance services act like extended warranties for the D/B/O option. The D/B/O option usually transfers life cycle costing risk to a third party, causing short and long-term trade-offs of capital versus maintenance.
- Induce Innovation and Creativity within Scope: D/B and D/B/O options usually invite some private innovation and creativity within the contracted scope, compared to the traditional design/bid/build approach and may result in cost savings, within the framework of a project.
- Potential for reduced City staff: While the City has less control over project design, construction and operation under this option, less administrative resources during design and construction are required. In a D/B/O option, project design and construction proceeds as with the D/B option, but the operations of facilities is performed by a private party and not by City staff. Responsibility for a facility and treatment performance can be placed on a D/B/O team.

Potential Risk Factors

The following potential risks must be considered when accelerating a biosolids transition:

- Increase future operating costs: If a new biosolids process is implemented, the annual operating costs will increase significantly, particularly due to additional energy and chemical consumption by up to \$10 million. Accelerating the process will accelerate the

timeline for this cost and rate increase, while also increasing the risk that the most cost effective options are not evaluated or considered.

- Result in Potential Loss of Reliability: Accelerating the schedule does not allow for technologies to be pilot tested before they are adopted into the design. Pilot testing would ensure that any significant investment is successful, reliable, and able to meet current and future regulatory requirements.
- Need for Compliance with Private Activity Restrictions: D/B/O operating proposal would also have to be evaluated for compliance with private activity restrictions at the Plant, that are required to maintain the tax exempt status of outstanding sewer revenue bonds and the ability to issue future tax exempt debt.
- Loss of integrated solution/technology opportunities: While alternative delivery options can lead to technology innovation within a contracted project, a design/bid/build approach allows the City to take advantage of opportunities outside of such a scope, such as gasification (Harvest Power pilot) as a disposal option for the biosolids. The alternative delivery options may limit the use of possible future green energy sources such as waste heat from the nearby Calpine Plant.
- Challenges meeting environmental goals/greenhouse gas emissions: Biosolids processing in the recent years has become an evolving field with respect to technology innovations due to the significant energy implications of this process in both the energy required to process biosolids as well as the potential for capturing energy from the organics in biosolids. The fastest transition timeline would likely require adopting existing off-the-shelf higher energy technologies with higher greenhouse gas impacts. City policy is to reduce greenhouse gas emissions from municipal facilities. Additional time constraints make it more difficult to attain this goal.

As discussed, the alternative delivery approaches have risks and benefits, which will be explored further in the future, including working with our stakeholders.

Program needs to ensure delivery by 2021

In the coming months staff will develop detailed implementation plans and resource and staffing strategies in case this roughly \$300 million program is ultimately approved. Several aspects of this program require unique expertise and dedicated staffing to implement.

- a. Site preparation and dealing with the legacy biosolids would require significant effort and unique experience in biosolids management, environmental remediation, and compliance, and, negotiations with regulatory agencies; environmental engineering expertise for the oversight of the either on-site management or disposal and hauling of the biosolids would also be required.
- b. Current biosolids are disposed of at the Newby Island Landfill as alternative daily cover. Mechanical dewatering and drying would produce a biosolids product that will be different from our current product which currently produces a fairly dry product (20% water content vs. the 75% water content from the mechanical dewatering operation). Hence new disposal options may need to be explored along with a procurement process to enter into long term contracts for hauling and

disposal. The staff-recommended 2025 date coincides with Newby Island expected closure (if the landfill's permit extension is approved).

- c. Design and construction management of a facility involving complex mechanical equipment, likely including the permitting and construction of a new electrical substation, new utility water supply, site improvements, and side stream management considerations, would require unique expertise. In addition, significant coordination and integration of ongoing operations would be required as the project progresses. As mentioned earlier in this memo, this biosolids facility project would be one of the largest of its kind in the nation if approved.

