CLEANWATERPROGRAM

PROTECTING THE BAY FOR A SUSTAINABLE FUTURE

Wastewater Treatment Plant Upgrade and Expansion Project

Planning Commission Study Session
August 8, 2017

Clean Water Program Drivers & Goals

Replace Aging Infrastructure

Collection System

WWTP

Provide Higher Levels of Treatment & Capacity Assurance

CALIFORNIA Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

Permits for Clean Water NPDES

RWQCB Cease & Desist Order
NPDES Permit

Address Sustainability, Climate Change, & Biosolids/Energy

Reusable **Clean Water** Partnerships

Institute for Sustainable Infrastructure

ENVISION™

Infrastructure Sustainability Metrics

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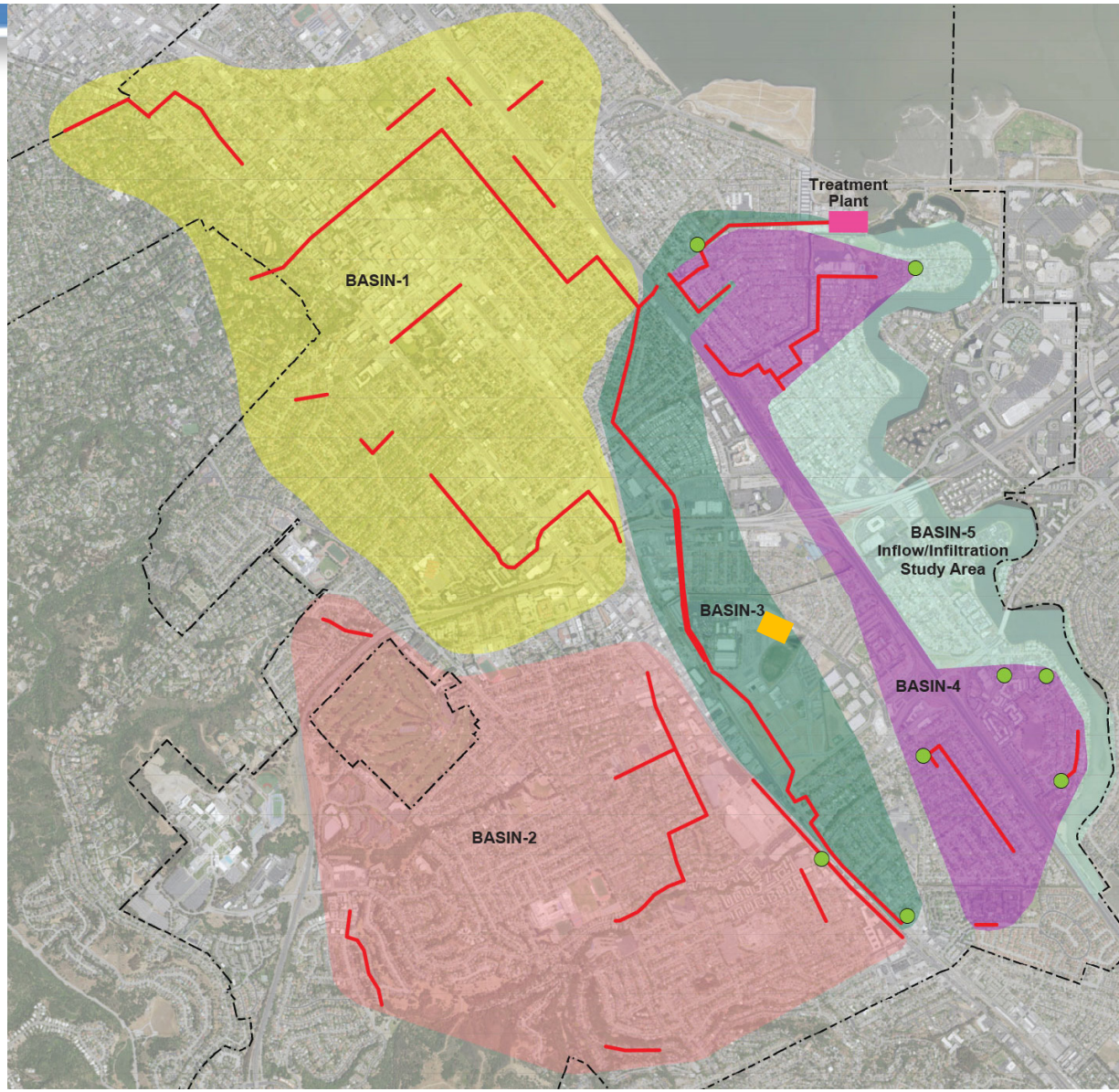
Comprehensive Approach

