Valley Water

Clean Water • Healthy Environment • Flood Protection

Virtual WateReuse NorCal Joint Chapter Meeting

Implementing a Purified Water Project Using a Public Private Partnership

Presented by: **Kirsten Struve, Assistant Officer Water Supply**

Valley Water

Presentation Overview

- Background
- What is the Project and Why Was This Delivery Method Chosen?
- How Will the Project Be Delivered
- What Challenges Are We Facing?
- What is the Current Schedule?

Valley Water Provides:

Clean water

Flood protection

Healthy environment

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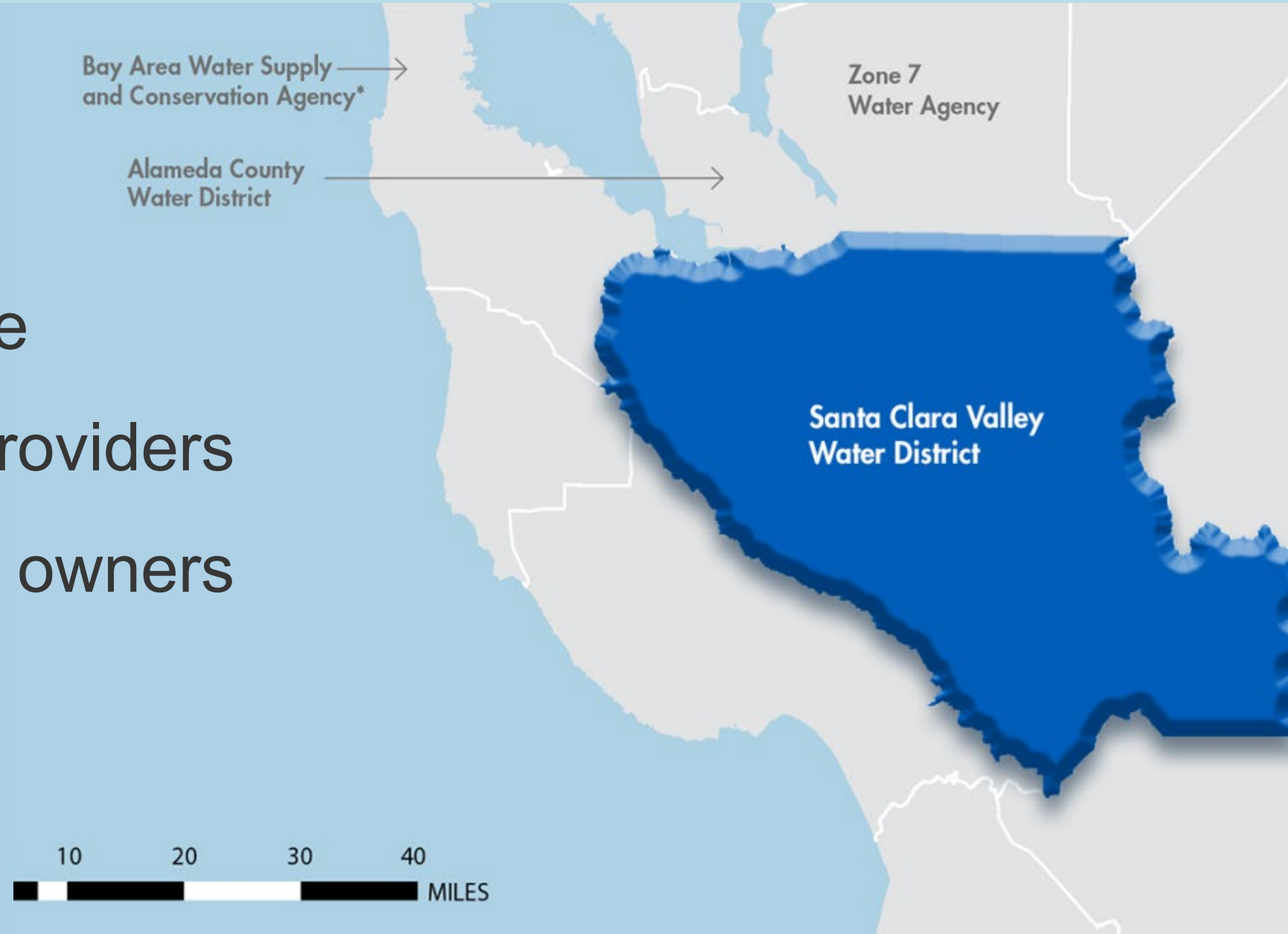
We Serve:

