Richmond Wastewater Services Update

Planning Committee

February 11, 2014
Agenda

• Background
• Annexation Process
• Key Considerations for Annexation
• Next Steps
Background

- Original alternative was found to be infeasible
- Significant increases in wet weather discharges
9/24/13 Richmond City Council Meeting
- Council directed City staff to evaluate long-term alternatives for wastewater management, including regionalization approaches

One of the alternatives identified by City staff was annexation by the District
- District would assume responsibility for the Richmond WPCP
Annexation Process

- Staff has initiated investigations into the annexation process
- The District may be able to negotiate an agreement directly with the City depending on the City’s annexation process
- The District has prior experience with a similar annexation (Stege Sanitary District)
Key Considerations for Annexation

- Following 9/24/13 City Council Meeting, staff have continued discussions with City Staff, who continue to express interest in annexation

- Staff has developed “Key Considerations” for annexation to establish the discussion framework

- Following Planning Committee review, the next step will be to transmit key considerations to City staff

- If City shows formal interest, staff would work on formal “Principles of Annexation”

- These principles would subsequently be submitted for consideration by full Board
Key Considerations
Financial

1. Those served by the Richmond Sewer District will fund and finance all necessary capital improvements to the WPCP

2. Repayment of the existing debts associated with the City’s WPCP remains the responsibility of those served by the Richmond Sewer District
Wastewater treatment fees collected from those served by the Richmond Sewer District will be sufficient to cover the full cost of ongoing operations, maintenance, and improvements to the WPCP and the proportional cost of using any District facilities.

Annexation has no detrimental impact on the District’s existing bond rating.
Key Considerations

Regulatory

5. The City retains responsibility for the collection system.

6. Annexation includes negotiation of a maximum allowable wet weather flow rate into the WPCP.

7. The District is protected from regulatory liabilities associated with existing WPCP deficiencies.
8. Annexation does not significantly impact the satellite agencies currently served by the District.

9. The District reaches an acceptable agreement with the West County Wastewater District for joint operation of the shared outfall.
Next Steps

• Staff will transmit key considerations to City staff

• If the City expresses further interest in taking steps towards annexation by the District, staff will develop formal Principles of Annexation for future Board consideration
San Francisco Bay Nutrients Update

Planning Committee

February 11, 2014
Agenda

• Background
• SF Bay Nutrient Management Activities
• District Perspective
• Next Steps
San Francisco Bay has historically been very resilient to nutrient loads.
Background
Changing Bay Conditions

• Factors that contribute to resiliency:
  – High turbidity (limited light)
  – Filter-feeding clams
  – Strong mixing

• Recent evidence points to decreasing resiliency
  – Increases in phytoplankton
  – Declines in dissolved oxygen

➢ Bay conditions are shifting, but much is unknown
Nationally, stringent water quality objectives for nutrients have led to significant investment in treatment upgrades.

Closer to home – Sac Regional

- Concerns about nutrients and ammonia toxicity in Sacramento Delta
- Stringent Nutrient Limits in Sacramento Regional NPDES permit 2010:
  - Ammonia 2.2 mg/L
  - Nitrate 10 mg/L
  - Estimated $1.5 - $2 billion for upgrades
- SCRSD Appealed to SWRCB and Superior Court, lost and accepted nutrient limits in settlement
SF Bay Nutrient Management Activities

- Collaborative Effort (BACWA, RWQCB, research institutions, and other stakeholders)
- Scientific Studies
- Watershed Permit as regulatory vehicle
Nutrient Management Activities

Scientific Studies

- Monitoring and Research Studies
  - Trends in impairment indicators
  - Cause & effect studies
  - Assessment framework – how much nutrient loading is acceptable without impacts
  - Nutrient loading monitoring

- Funding
  - BACWA, RMP, SFEI, USGS, Water Boards, EPA, and others
Nutrient Management Activities
Watershed Permit

- Applies to all 40+ Bay WWTPs
- No water quality objectives or associated numeric limits
- Reasonable approach supported by wastewater community
- Scheduled for Water Board adoption April 9
District Perspective

- Loading in our discharge is high relative to others
  - Large South Bay plants already have some nutrient treatment
  - Nutrients from Resource Recovery Program
- Central Bay location benefits from high mixing
- Cost-effective nutrient reductions may be possible through sidestream treatment
Nutrient (NH3) loading to SF Bay
(Jul 2012 - Mar 2013)

- San Jose
- EBMUD
- SFPUC
- EBDA
- CCCSD

kg/day

0 2000 4000 6000 8000
• Up to 80% of Central Bay replenished with new water from Pacific Ocean daily during wet season
  – *Compared to weekly or greater in South Bay*
• Full-scale nitrification/denitrification at MWWTP could cost upwards of $300M

• Recycle stream is particularly nutrient-rich
  – By treating this “sidestream,” there is potential to significantly reduce nutrient load in effluent more cost-effectively

• District was awarded a $517k grant for regional study of sidestream treatment
Next Steps

- Participate with stakeholders in regional scientific and technical studies and information gathering
- Evaluate potential for sidestream treatment using EPA grant
- Work with BACWA to implement Watershed Permit and prepare for next permit in 5 years