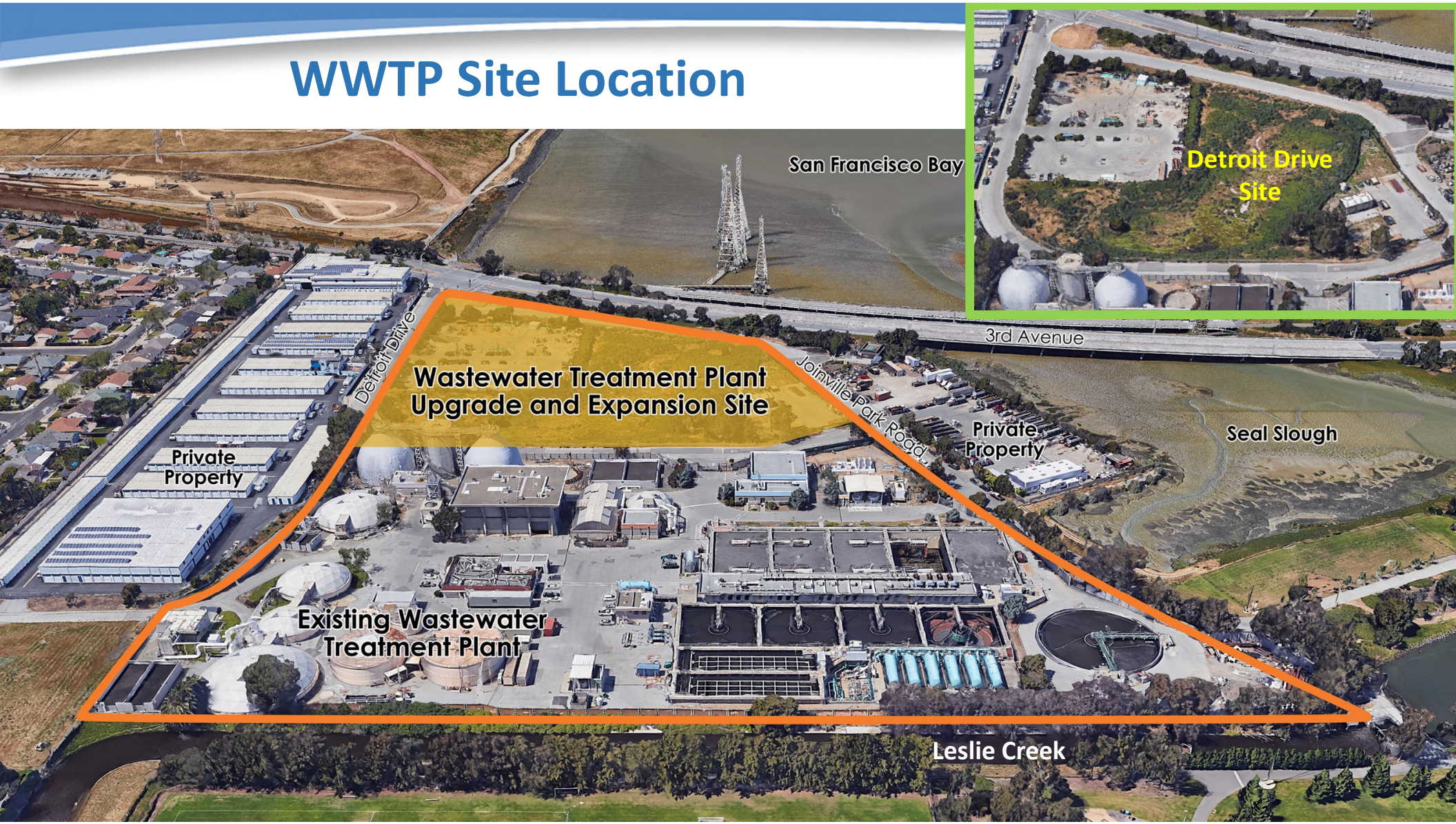
- Collection System Improvements
  - —*Pipes*
  - —*Pump Stations*
  - —*In-System Storage*
- **Treatment Plant Improvements**
  - —*Existing Treatment Facilities*
  - —*New Treatment Facilities*