15 Cities

2,000,000 People

13 Local water providers

4,700 Direct well owners



A Comprehensive, Flexible Water System

10 reservoirs
3 pump stations
142 miles of pipelines
3 water treatment plants
1 water purification center
393 acres of recharge ponds
$7.1B System Replacement Value

Legend

- Lakes, reservoirs, rivers, creeks, & bays
- Raw water pipeline
- Drinking water pipeline
- Pump Plants
  1. Vasona
  2. Coyote
  3. Pacheco
- Drinking Water Treatment Plants
  A. Rinconada
  B. Santa Teresa
  C. Penitencia
- Silicon Valley Advanced Water Purification Center
- Anderson Hydroelectric Facility
- Local wastewater treatment plant and recycled water provider
  a. Palo Alto
  b. Sunnyvale
  c. San Jose-Santa Clara
  d. South County
- Recharge Ponds

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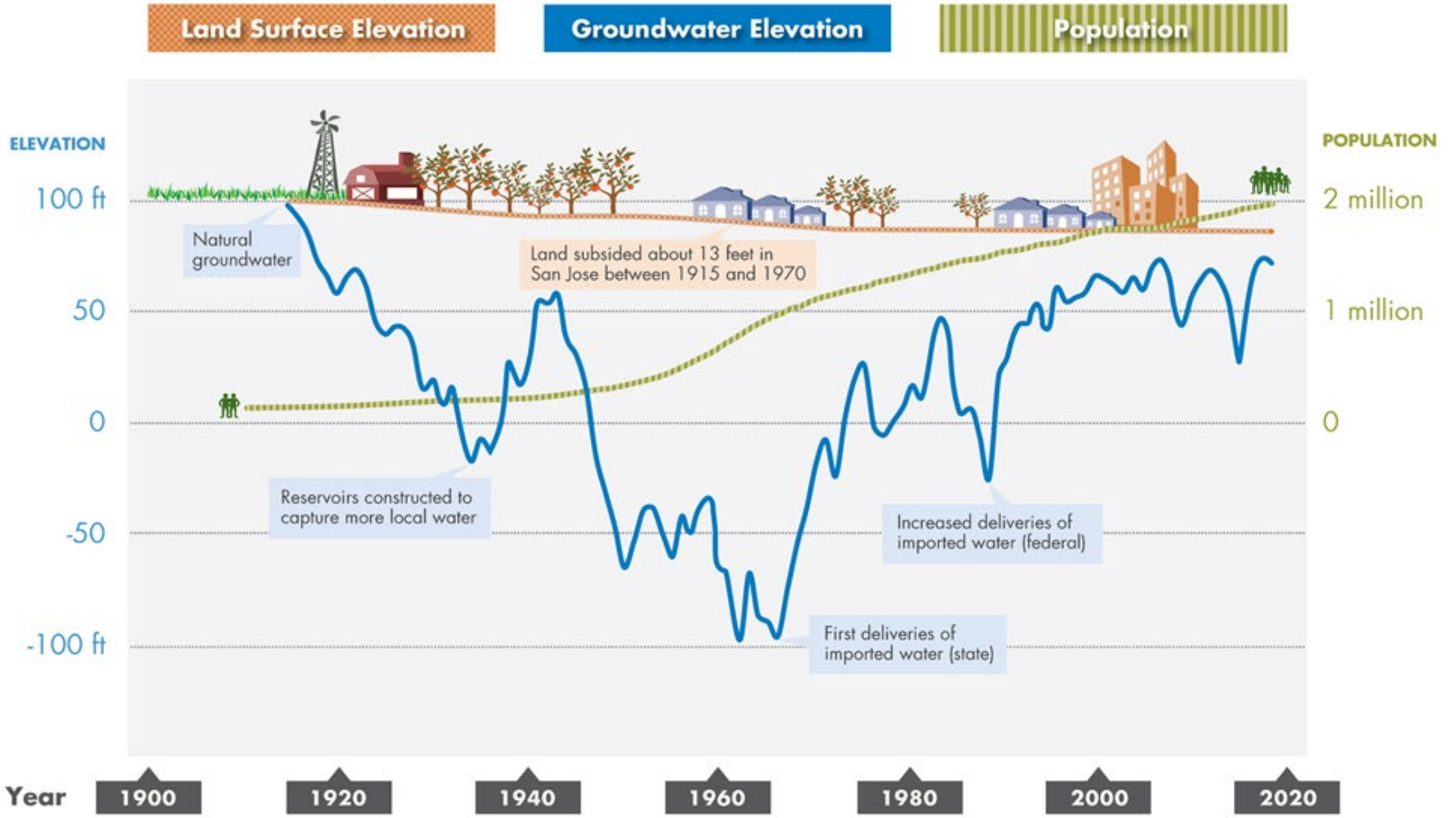
valleywater.org

