Subcommittee on Pure Water Southern California and Regional Conveyance

Regional Benefits of Pure Water Southern California

Item 3b

January 22, 2025

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Subject

Regional Benefits of Pure Water Southern California

Purpose

Inform the committee about the need, regional benefits, and alignment of supply and demand for Pure Water Southern California

Next Steps

Continue planning and design efforts to determine program demands and regional benefits

Need for Pure Water Southern California

Risk of Shortage & Water Supply Allocation Plan (WSAP)

- Up to 1.22 MAF of net shortage by 2045
  - Would require up to 650 TAF of additional core supply
  - Needs primarily in the SWP-dependent areas
- Net Shortage of up to 66% of the time
  - 2% chance that storage would go below 1 MAF

Declining Groundwater Levels

- Despite favorable hydrologic conditions the past 2 years, 48 percent of the groundwater basins are still below their established operating ranges
- Loss of groundwater production by as much as 10 percent by 2040

Slow Development of Local Supplies

- Despite significant investment in local supplies, the potential shortfall in development remains at ~ 400,000 AF

Regional Benefits of Pure Water

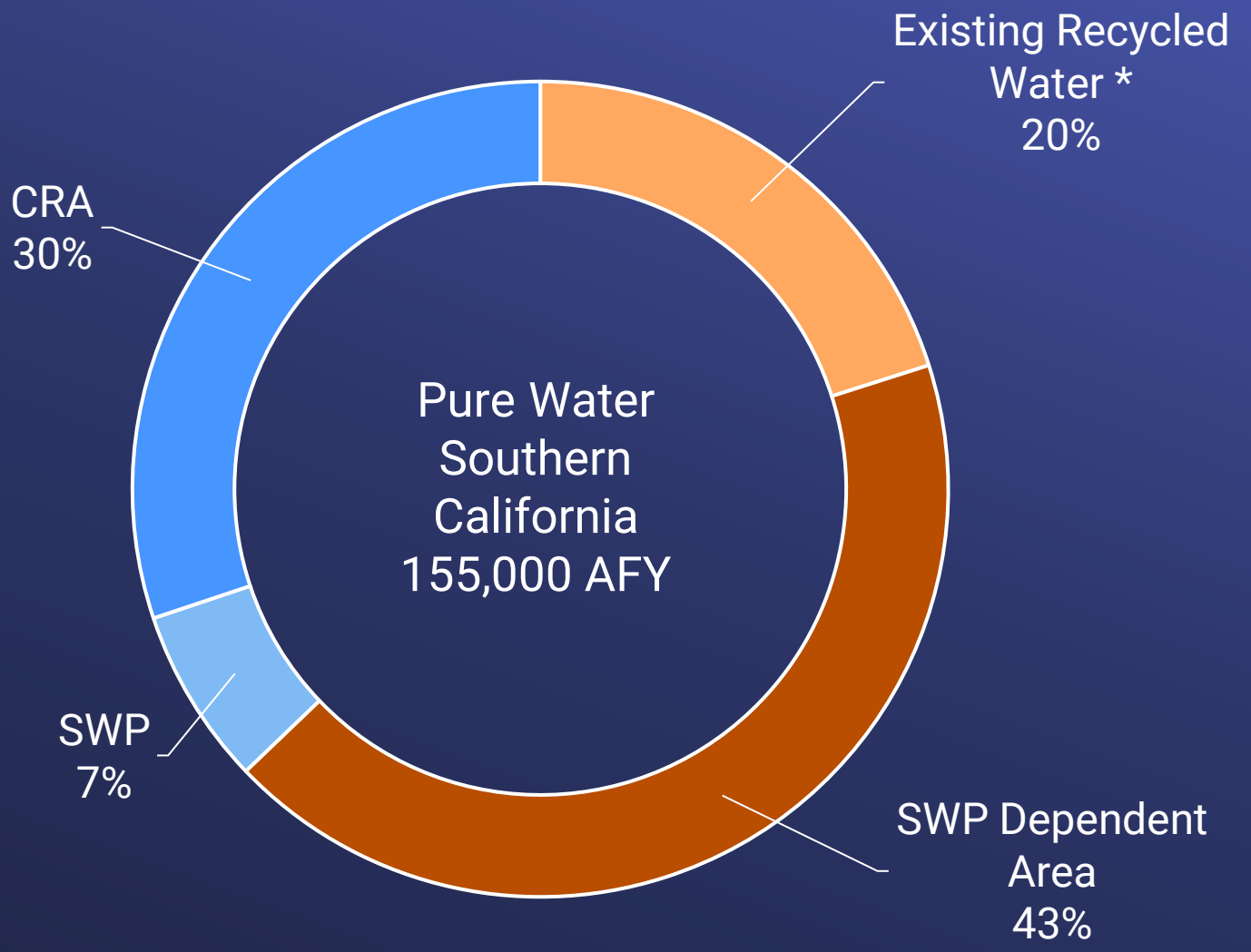
- Reduces Risk of Net Shortage by up to 14%
- Reduces Risk of WSAP by up to 50%
- Reduces Reliance on SWP and Colorado River
- Improves Groundwater Sustainability
- Improves Local Supply Development
- Increases Available Supply During Seismic Emergency by 15%
- Increases Operational Flexibility
- Generates up to 50,000 New Jobs

