Hetch Hetchy Regional Water System

Operated by the San Francisco Public Utilities Commission

San Francisco's Alternative Water Supply Program

In Search of New and Diversified Supplies

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Today's Discussion

- Current Water Resources Management
  - Overview of San Francisco's Regional Water System
  - Managing Water Resources
  - OneWaterSF
- Looking Ahead: Alternative Water Supplies
  - Key Drivers for Future Planning
  - Meeting Needs with Alternative Water Supplies
  - Key Challenges
- Common Themes
  - Shared Experiences and Lessons in Planning

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CURRENT WATER RESOURCES MANAGEMENT

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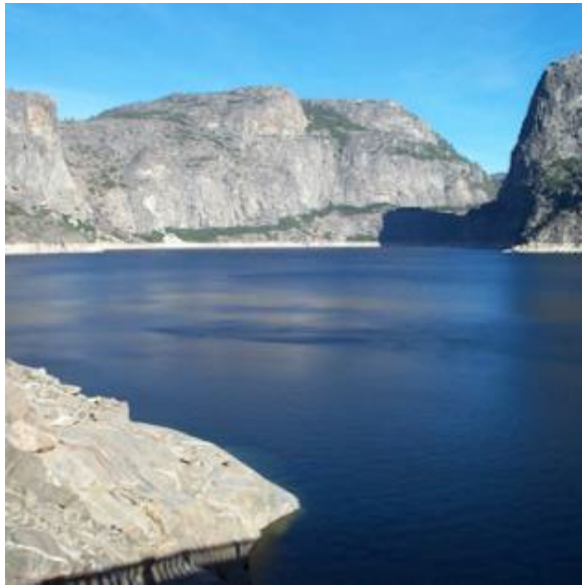
San Francisco Public Utilities Commission (SFPUC)



Water: delivering high quality water every day to 2.7 million people

Power: generating hydropower and solar power

Sanitation: protecting public health and the environment

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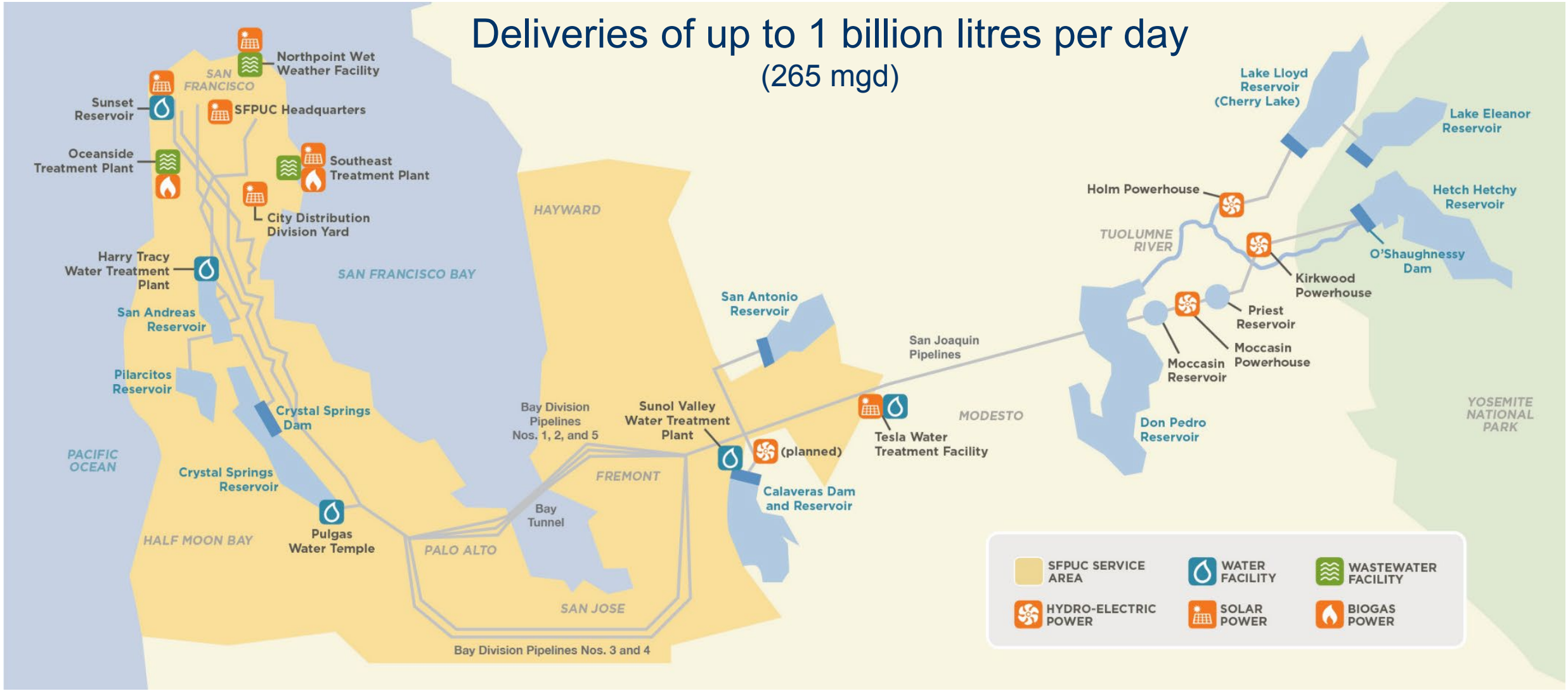
SFPUC's Regional Water System