SANTA CLARA COUNTY GROUNDWATER AT-A-GLANCE

a graphic representation not intended as a technical exhibit

Valley Water



Last updated February 1, 2019

We Utilize Multiple Water Sources

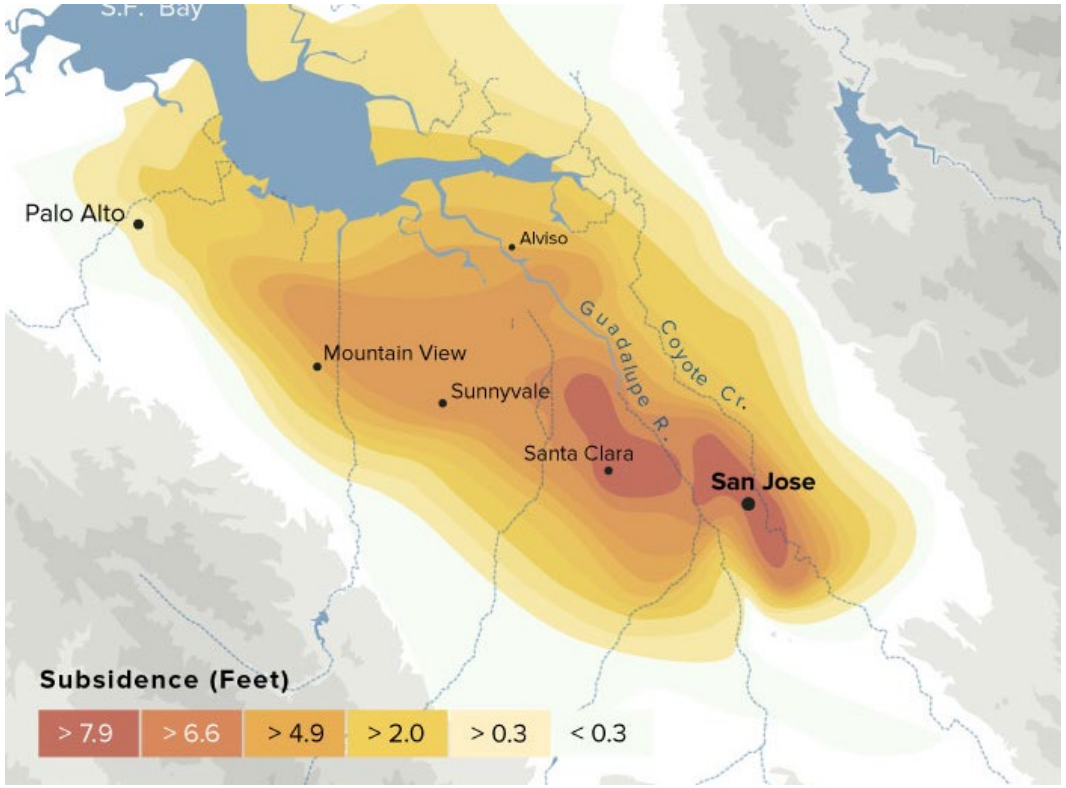
Local Water (30%)
- Groundwater aquifer
- Reservoirs