Pure Water Southern California Offsets SWP and CRA

Pure Water Southern California production reduces reliance on imported water sources:

- 80% of PWSC reduces reliance on SWP & CRA
- 20% of PWSC replaces existing recycled water use

* The existing West Basin recycled water may be used by the City of Los Angeles to reduce reliance on SWPDA



Member Agency Discussions

Meetings (April-December 2024)

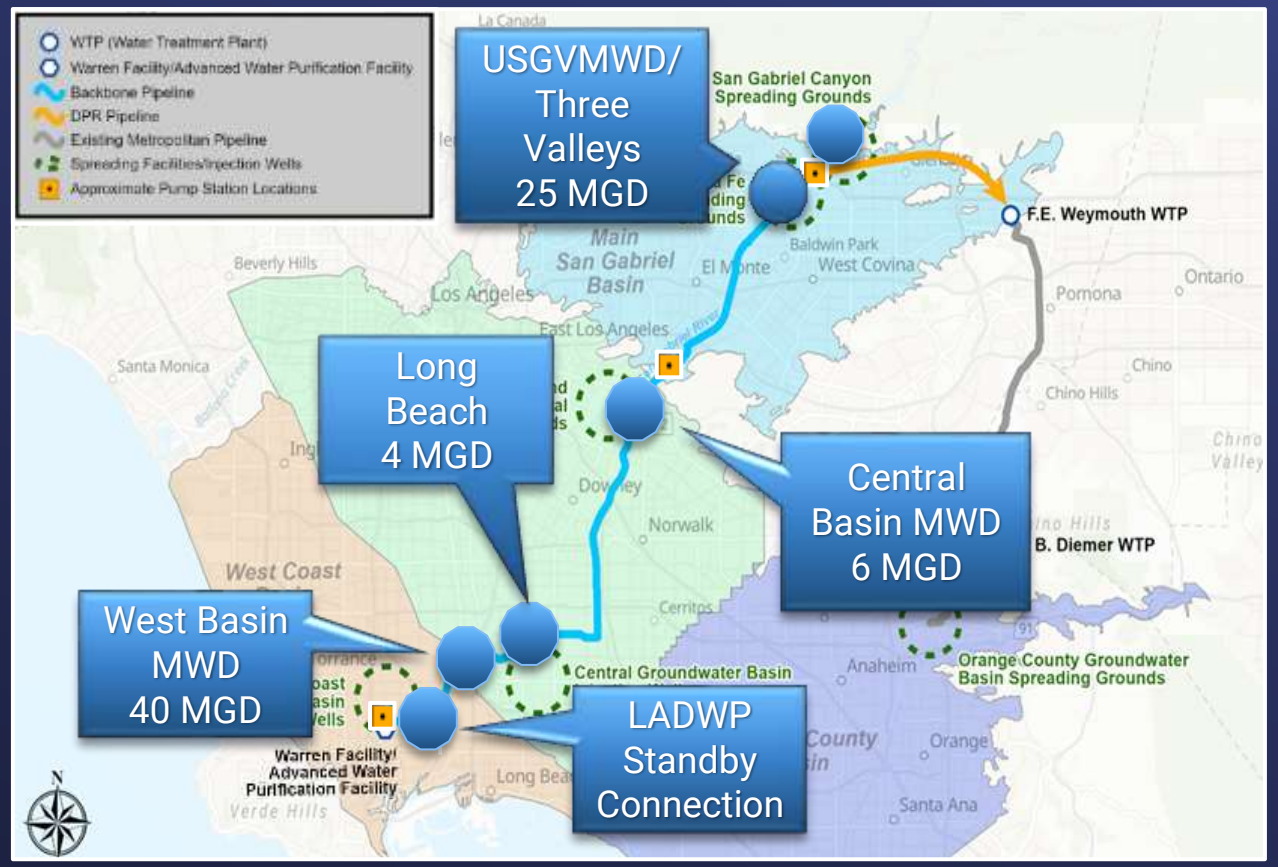
Refinement of MA Demands

Development of Preliminary Term Sheets for Purchase and Delivery of Pure Water

Potential Demand: ~45 mgd

Member Agency	Average Demand	Existing or New Demand
LACSD	<1 mgd	Existing effluent
LADWP	Standby	Existing recycled water
West Basin	40 mgd	Existing recycled / imported
Long Beach	4 mgd	New augmentation
Total	**~45 mgd**	—

Potential Demand: ~75 mgd



* Meets minimum demand for Main San Gabriel Basin.

Member Agency	Average Demand	Existing or New Demand
LACSD	<1 mgd	Existing effluent
LADWP	Standby	Existing recycled water
West Basin	40 mgd	Existing recycled / imported
Long Beach	4 mgd	New augmentation
Central Basin	6 mgd	Existing imported
USGVMWD	21 mgd *	Existing imported
Three Valleys	4 mgd *	New augmentation
Total	**75 mgd**	—

Alignment of Supply and Demand Goals

Ability to meet production goals without storage (2019-2023 Daily Hydrology)