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Managing Water Resources

- ✓ Conservation
- ✓ Recycled water
- ✓ Onsite water reuse
- ✓ Minimizing losses
- ✓ Innovations

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Conservation

- ✓ **Conservation *(150-170 litres per day)***
  - Fixture replacements
  - Audits, free devices
  - Rain barrel giveaways
  - Laundry-to-landscape program
  - Financial incentives (rebates, grants)

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Offsetting Non-Potable Demands

- ✓ **Recycled water**

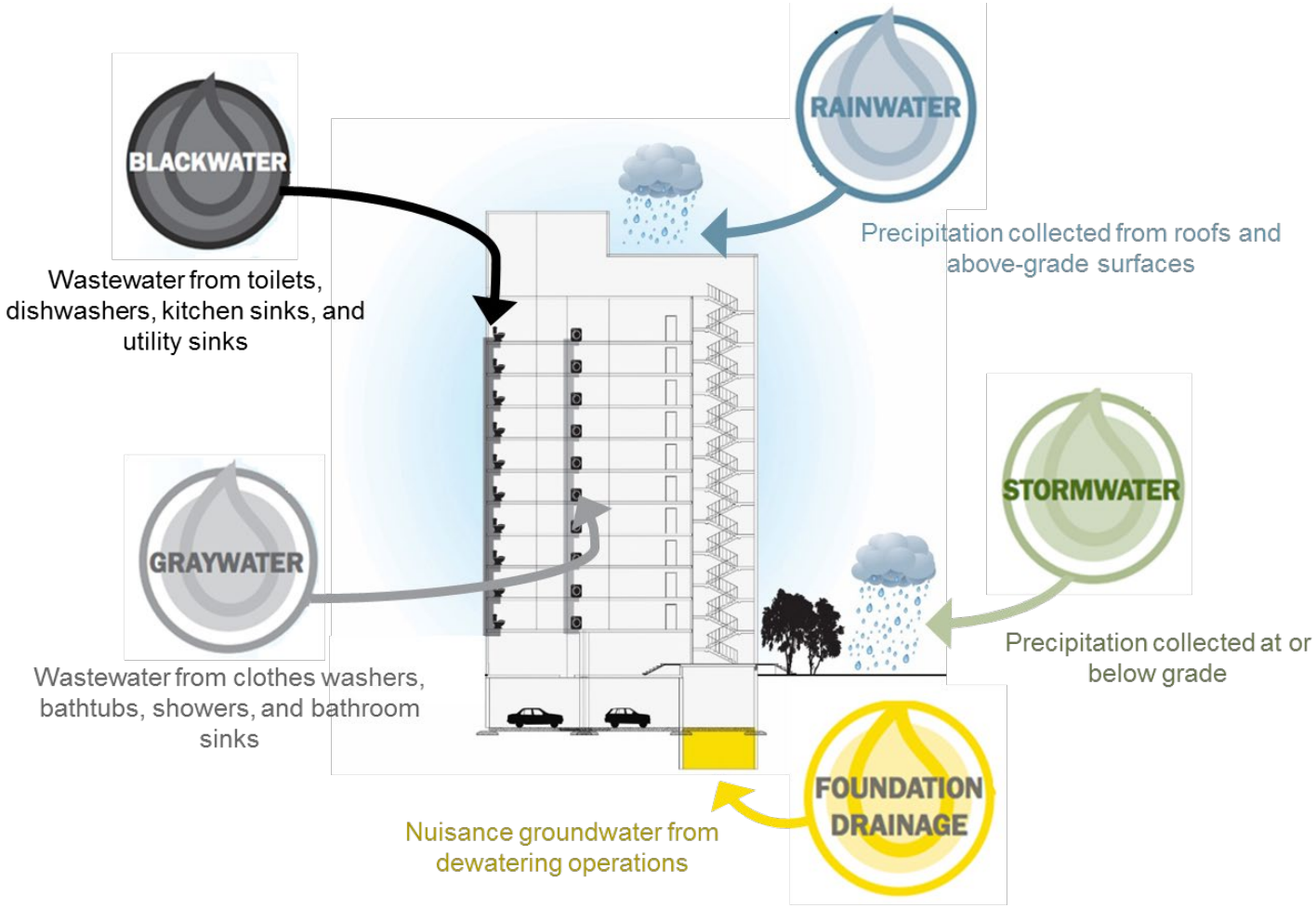
  (centralized)

  - Irrigation, cooling towers

- ✓ **Onsite water reuse**

  (decentralized)

  - Local ordinances
  - Technical assistance
  - Grants



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Other Demand Management Actions

- ✓ **Minimizing losses (<10%)**
  - Leak detection
  - Pipeline replacement
  - Automated Meter Installation (AMI)

