

Update on SWP Issues - Delta Conveyance Project

WATER RESOURCES AND WATERSHED COMMITTEE
SEPTEMBER 9, 2020
ITEM NO. 4.2



Presentation Outline

- Overview Pending Committee and Board Actions
- Previous Board Action and Recent Developments
- Notice of Preparation
- DCF Preliminary Benefits
- DCF Costs and Cost Allocation
- Planning Funding Agreements
- DCA Governance Changes

Pending Committee and Board item for October/November

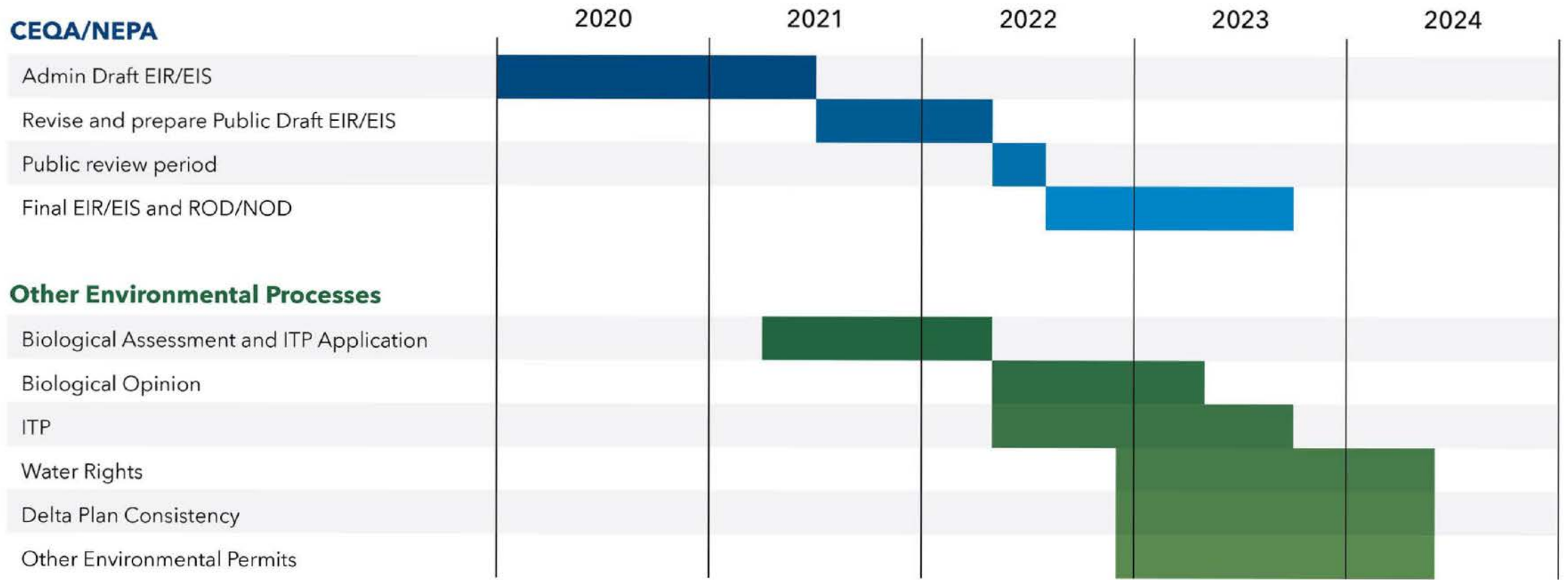
- Authorization to participate in Delta Conveyance Facility (DCF) planning costs
- Authorization for SCV Water's participation in DFC Design and Construction Authority (DCA)