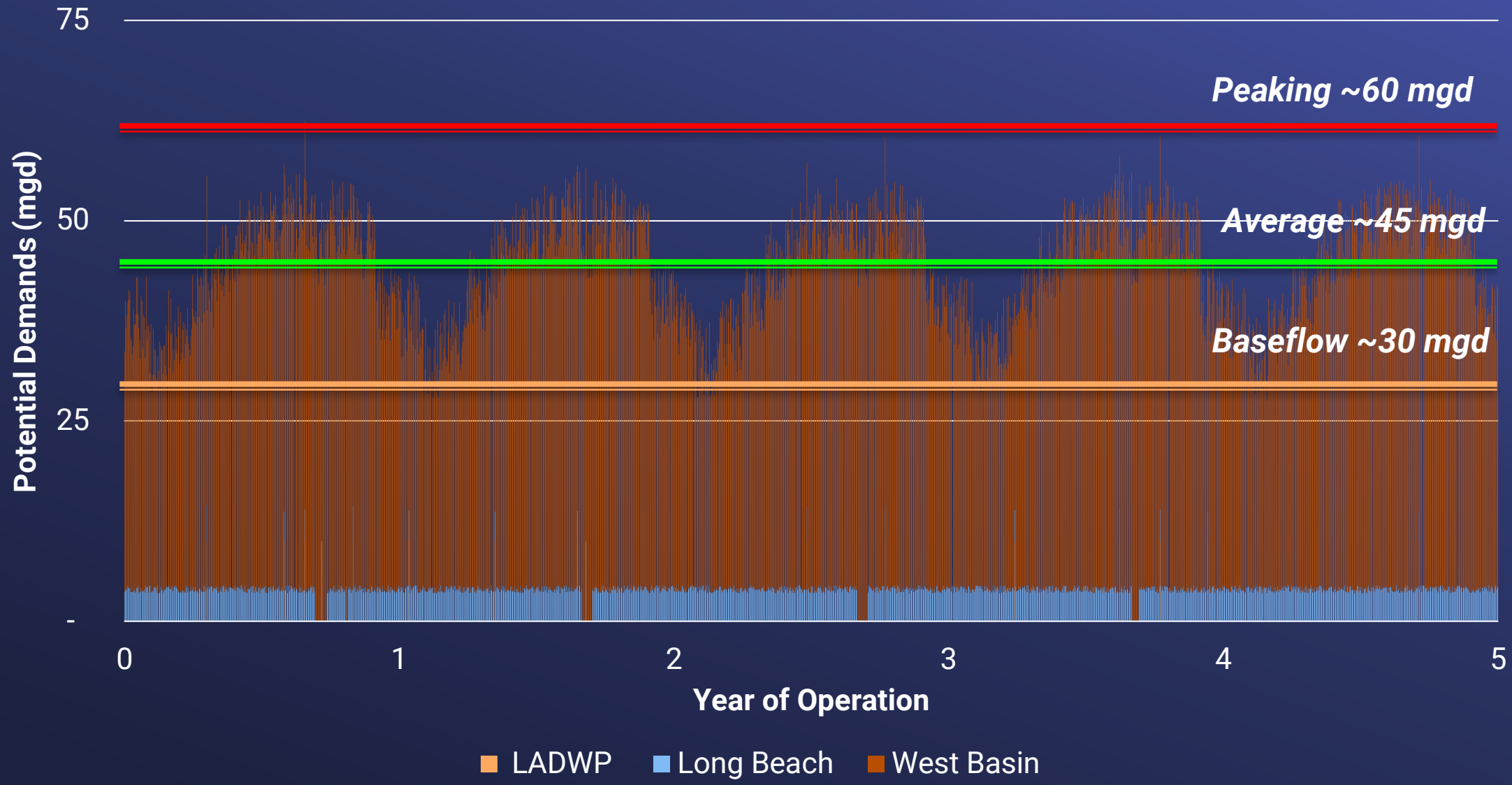
Account for downtime and maintenance

Account for spreading basin availability in Central and Main San Gabriel Basin