- ✓ **Innovations**
  - Atmospheric Water Generation

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OneWaterSF: A New Approach

Matching the right resource to the right use

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LOOKING AHEAD: ALTERNATIVE WATER SUPPLIES

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Key Planning Drivers

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Meeting Future Needs

Demands

Conservation, Onsite Water Recycling, and Ordinances

3680 l/s
or 382 ml/d
in droughts

LOS Goals

Uncertainties:
Climate Change
New Regulations
Future Curtailments

Supplies

Regional Water System, Local Supplies, and
Alternative Water Supplies

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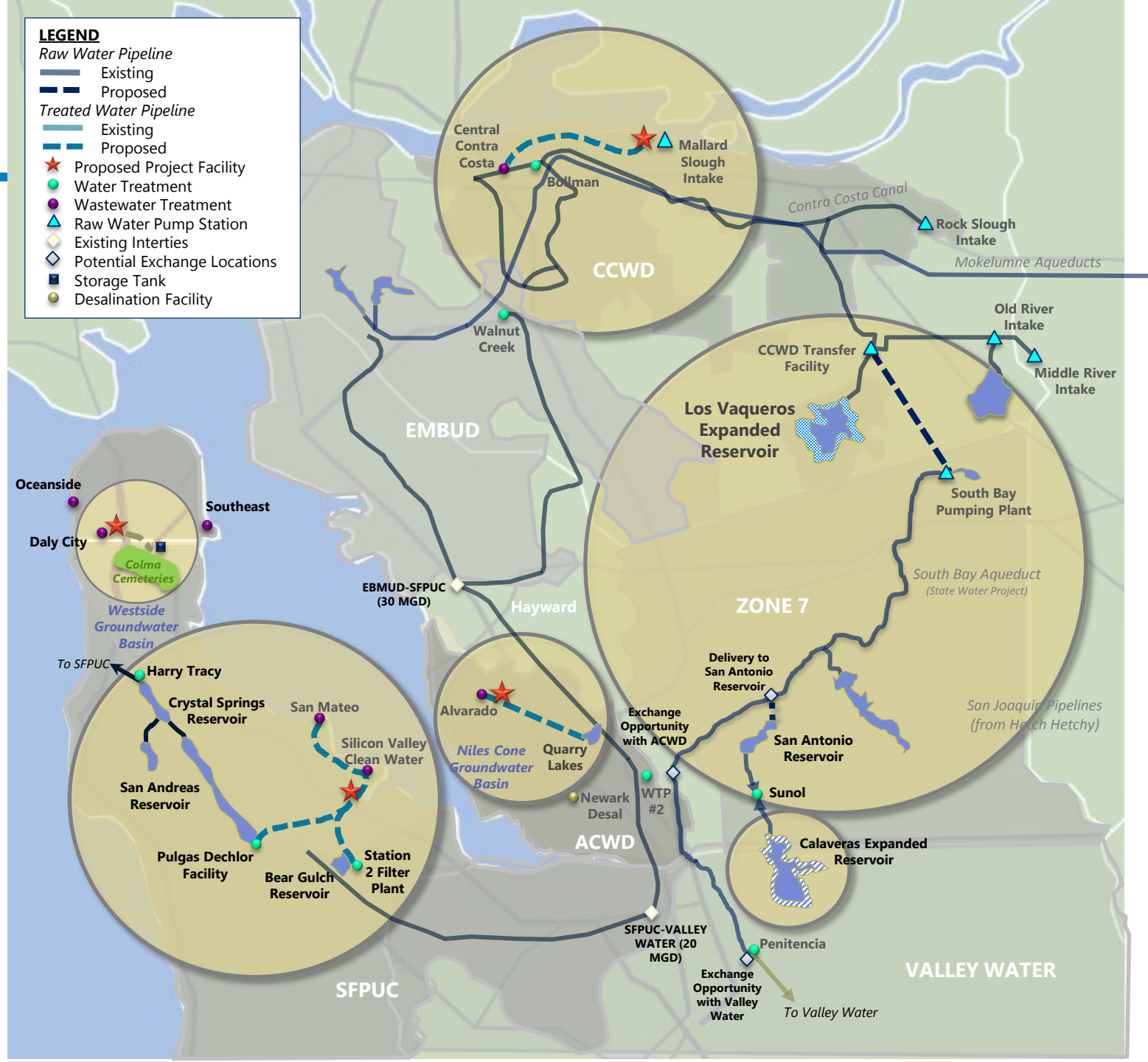
Alternative Water Supply Projects

- Distributed opportunities in the Service Area
- Various conveyance and delivery alternatives being considered for each project
- Leveraging existing infrastructure and regional partnerships



Limited Potable Supply Options

Transfers (7.6 mld or 2 mgd):

- Drought year transfers from Irrigation Districts or others

Purified Water (38-95 mld or 10-25 mgd):