Previous Board Action and Recent Developments

May 2018	Authorized Gap Fund	<ul style="list-style-type: none">• Approximately \$2 Million for continued funding of planning costs
July 2018	CA WaterFix	<ul style="list-style-type: none">• 2.35% Participation Rate w/Water Management Provisions
Nov 2018	Joined Finance JPA	<ul style="list-style-type: none">• General Manager assigned to Board
FEB 2019	Governor Newsom	<ul style="list-style-type: none">• Shifts State's direction and initiates planning for a support a single tunnel
JAN 2020	Department of Water Resources (DWR)	<ul style="list-style-type: none">• Released Delta Conveyance NOP• Single Tunnels (6,000 cfs)
APR 2020	Department of Water Resources (DWR)	<ul style="list-style-type: none">• Completes DCF AIP negotiations except for contractor participation

Project Schedule

Delta Conveyance Project Schedule



Delta Conveyance

Agency Board Actions

December 2020
2021-22 Planning Costs

- Funding Agreement for planning costs
- Review Delta Conveyance Agreement in Principle
- Potential updates to DCA agreement

Post-2022
Planning Costs

Post-2023

- Project Participation
- Approve Project/Contract Amendment for Conveyance

Planning Activities (2020 – 2024)

◆ Draft EIR/S

◆ Final EIR/S

◆ Federal/State ESA Approvals

◆ Project Approval ROD/NOD

◆ SWRCB - Change in Point of Diversion

◆ DSC -Certification of Consistency

This slide does not show all necessary permits and regulatory processes. It is a general representation of one-way DWR may seek to comply with regulatory requirements.

Notice of Preparation

Delta Conveyance Objective

To restore and protect ability to deliver SWP Water Supply

- **CLIMATE RESILIENCY:** Addresses climate change, extreme weather, and rising sea-levels in the Delta for the SWP
- **SEISMIC RESILIENCY:** Minimizes health/safety risk to public from earthquake-caused reductions in water delivery quality and quantity from the SWP
- **WATER SUPPLY RELIABILITY:** Restores and protects ability to deliver SWP water in compliance with regulatory and contractual constraints
- **OPERATIONAL RESILIENCY:** Provides SWP operational flexibility to improve aquatic conditions and manage risks of additional future constraints

Delta Conveyance – Notice of Preparation

Alternatives:

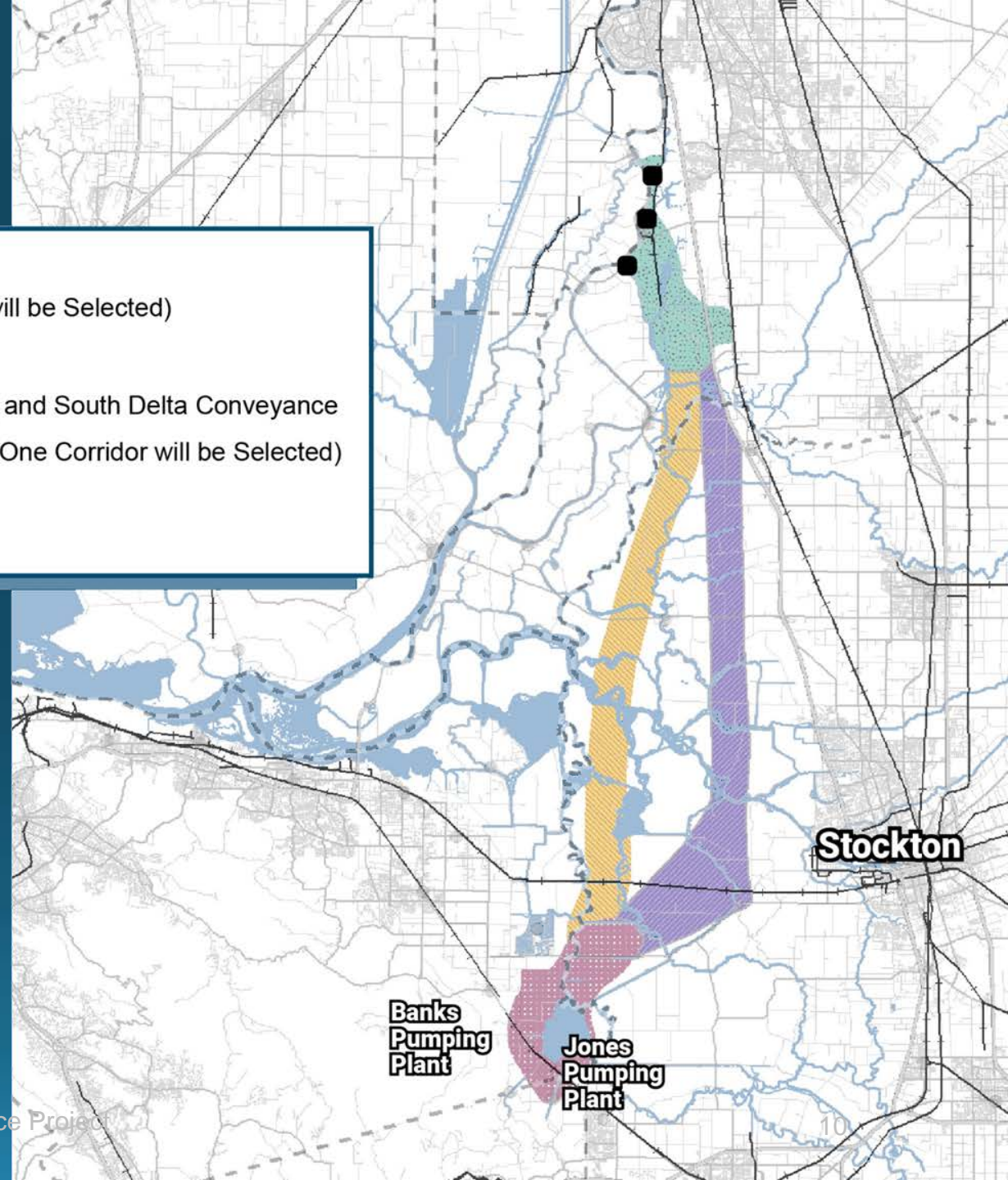
- Proposed Project: Single tunnel up to 6,000 cfs
- DWR considering alternatives
 - Capacities ranging from 3,000 to 7,500 cfs
 - Varying degrees of involvement of the CVP, including no involvement
- Final choice of potentially feasible alternatives for Draft EIR in process

Delta Conveyance – Notice of Preparation

New Facilities

Legend

- Potential Intakes (Only Two Sites will be Selected)
- Intakes and North Tunnels
- Pumping Plant, Southern Forebay, and South Delta Conveyance
- Potential Optional Tunnel Corridors (Only One Corridor will be Selected)
- Central Tunnel Corridor
- Eastern Tunnel Corridor