Account for range in expected demand (diurnal, peaking, and average demand)

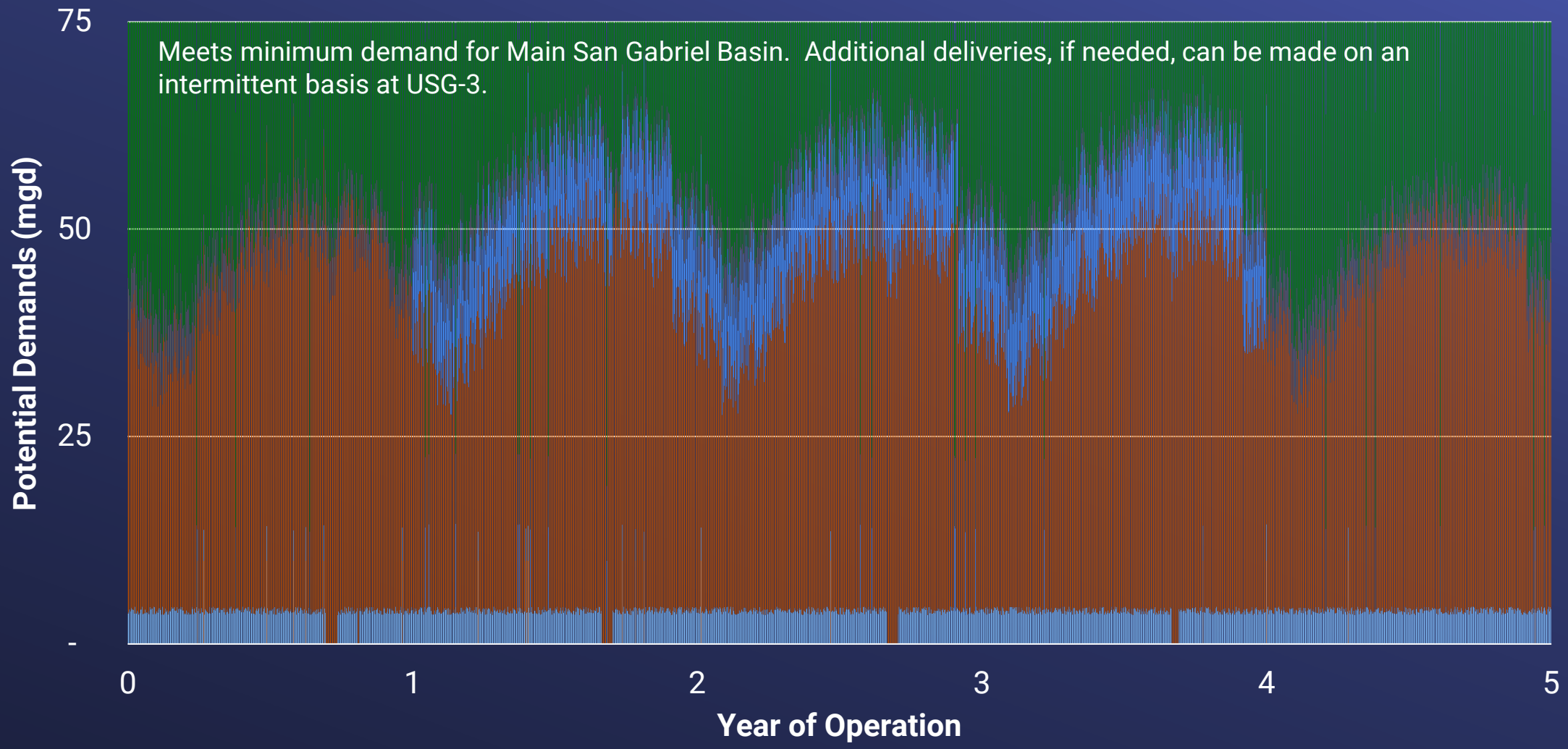
Daily Demands Vary Significantly with an Initial Delivery of ~45 mgd