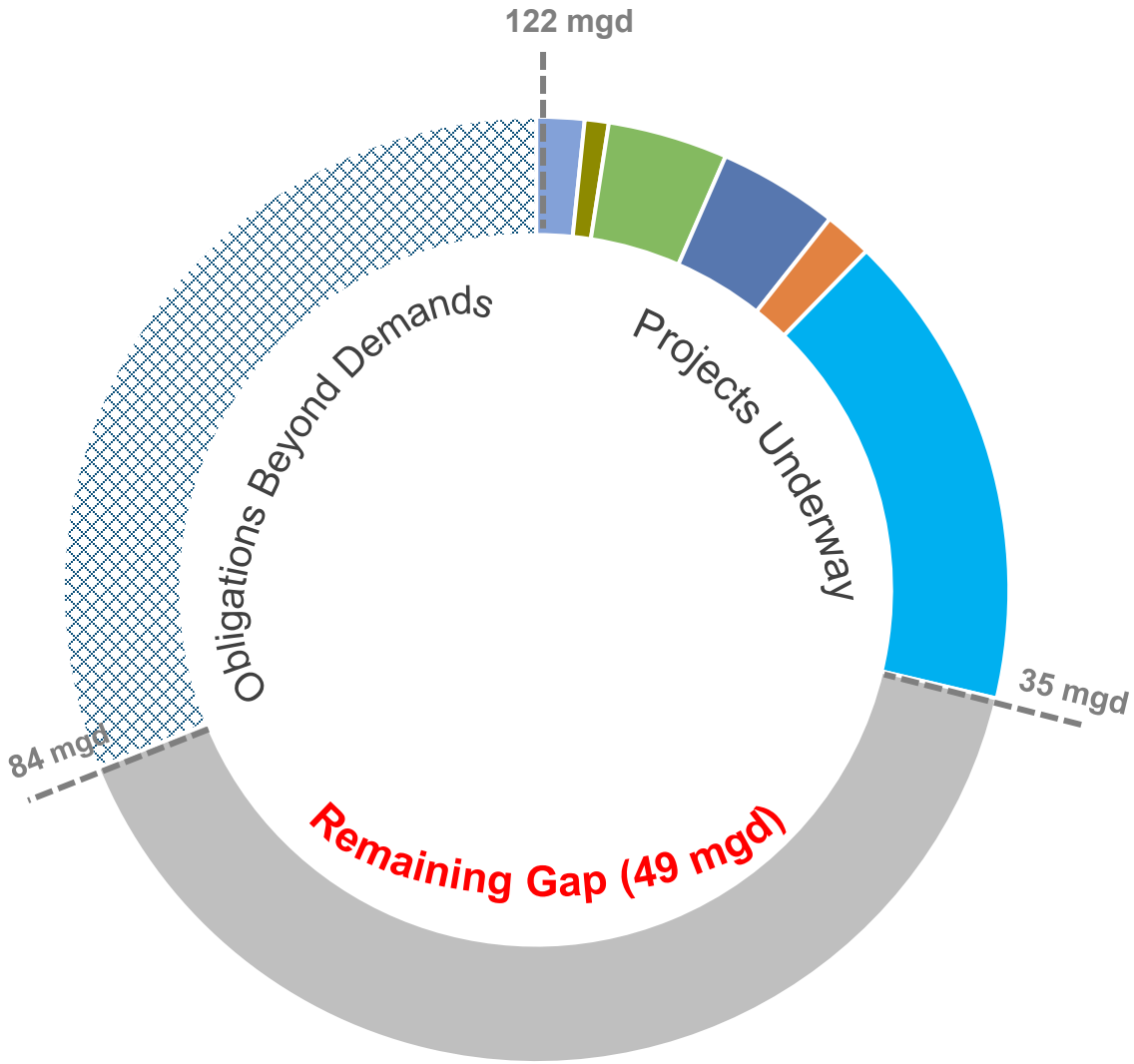
- Recycled water that has undergone full advanced treatment and is suitable for potable use or delivery through existing distribution

Desalination (19-57 mld or 5-15 mgd):

- Saltwater / brackish source for potable use or storage

Storage: (114 mld or up to 30 mgd)