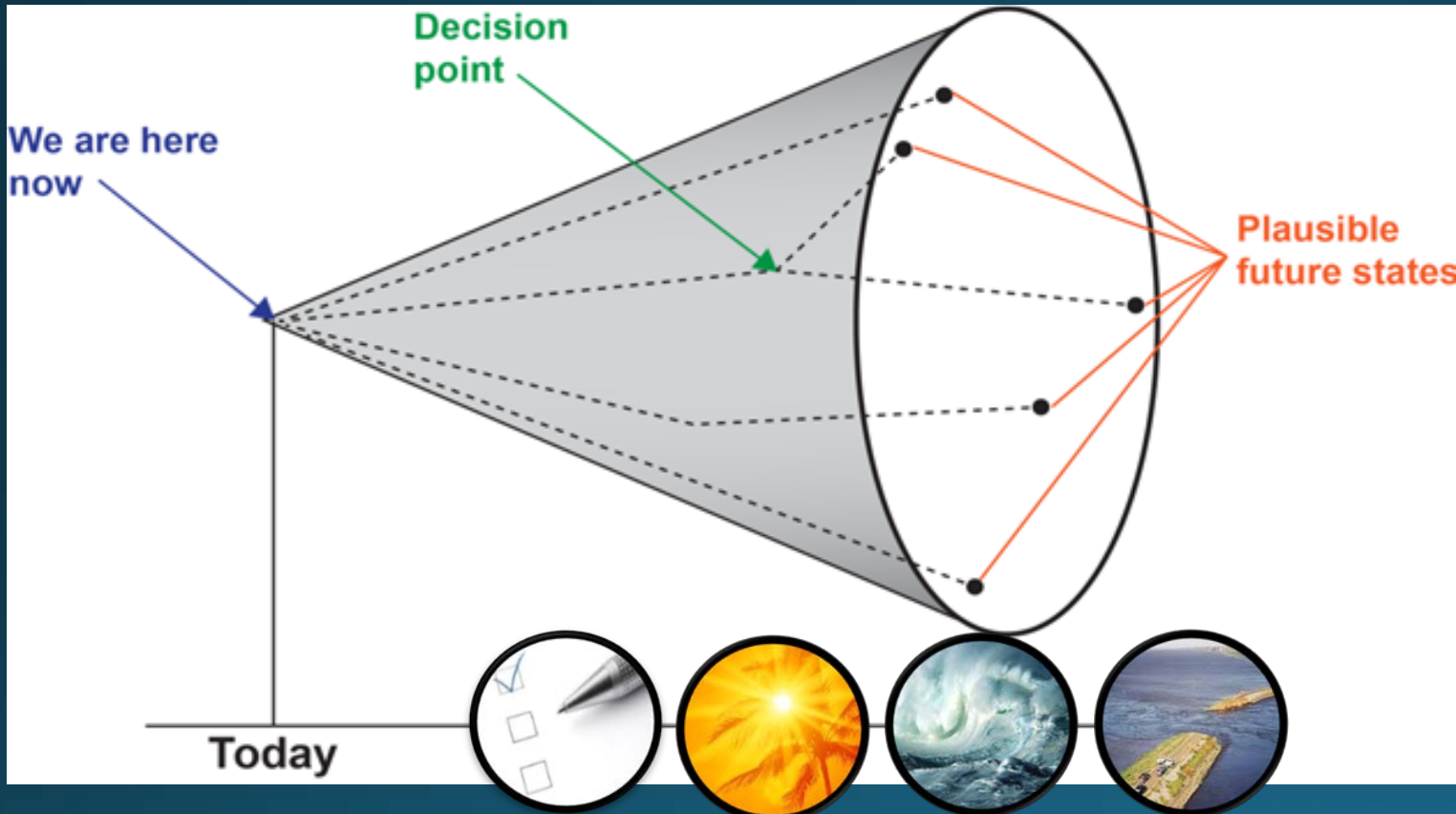


DCP Preliminary Benefits

Water Reliability and Resiliency Benefits

- Water supply reliability and SWP resilience
 - Climate change adaptation/stormwater capture
 - Sea-level rise adaptation
 - Seismic resilience
- South Delta flow pattern improvements for fisheries
- Water transfer capacity and carriage water savings
- Water quality improvements for SWP deliveries

Estimating SWP Exports under Future Conditions and Risks



Risk drivers: Changing regulations, climate, sea level, seismic and levee conditions, other?