Significant Member Agency Storage Likely Required



Daily Deliveries Vary Less with an Initial Delivery of 75 mgd

Dedicated Recharge in Main San Gabriel Basin Helps Control Demand Variability



Summary of Demand Assessment

45 mgd

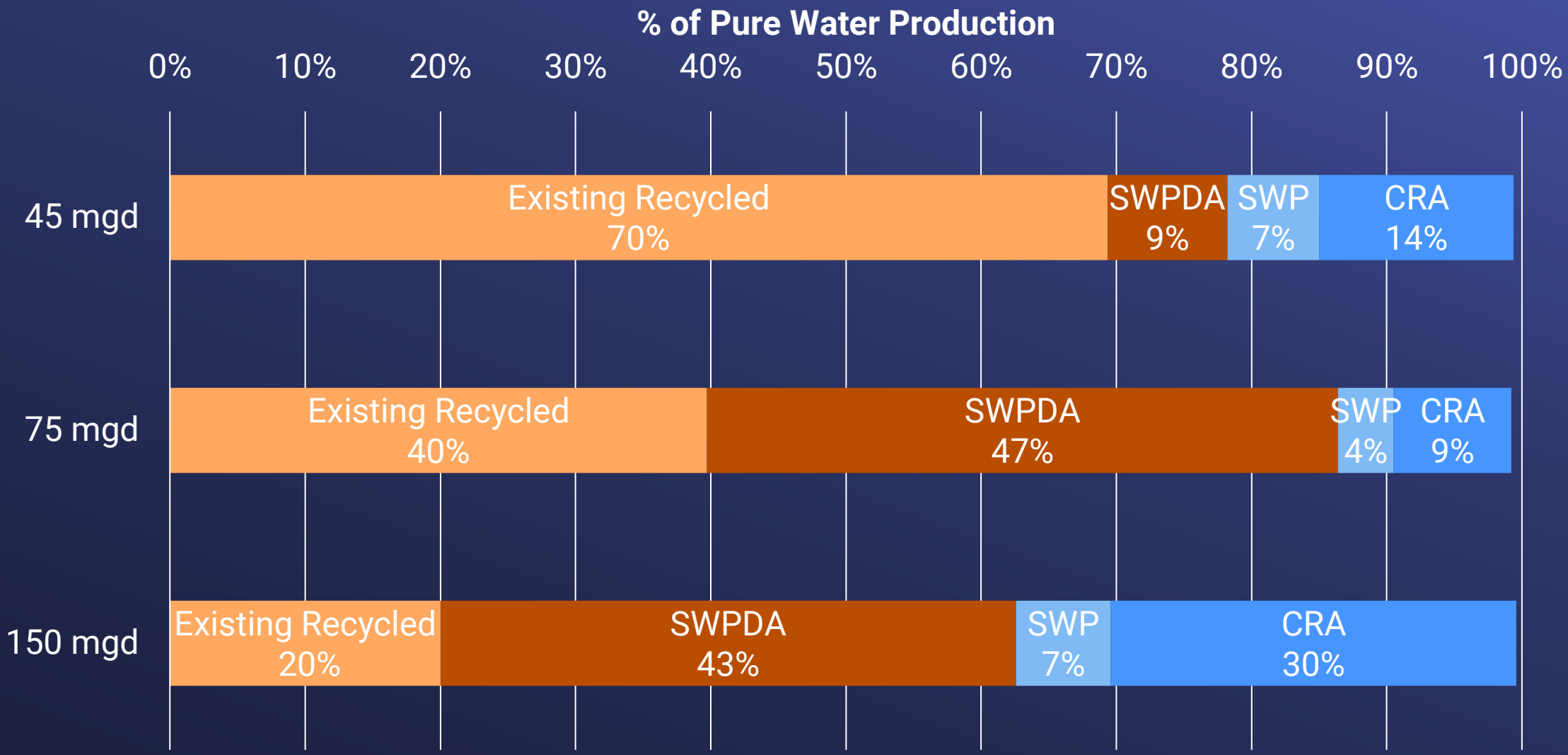
- Smaller initial construction package
- Demands vary significantly
- May require significant member agency storage to handle peaking & meet Metropolitan's goals