Imported Water (50%)
- Delta conveyed
- Hetch Hetchy

Recycled Water (5%)
- Wastewater Treatment
- Advanced Purification

Conservation (15%)
- Residential
- Commercial, Agriculture

The Project and its Delivery

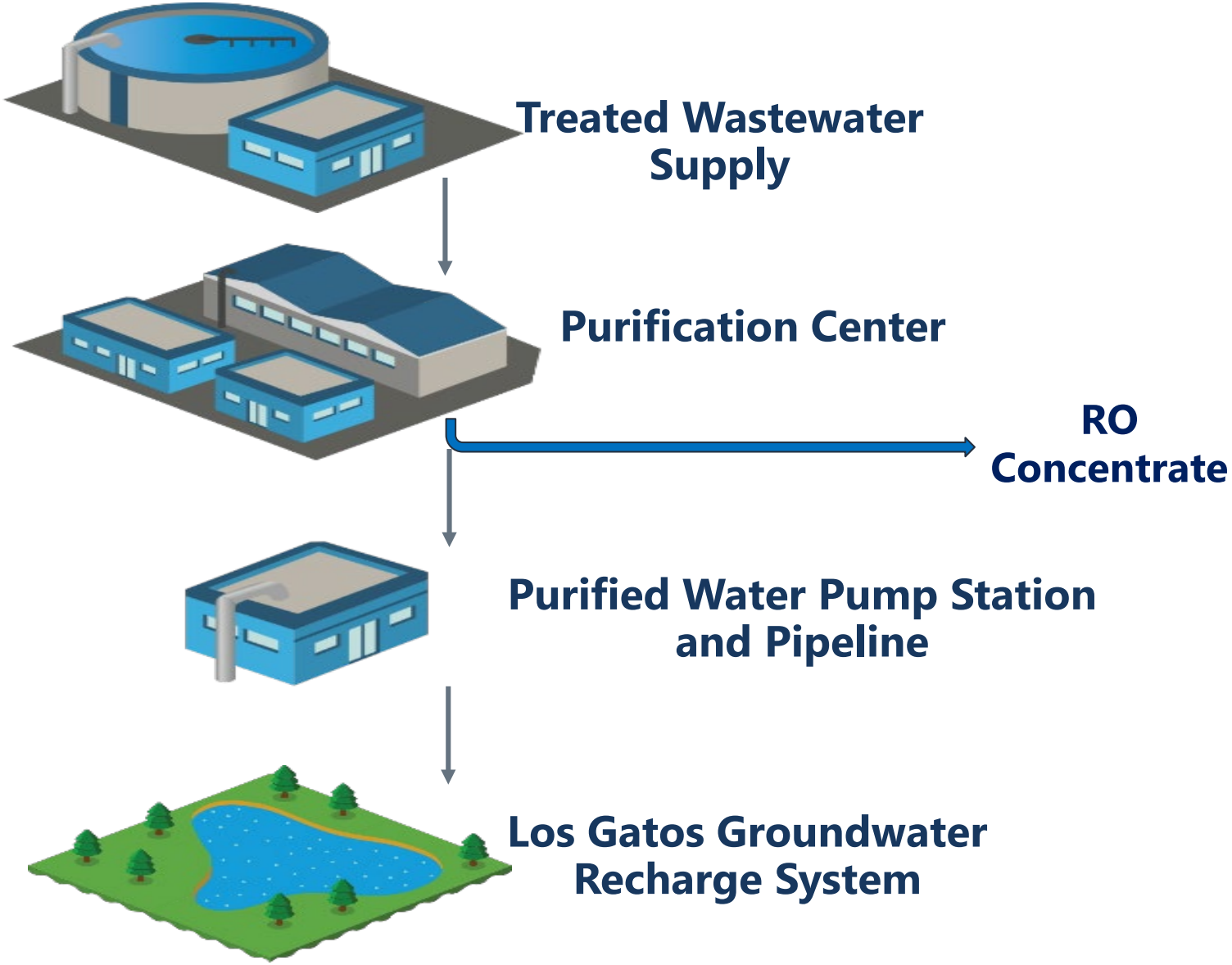


Purpose of this Project

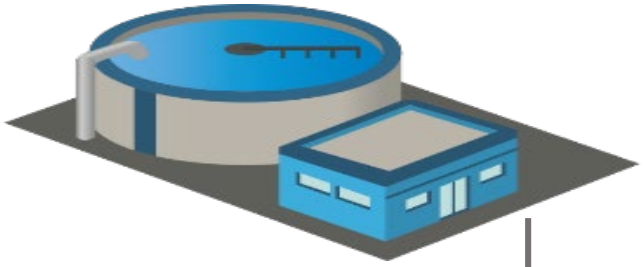
- A reliable supply of safe, clean water is crucial for public health and the economy.
- Valley Water is investing in technology to ensure our water supply into the future
- Recycled and purified water is a drought-resilient and locally controlled water supply
- Improve supply reliability consistent with Water Supply Master Plan 2040
- Meet our goal of about 10% of Santa Clara County's water demand from water reuse

What is the Project?

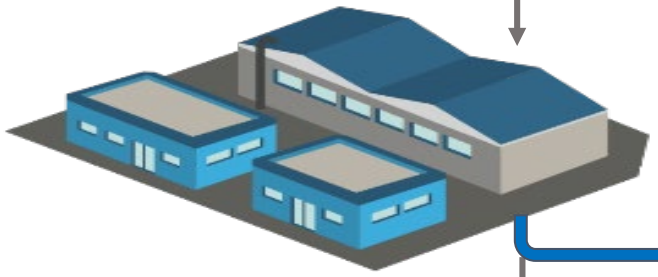
Major Project Elements



The Project



Treated Wastewater Supply (from PA or SJ)