CWP = $900 Million over 10 years to meet goals



WWTP Site Vicinity

WWTP Site Location



WWTP Integrated Site Layout

1. HEADWORKS (PRELIMINARY TREATMENT)
2. DUAL-USE CLARIFIERS (PRIMARY TREATMENT)
3. BIOLOGICAL NUTRIENT REMOVAL (BNR)
4. MEMBRANE BIOREACTOR (MBR)
5. DUAL-USE CONTACT TANK
6. FLOW EQUALIZATION BASIN
7. ODOR CONTROL
8. CHEMICAL SYSTEMS
9. EXISTING DISINFECTION IMPROVEMENTS
10. ADMINISTRATION BUILDING
11. MAINTENANCE WAREHOUSE

*** Existing facilities to be demolished prior to start of major construction are shown in red.**

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Sustainability

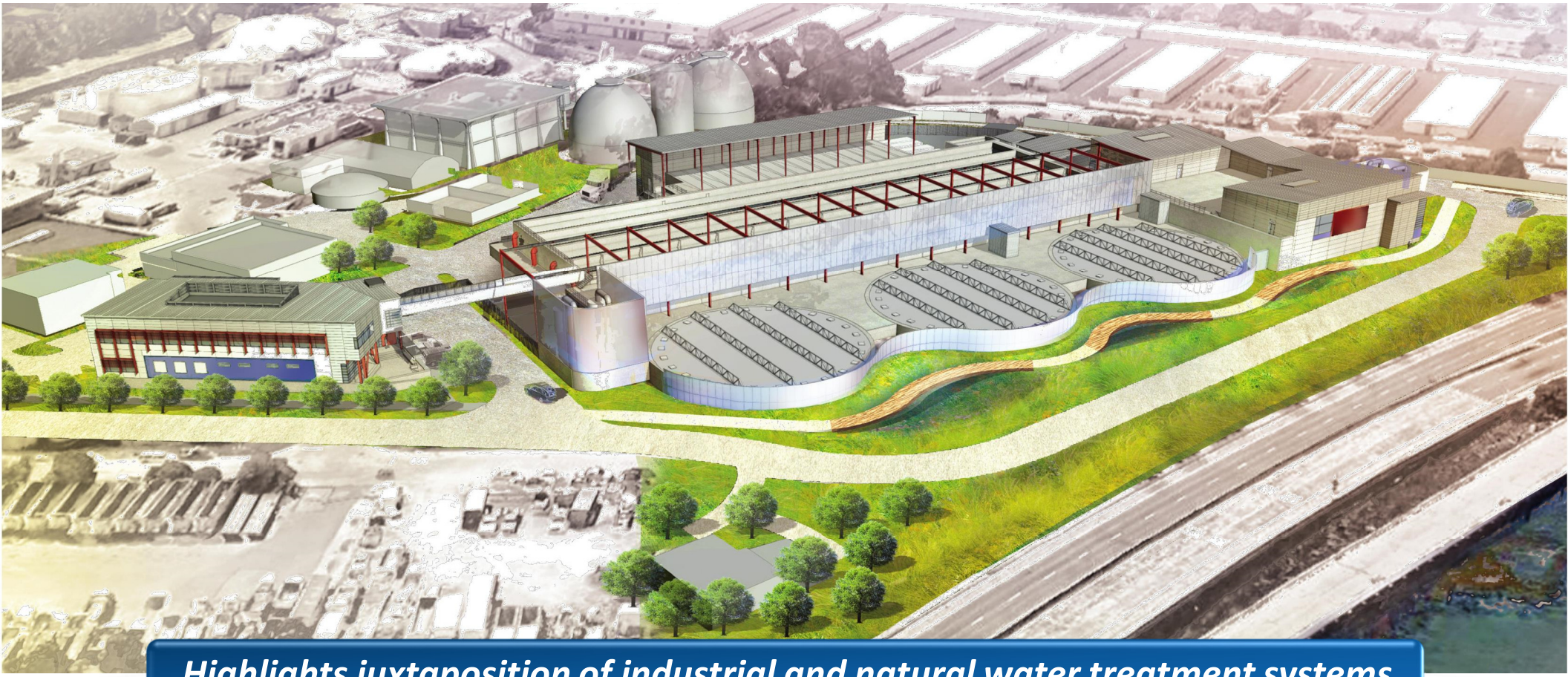
- Protect Public Health
- Community Enhancement
- Educational