75 mgd

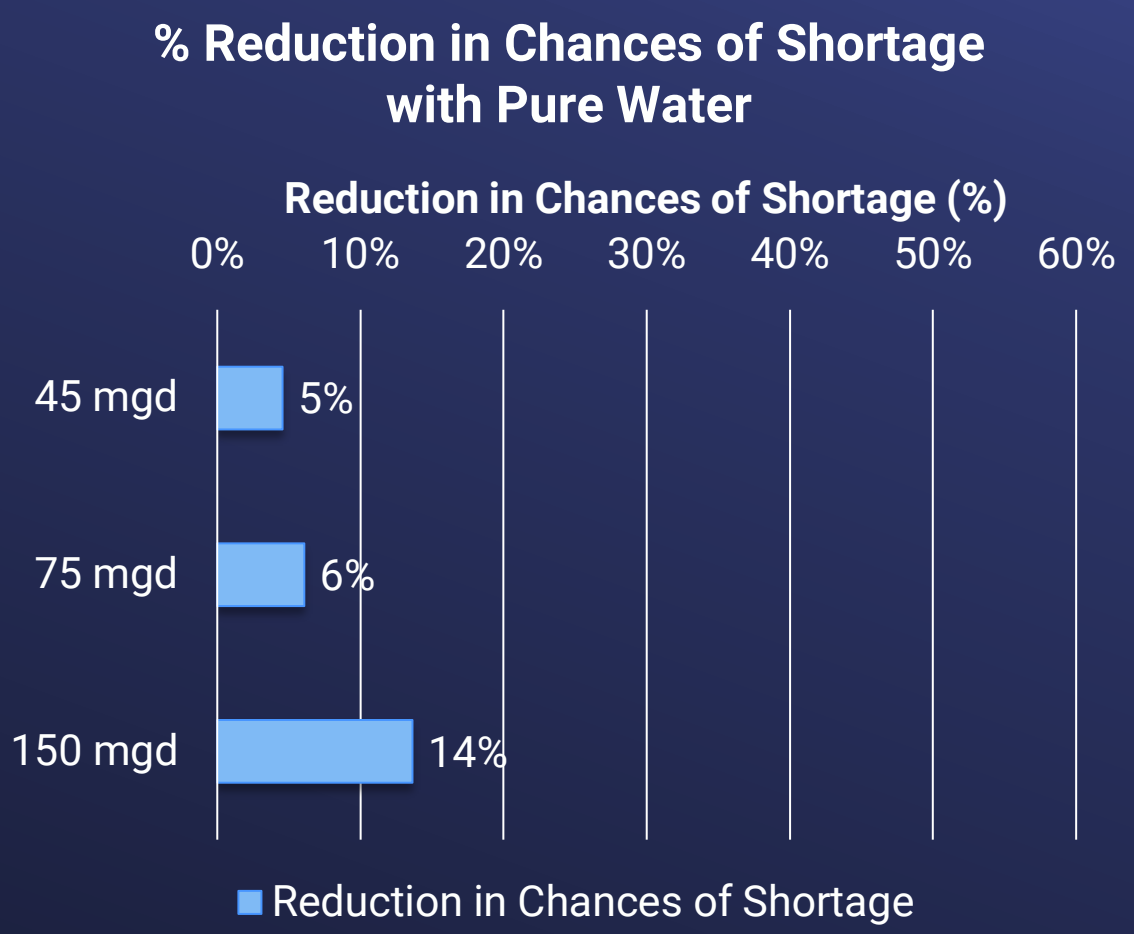
- Meets most of the IPR demand
- Addresses storage/peaking issues
- Will need to decide on backbone upsizing earlier