Purification Center

RO Concentrate

Purified Water Pump Station and Pipeline

Los Gatos Recharge System

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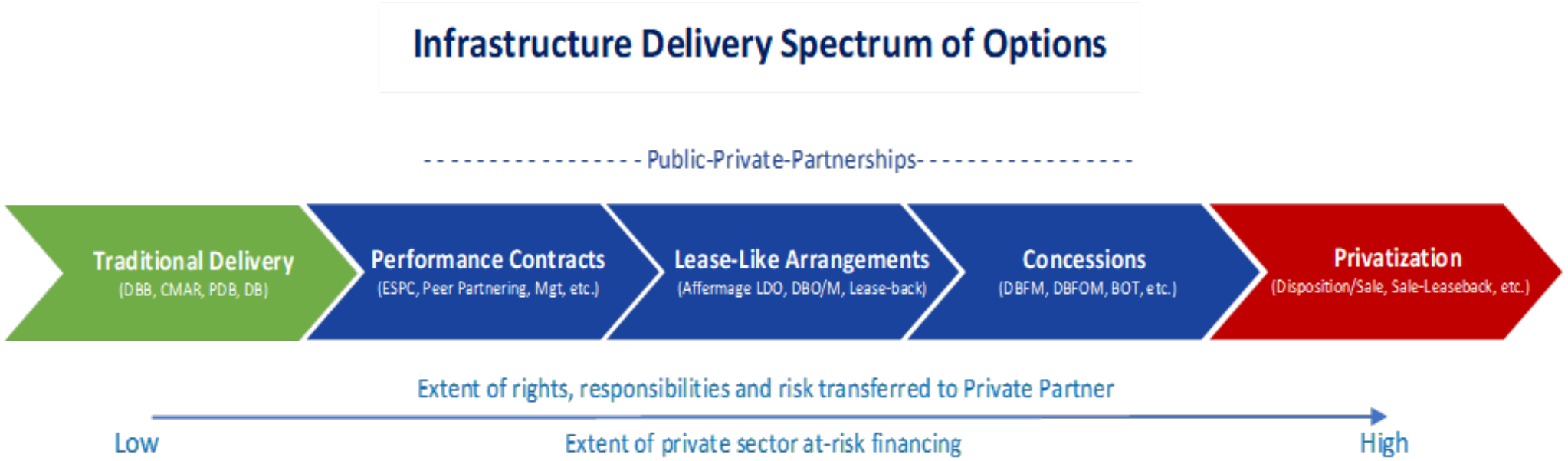
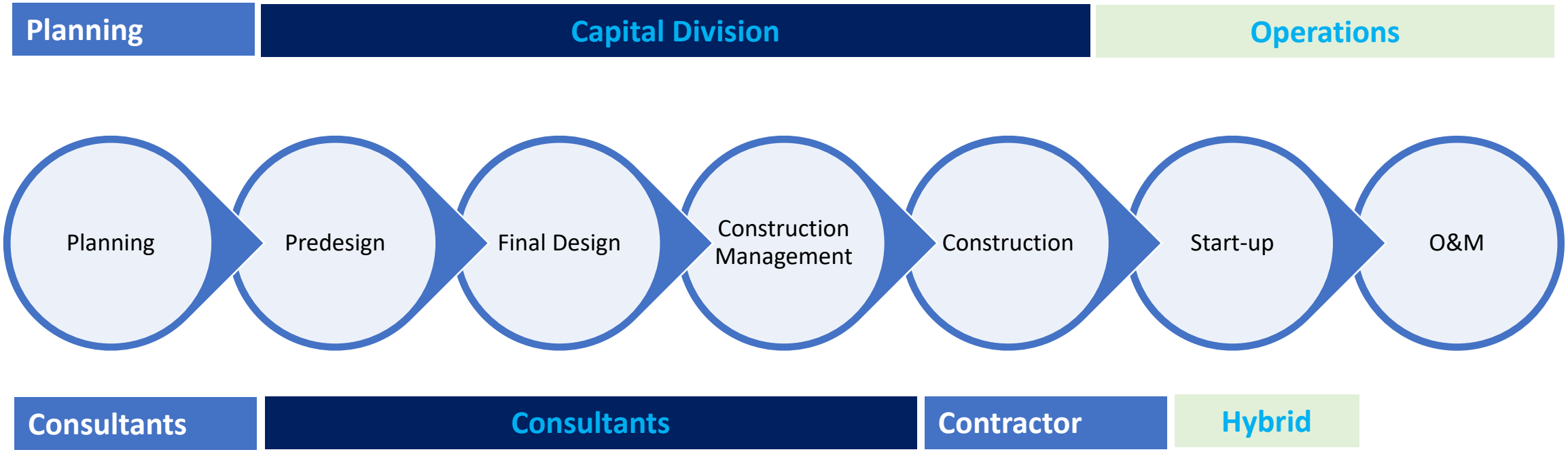
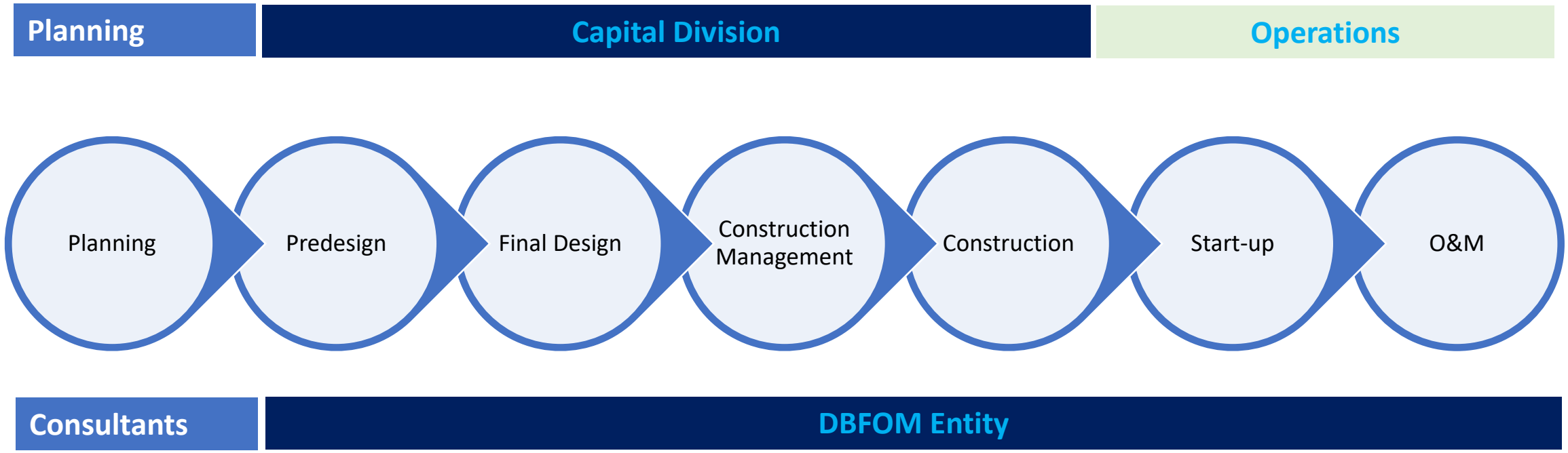


