#### PASO BASIN COOPERATIVE COMMITTEE November 20, 2024

Agenda Item #10 – Update on State Water Project Feasibility Study

#### **Recommendation**

None; information only.

#### Prepared By

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#### **Discussion**

In 2022, the Paso Basin was awarded a \$7.6 million grant from the California Department of Water Resources for the implementation of its Groundwater Sustainability Plan (GSP).

The grant spending plan is composed of six (6) components, and Component 6, Water Supply Feasibility/Engineering Studies, includes a State Water Project (SWP) Feasibility Study. An RFP was issued for this project, and Provost & Pritchard was the selected consultant.

An update on the SWP Feasibility Study is provided as Attachment 1.

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# Paso Robles Subbasin SWP Supplemental Supply **NOVEMBER 20, 2024**

# Paso Basin SWP Supp Supply Agenda

- Introduction
- SWP Supply and Capacity
- SWP Costs
- Alternatives Development
- Next Steps

SWP Supply and Capacity PASO BASIN SWP SUPPLEMENTAL SUPPLY NOVEMBER 20, 2024

# Potential SWP Supplies Available to Paso Robles Subbasin

- SLO County Flood Control and Water Conservation District Table A Amounts – 25,000 AF
- 2023 SWP Delivery Capability Report Adjusted Historical Hydrology
  - Average Deliveries 12,400 AF
  - Percent Deliveries 49%; Allocated 56%
- SWP County FC&WCD Available Table A Amount
  - Total Maximum Table A Amounts 25,000 AF
  - Subcontractors and Drought Buffer 10,537 AF
  - Assumed Reserved for Other Users 1,500 AF
  - Assumed for Paso Robles Subbasin 12,963 AF
    - Average allocations 7,100 AF

# Potential SWP Supplies Available to Paso Robles Subbasin

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- 2023 SWP Delivery Capability Report Adjusted Historical Hydrology
  - Average Deliveries 12,400 AF
  - Percent Deliveries 49%; Allocated 56%
- Potential SWP Supply for Paso Basin
  - Table A 12,963 AF
  - Average allocations 7,100 AF



# Paso Basin SWP Supply has large variations



## SWP Article 21 Water

- Intermittent supply as available when Delta has high flows and San Luis Reservoir is full
- SLO County FCWCD Allocated Share averages about 290 AF/Year
- Average availability about 25% of years, many years with minimal quantities
- Maximum availability rate is 15.4 cfs
- Cost is limited to energy cost for pumping, about \$150/acre-foot
- Up Side: Other SWP contractors may not use their allocation, so quantities could be larger
- Down Side: Greatest availability in wet San Joaquin watershed years, when local stream likely to have flows

# Paso Basin Article 21 Water Supply Availability



■ Table A ■ Article 21

## Coastal Branch Aqueduct Reaches



# Capacity <u>not</u> Constraining in Coastal Branch Reaches 31A & 33A



# Capacity <u>is</u> Constraining in Coastal Branch Reach 33B



#### Coastal Branch Reach 33B Below Polonio Pass Water Treatment Plant Wet Year Available Capacity and Target Deliveries



#### Coastal Branch Reach 33B Wet Year Available Recharge Capacity



SWP Costs PASO BASIN SWP SUPPLEMENTAL SUPPLY NOVEMBER 20, 2024

## SWP Cost Evaluation

- Initial State Water Project and Coastal Branch Costs are Nearing Complete Repayment
- SWP Cost Repayment Period is through 2035
- Post-2035 should have significantly reduced costs; Limited to ongoing operation and maintenance
- Prior SWP Cost Estimates include Full Repayment of SWP Costs from 1992 to Present
- Retrospective Repayment is not a legal requirement and is not a common practice among SWP Contractors
- Analysis Approach:
  - Segregate SWP Costs into Current Charges and Repayment of Past Charges
  - Develop alternative SWP Costs for current Repayment period and Post Repayment period
  - Identify alternative SWP Cost approaches for policy consideration

## SWP Costs – Polonio Pass Raw Water (\$ per acre-foot)



- Retroactive and future costs included in prior cost analysis are not supported by documented policies
- Conveyance Capital Costs have clearest basis for buy-in requirement
- Biggest single Buy-in cost element is Capital repayment for Reach 33A
- Other charge categories could be considered sunk cost

## SWP Policy Issues and Decision Makers

DWR for California Aqueduct (Likely indirect SWP Contractors input)

- No Issues for SLO County access through Reach 31A (Initial Coastal Branch Facilities)
- SLO County capacity limited in Reaches 33A and 33B (Coastal Branch Phase 2)
- Physical capacity available in Reach 33A, capacity is limited in Reach 33B
- No clear DWR policy on retroactive payment or access to capacity
- SLO County for Sale of SWP Table A Amounts to individual Agencies
  - Amounts available to different County areas
  - Reimbursement, if any, for past costs
  - Types of costs, if any, to be reimbursed

CCWA for water treatment and reimbursement for capital costs

## Paso Basin Alternatives Development PASO BASIN SWP SUPPLEMENTAL SUPPLY NOVEMBER 20, 2024

## Alternatives

Problem statement – Subbasin overdraft and data gaps

#### Primary Alternatives

- Treated Water at Shandon
- Treated Water at Creston
- Raw Water at Shandon
- Raw Water to Cholame Creek

#### Uses for SWP water

- In-channel recharge
- Constructed recharge basins
- Direct Delivery for irrigation
- Phased approach
  - Construct turnout(s) potentially starting with EPC pilot turnout near Creston
  - Recharge in creek channels with monitoring
  - **Future addition of recharge basins and irrigation pipelines if needed**



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## Turnout Sizing and Costs

Costs do not include de-chlorination facilities

- ► 6-CFS
  - Approximately 3,600 AFY (assuming 10 months of continuous use)
  - ► 12-inch components
  - Preliminary construction estimate \$1.3M
- ▶ 12-CFS
  - Approximately 7,300 AFY (assuming 10 months of continuous use)
  - ► 18-inch components
  - Preliminary construction estimate \$1.7M
- ▶ 24-CFS
  - Approximately 14,500 AFY (assuming 10 months of continuous use)
  - > 24-inch components
  - Preliminary construction estimate \$2.0M

## **Outlier Alternatives**

Pipelines to areas of domestic well decline

- Pipeline cost (10+ miles of pipe)
- Lack of reliable SWP supply for potable use
- Lack of suitable recharge areas
- Raw water pipeline from Coastal Branch Reach 33A
  - High cost of pipeline and pump stations (\$330M)
- Releasing raw water near Polonio Pass for overland flow to Shandon area
  - Lack of clear flow path through Cholame valley, likelihood of water being lost outside of the Subbasin
  - San Andreas Fault system

# Ongoing Work

#### Cost Estimates

- Raw water pipeline
- Turnouts
- De-chlorination
- Recharge basins
- Creek discharge structures
- Irrigation pipelines
- Assessment of in-channel recharge permitting hurdles
- Continuing hydrogeology research
- Draft report

## Next Steps

- Refine Alternatives based on input
- Continue Alternatives definition, hydraulic analysis and cost analysis
- Complete SWP cost evaluation and policy meetings