- Above or below-ground option to save water for droughts



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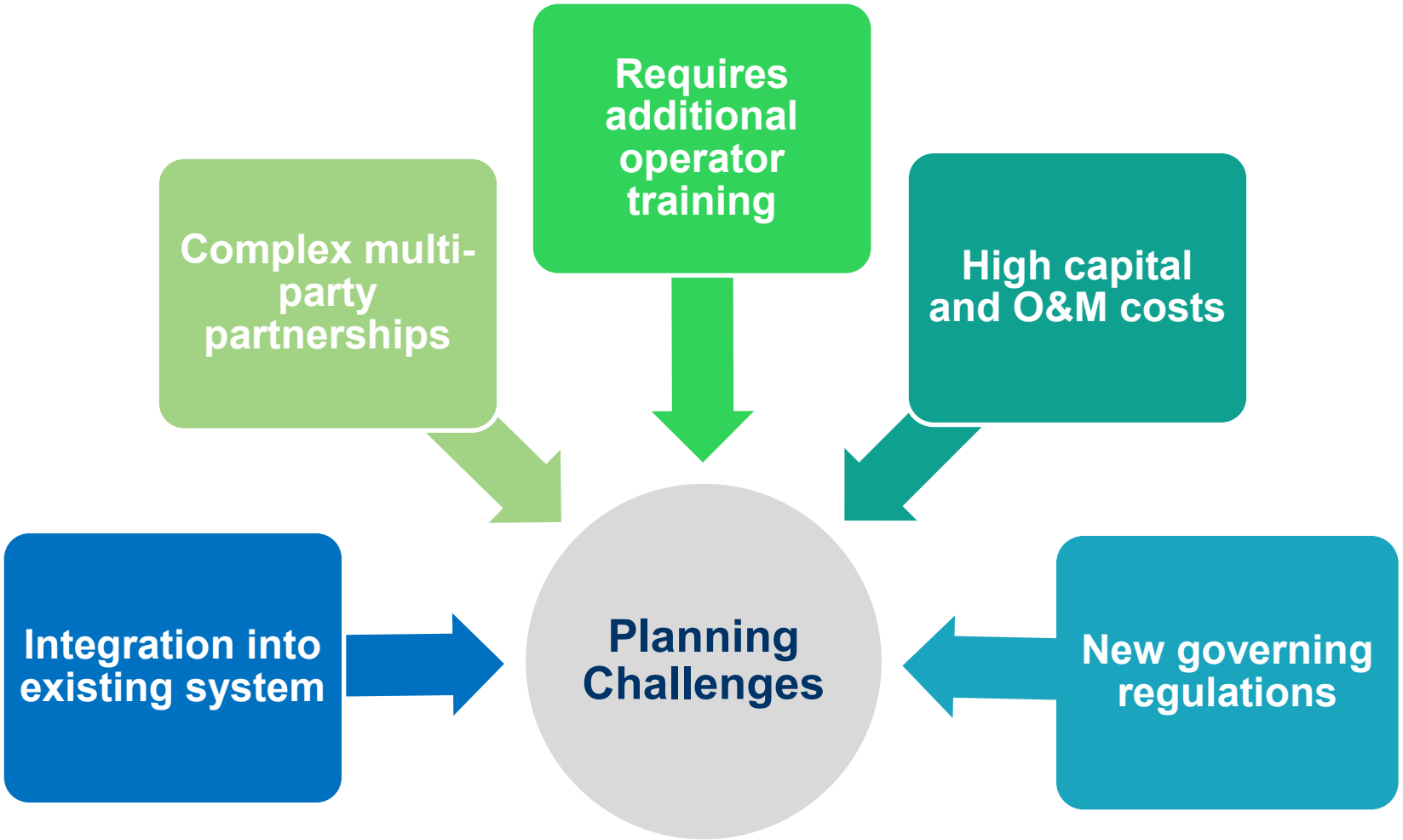
Challenges



Alternative Water Supplies Require a Longer-Term Planning Horizon

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COMMON THEMES

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Shared Experiences and Lessons

- ✓ Maximize efficient use of existing supplies first
- ✓ Recycle water for non-potable uses where feasible
- ✓ Test innovations and technological improvements
- ✓ Prepare for the cost and complexity of new potable supplies
- ✓ Engage with the public and leaders to solicit support for new supplies

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THANK YOU

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