How Will the Project Be Delivered?

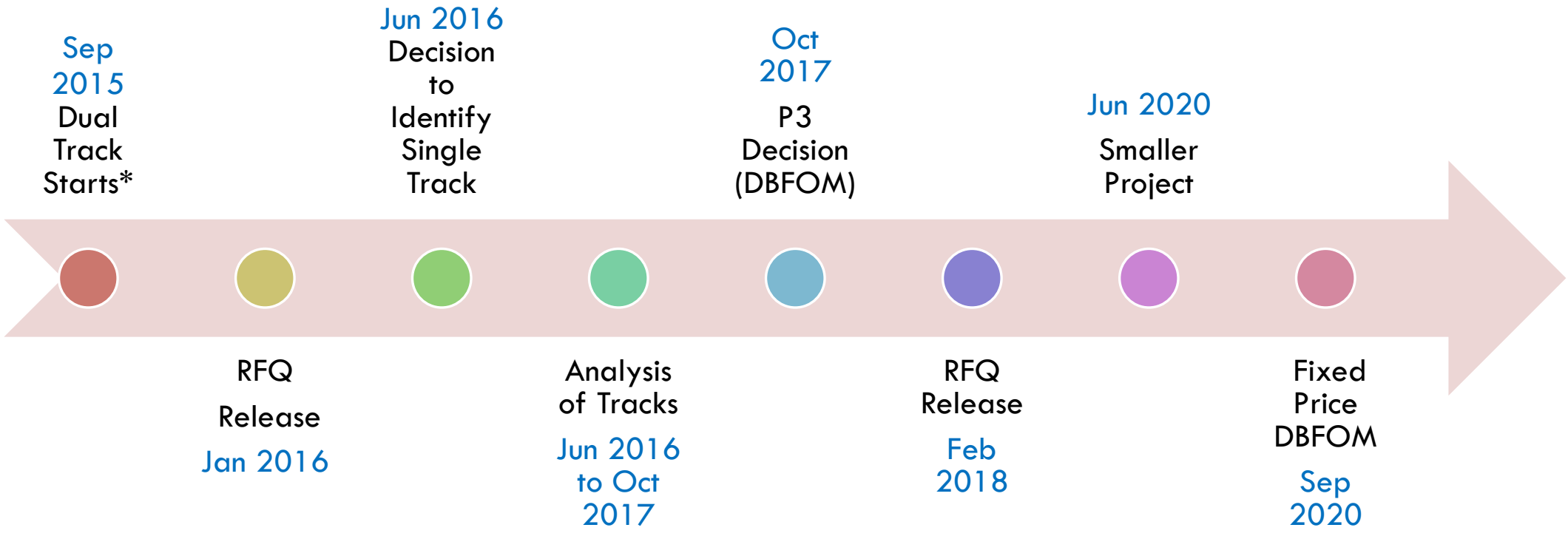
Typically for VW, Major Project Delivery Involves Private Sector at Each of the Phases Below Except O&M



DBFOM Delivery Integrates Designer, Contractor, Start-up Into 1 Contract and Adds O&M (plus Financing)