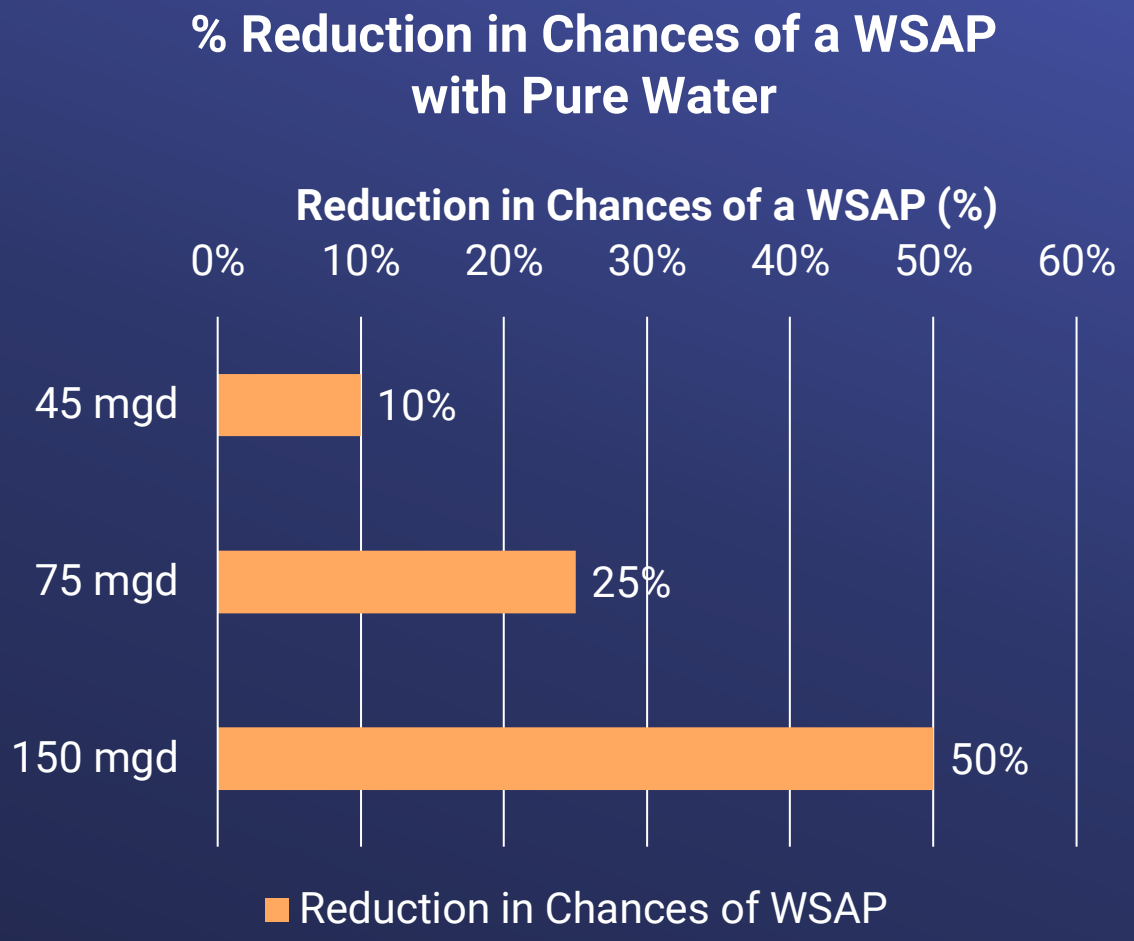
Regional Benefits of Pure Water

Reduces Reliance on SWP & CRA



Regional Benefits of Pure Water
Reduces Chances of Shortage and WSAP





Summary

Need for Pure Water

- Risk of shortage and WSAP
- Declining groundwater levels
- Slow development of local supplies

Regional Benefits of Pure Water

- Reduces risk of shortage and WSAP
- Reduces reliance on SWP and Colorado River
- Improves groundwater sustainability and local supply development
- Increases operational and emergency flexibility
- Generates new jobs

Demands

- 45 mgd: Operationally challenging to implement & doesn't meet Metropolitan goals.
- 75 mgd: Demand variations can be handled with new dedicated recharge in Main San Gabriel Basin.


THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
1928