- Pursuing LEED Silver Certification for Administration Building
- Following ENVISION guidelines for sustainable infrastructure for WWTP

- Applying for State Revolving Fund Loans
- Prevailing Wages

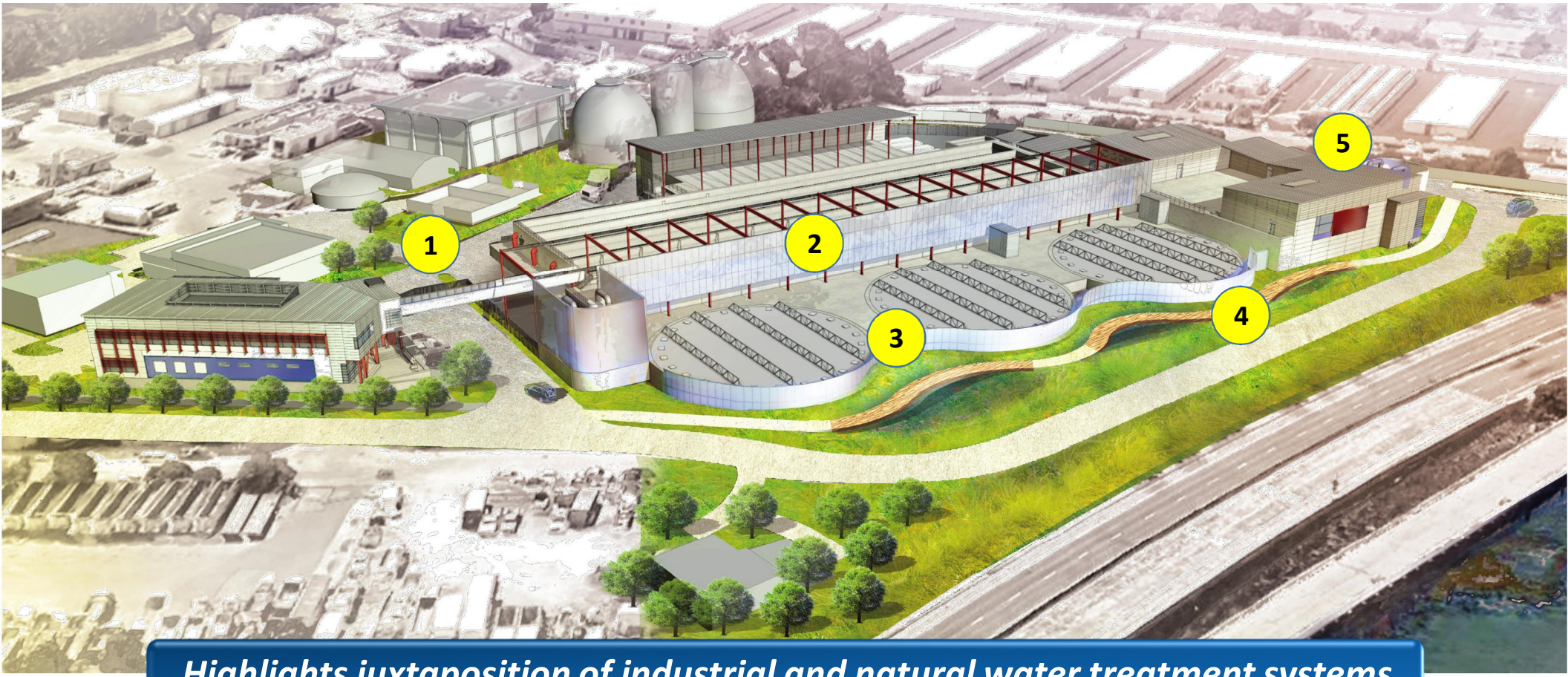
Inspired by City's sustainable initiative for healthy environmental, economic and social development