Purified Delivery Method Chosen By Board Through Public Process

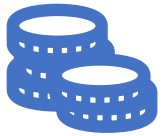


* - Progressive DB and DBFOM

Key Drivers in Board's Decision (October 2017)

Better harnessing private sector innovation

Concerns over rate impacts of financing 5-year Capital Improvement Program



Benefits of risk transfer, especially costs

Staff workload

Positive report of San Diego County Water Authority

Board Decisions – 2020

01

Do not defer but proceed immediately

02

Implement smaller ~ 11,200 AFY project

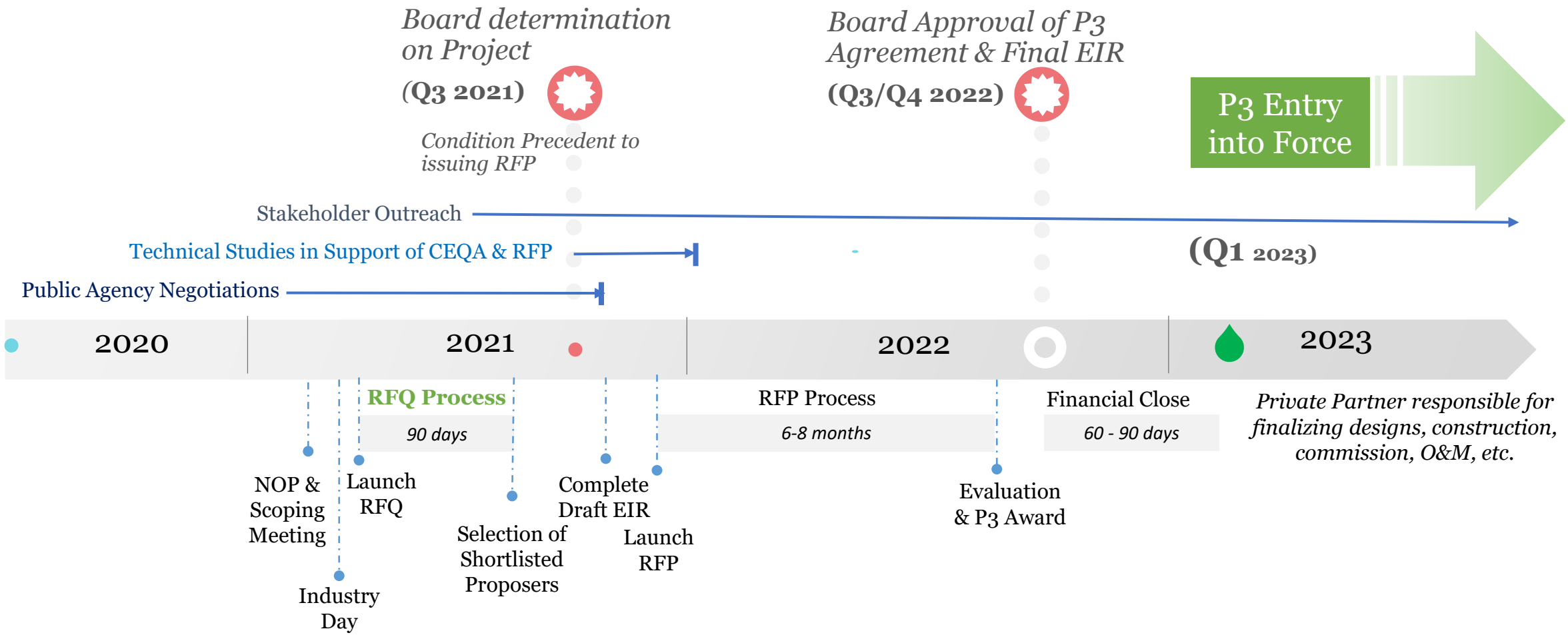
03

Utilize fixed-price design-build-finance-operate-maintain delivery method

What Challenges Are We Facing?

- Large project (~$500M).
- First time using DBFOM delivery method.
- Shift towards being performance oriented rather than specifying the detailed how.
- Addressing interfaces:
  - Treated wastewater provider
  - Valley Water operations
  - Regulatory agencies
  - Jurisdictions involved in construction

What is the Current Schedule?



QUESTIONS