Staff must focus on delivering a capital improvement program that ensures the continued operation of the Plant without failure. If approved as part of the Plant Master Plan Preferred Alternative, the biosolids transition will require significant staff and consultant resources to be committed. Accelerating a proposed project deadline to 2021 exacerbates the potential costs and staff requirements. Current Capital Improvement Program delivery has been challenged with adequate resource provision, hiring timelines and procurement timelines. This project would require alignment of all supporting departments to ensure that adequate resources are available. Some of the internal process streamlining and resource dedication that would be needed includes:

- City Attorney resources to the Plant capital program
- Budget, fiscal, human resource, and accounting staff to support the program
- Capital Program Management System (CPMS) support
- Contract management and procurement support
- Experienced Plant operations and maintenance staff dedicated to this project
- Ability to hire temporary/contract employees with the necessary expertise to act as the owners agents/program managers
- Engineering specialties with the necessary expertise to review and ensure quality control for the program
- Process control staff with the necessary expertise to be hired to support the technology change
- Exemptions to certain city policies, where required and justified, such as the sole source procurement, competitive selection of consulting services, revolving door policy, etc.

Next Steps

Based on these preliminary benefits, risk factors, and other challenges associated with the current staffing and resource limitations at the Plant, staff will continue to work with the consultant team, other City departments and the neighboring stakeholders to further explore alternative delivery options that could result in the quickest feasible implementation of the biosolids transition if it is approved by Council.

An analysis of accelerated timing will be included in the biosolids preferred alternative analysis in the Plant Master Plan EIR to preserve the option of a faster implementation timeline should there be an opportunity.

Land Use Implications

An earlier biosolids transition would free up the land sooner, however, it appears unlikely that additional revenues could be realized. A Plant Master Plan sub consultant, Bay Area Economics (BAE), performed the economic analysis for the land use portion of the Preferred Alternative. The analysis assumes that development would begin in 2015 along State Route (SR) 237 corridor as a first phase due to its proximity to existing development and utilities. This timing would allow for the EIR to be completed and approved by the City and entitlements and infrastructure to be developed. While the site is close to existing utilities, it is not currently served by utilities and would require significant improvements, which would need to be funded using sources other than Plant funds. BAE's revenue projections are very conservative and assume that these improvements would be developer-funded, resulting in low revenue estimates. Potential revenues could be increased through other financing mechanisms, which will be explored.

The land uses along SR 237 suitable for economic development in the Preferred Alternative include retail uses, office research and development, light industrial for Clean Tech industries, and the conceptual Clean Tech institute. This area also includes a proposed 40-acre regional park. Robust real estate markets are unlikely to result in "full development" of these SR 237 land uses by 2025. Therefore, unless market demand increases substantially to require more land than available along SR 237 within that timeframe, there are no significant additional economic and employment benefits from accelerating the biosolids transition. The costs for the biosolids transition to a mechanical process are substantial and if completed, would increase operating costs by as much as \$10 million per year, due to increased energy, chemical and disposal costs.

An increase in property value to surrounding lands outside of the Plant property could occur as a result of a transition to a covered mechanical biosolids dewatering and drying process based on both the real and perceived elimination of a low value land use. To analyze these potential economic benefits to the region would require funds from other sources than Plant operating or capital funds.

EVALUATION AND FOLLOW-UP

The status report on the odor analysis and timeline considerations for a biosolids transition will be presented to TPAC and Council in the fall of 2011. The T&E committee will receive regular updates.