Architectural & Landscape Design
Concept 1



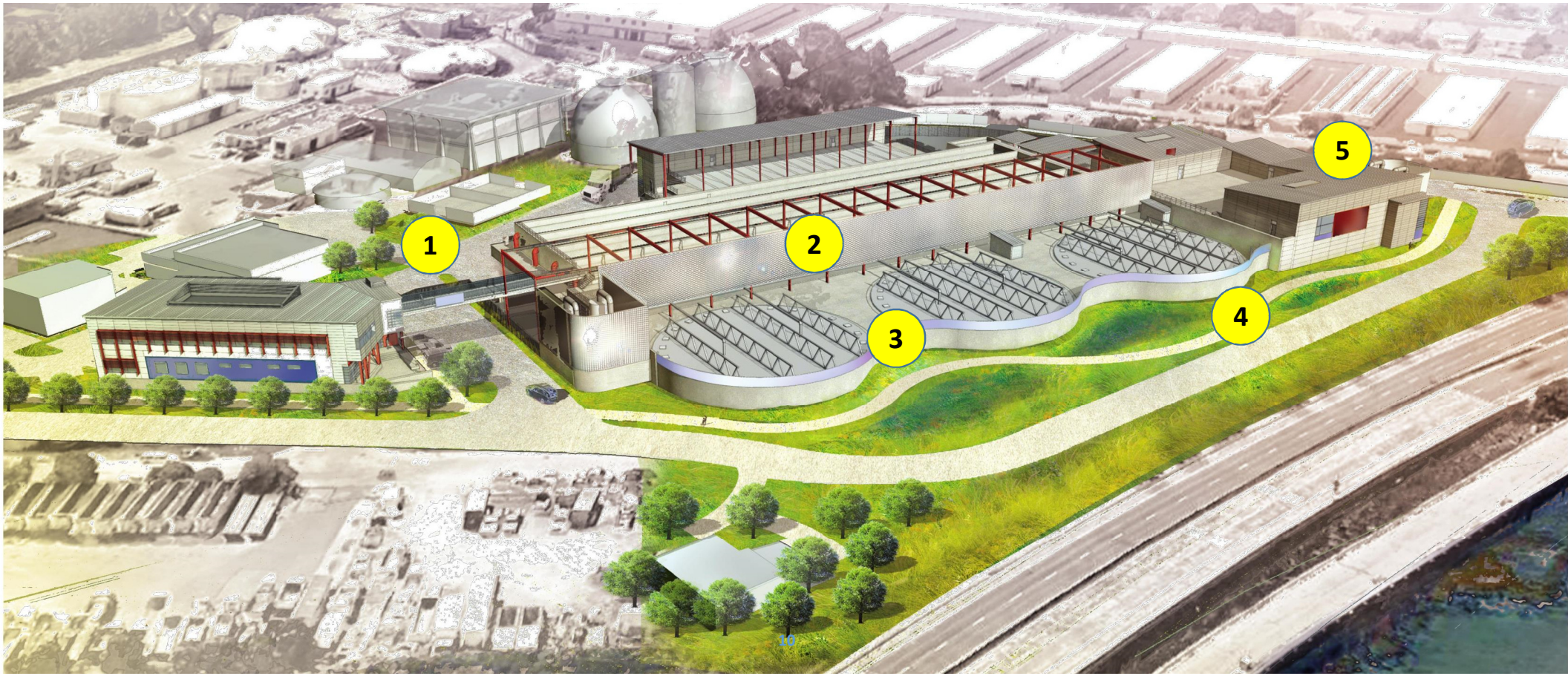
Highlights juxtaposition of industrial and natural water treatment systems