PUBLIC OUTREACH/INTEREST

- Criterion 1:** Requires Council action on the use of public funds equal to \$1 million or greater. **(Required: Website Posting)**

- Criterion 2:** Adoption of a new or revised policy that may have implications for public health, safety, quality of life, or financial/economic vitality of the City. **(Required: E-mail and Website Posting)**
- Criterion 3:** Consideration of proposed changes to service delivery, programs, staffing that may have impacts to community services and have been identified by staff, Council or a Community group that requires special outreach. **(Required: E-mail, Website Posting, Community Meetings, Notice in appropriate newspapers)**

This memo does not meet the criteria above. Direct engagement with the public and the Plant's many stakeholder groups has been an essential component to developing the Draft Plant Master Plan over the past three years. The communications strategy for the Plant Master Plan was developed by City staff with input from the Plant Master Plan Steering Committee, and implemented using a variety of media, advertising, and community engagement tactics. The tributary-wide Public Outreach Working Group, composed of staff from the cities and sanitation districts, has been providing input on the public outreach plan since December 2007. The Community Advisory Group will have met 20 times, and three public input opportunities were provided in May 2009, May 2010 and January 2011. When staff presented questions to the public at community meetings on the speed to both better treat odors at the Plant and change the biosolids dewatering and drying process, the public has consistently responded by saying that the Plant should begin the development of these processes but make sure not to overburden ratepayers. These results can be found in the Plant Master Plan public opinion summaries. Staff also met with regulatory and resource agencies to obtain input to produce the Preferred Alternative.

COORDINATION

This report has been coordinated with the City Attorney's Office, the Office of Economic Development, the Planning, Building, and Code Enforcement Department and is scheduled to be reported at the May 2011 Treatment Plant Advisory Committee meeting.

COST SUMMARY/IMPLICATION

The biosolids program cost implications include:

- The proposed approach using a design/bid/build approach and timeline up to 2025 will result in the projected capital costs of \$230 million and an increase in operating costs up to \$10 million/year once the facilities are complete and on-line. The increased operating costs are due to the need for energy needed to dry the solids as opposed to the current approach of using the sun in open-air lagoons and drying beds. In addition, chemical additions, odor control, and building maintenance needs will increase operating and maintenance costs.

- An accelerated approach to 2021 or sooner, if feasible, would increase operating costs sooner. An analysis would need to be performed on changes in capital costs when using alternative delivery options. While capital cost escalation could be avoided by implementing the biosolids capital projects sooner, the alternative delivery options may result in higher costs overall.
- A further accelerated approach using contract dewatering would require temporary contract dewatering facilities while permanent facilities are constructed. Staff had performed an analysis of a temporary contract dewatering option to eliminate the need for lagoons and drying beds 12 years sooner while constructing permanent facilities. As presented in the update to the Transportation and Environment Committee on December 6, 2010, this option would increase expenditures by \$178 million to 2025 (includes operating and capital costs) in addition to the \$230 million capital cost for the permanent facilities. For San Jose, this would mean an additional 8 percent one-time rate increase.

The current adopted 5-year capital program is funded exclusively from the Sewer Service and Use Charges (SSUC) for San Jose and other cities and agencies served by the Plant. As the capital program continues to increase in scope to implement the recommended projects of the final adopted Plant Master Plan, staff will evaluate the opportunities for alternative funding means, such as bonds, to pay for any large investments like the biosolids transition. Since each agency is responsible for setting their rates and fees, the need for alternative funding sources is unique to each agency. For, San José, it is anticipated that for the next three years revenues and reserve funds exist to pay for the capital program with no additional need for bonds. Every year, staff will review upcoming projects within the next three years to determine bonding opportunities.

CEQA

Not a Project, File No. PP10-069 (a) Staff Reports. The proposed action will allow staff and the consultants to continue to proceed with the analysis of potential environmental impacts of the proposed Plant Master Plan Preferred Alternative, including biosolids transition activities, as required by CEQA.

/s/

JOHN STUFFLEBEAN
Director, Environmental Services

/s/

DAVID SYKES
Acting Director of Public Works

For questions, please contact Bhavani Yerrapotu, Division Manager, Technical Services (ESD) at 945-5321 or Michael O'Connell, Acting Deputy Director (PW) at 535-8300.

Attachment A: Transition to New Dewatering and Drying – Timeline

Attachment A: Transition to New Dewatering and Drying

Design/Bid/Build Compared to Design/Build and Design/Build/Operate