Architectural & Landscape Design
Concept 1

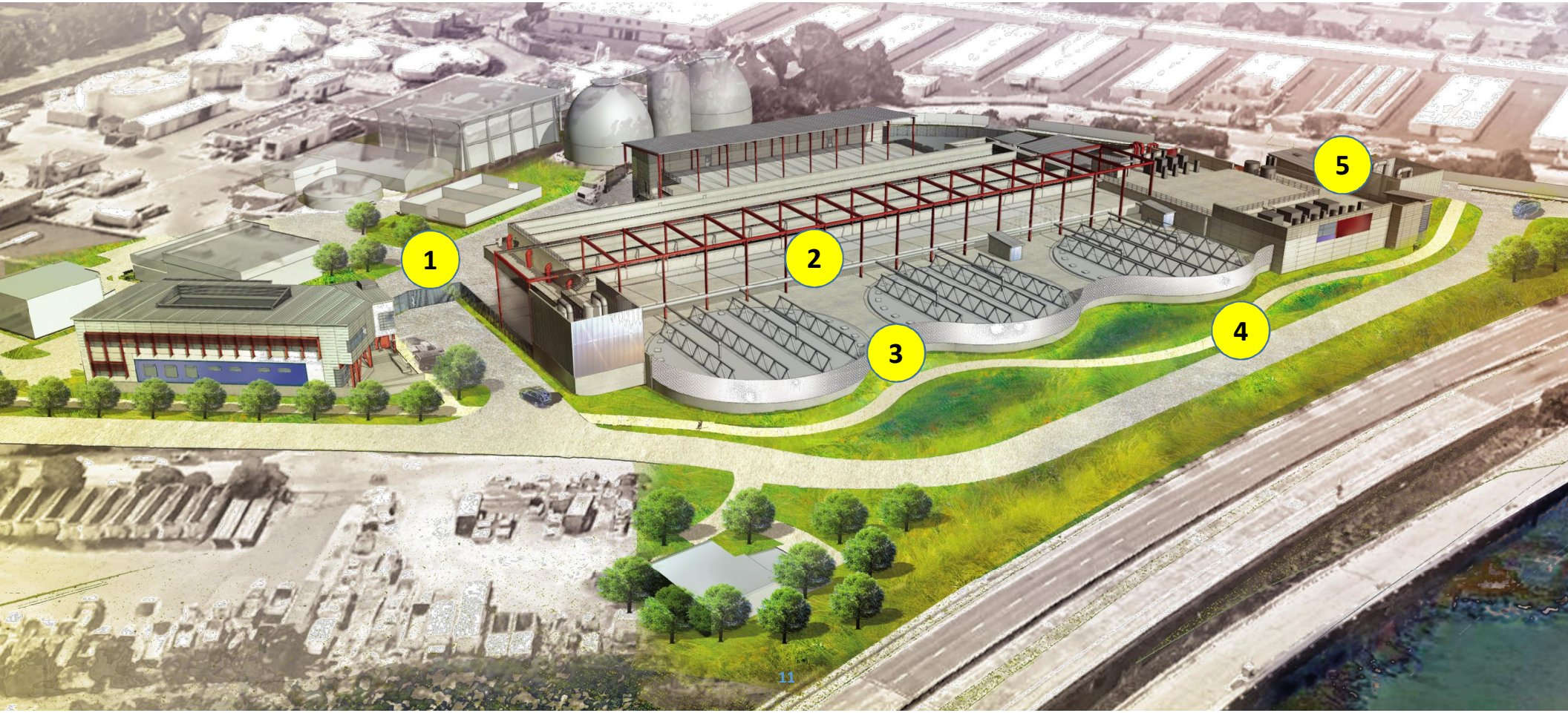


Highlights juxtaposition of industrial and natural water treatment systems

Architectural & Landscape Design
Concept 2



Architectural & Landscape Design
Concept 3



Community Access

Pedestrian Access Improvements and Educational Components

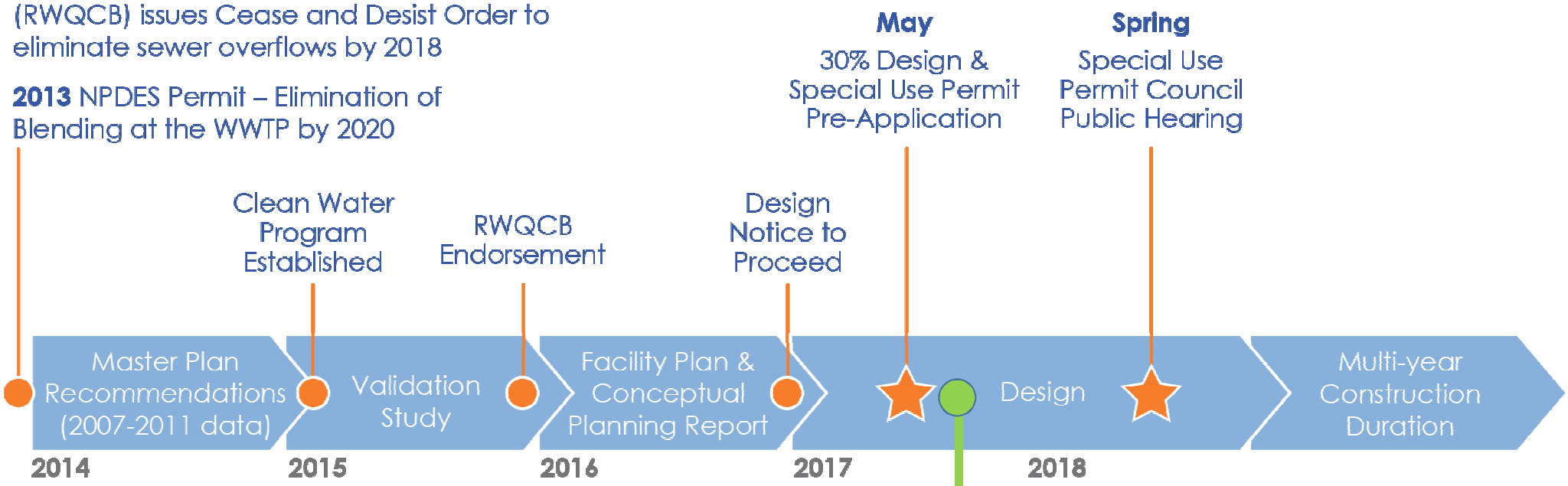
Administration Building

Public Interface; Gateway to the WWTP

Project Evolution – Where We Are

2009 Regional Water Quality Control Board (RWQCB) issues Cease and Desist Order to eliminate sewer overflows by 2018

2013 NPDES Permit – Elimination of Blending at the WWTP by 2020



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WWTP Questions and Feedback