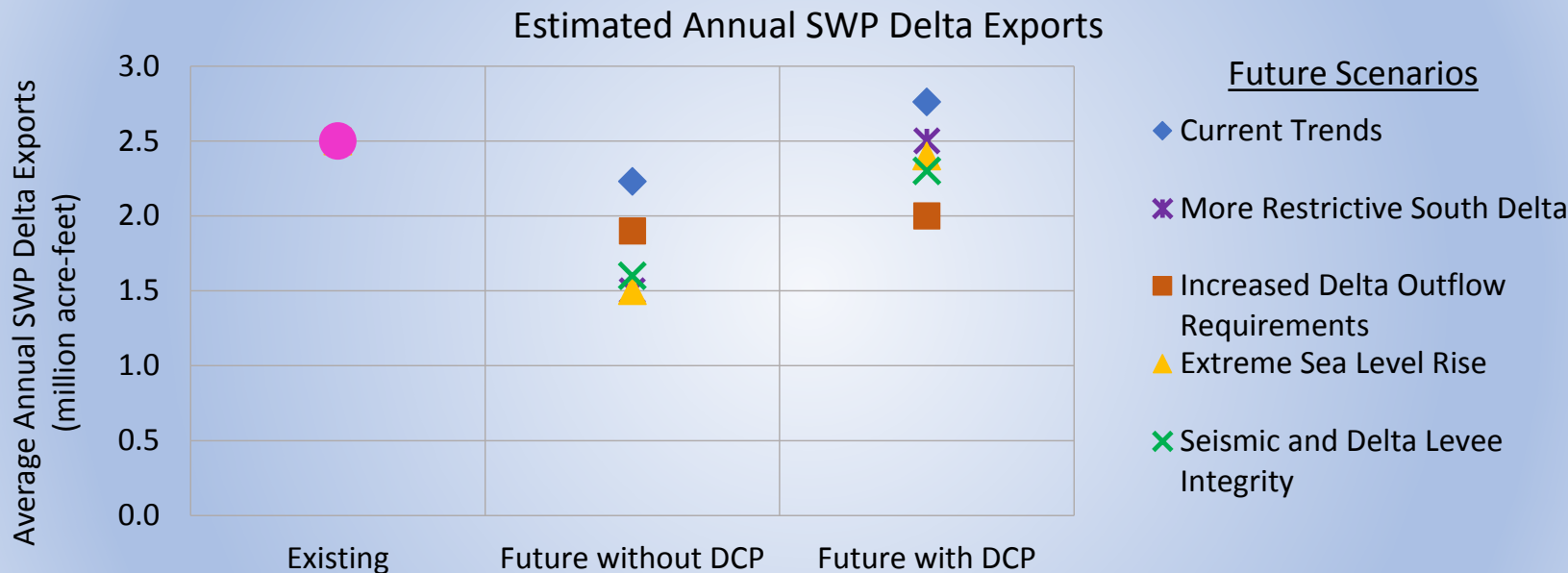
- DCP will operate under future conditions
- Exact future conditions unknown
- Future likely a combination of climate/hydrology, sea level, regulatory, seismic, and other risk drivers
- Scenarios help explore plausible futures and assess SWP reliability and resilience

Preliminary Water Supply Assessment Scenarios

- 5 plausible combinations of regulatory, climate and sea level, and seismic/levee risk future scenarios
- Each scenario simulated with and without DCP
- DCP operations based on California WaterFix
- Coarse estimate of water supply changes using CalSim II
- Estimates may change as DCP is further defined and modeling is refined



DCP Improves SWP Resilience Under Future Conditions



- SWP exports decrease by ~300 to 1000 TAFY under future scenarios without DCP
- DCP allows similar SWP exports as the existing conditions in the future — *demonstrates improved resilience*

**TAFY: thousand acre-feet per year on average*

System resilience is defined as the capacity to respond, absorb, adapt to, and recover from disruptive events

- Haines 2009, Risk Analysis

“... intended to strengthen the resilience of water systems, thereby helping communities prepare for disruptions, to withstand and recover from shocks, and to adapt and grow from these experiences.”

- California Water Resilience Portfolio 2020

DCF Preliminary Costs and Cost Allocation

Timeline of Cost Information

May 2019 CWF
Project Withdrawn

Delta Habitat Conservation and Conveyance (DHCCP) Cost Estimate

CA WaterFix Project Cost Estimate

DCA Cost Information

2013	2014	2015	2016	2017	2018	2019	2020
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DHCCP Cost Estimate (2012 dollars)

- 2 Tunnels
- \$24.78 Billion
- SWP share \$10.03 Billion

CA WaterFix Cost Estimate (2017 dollars)

- 2 Tunnels
- \$16.73 Billion



CA WaterFix Cost Share (2017 dollars)

- 67% SWP
- 33% Unsubscribed (MWD funding)
- SWP Share \$11.086 Billion

DCA Cost Estimate August 2020

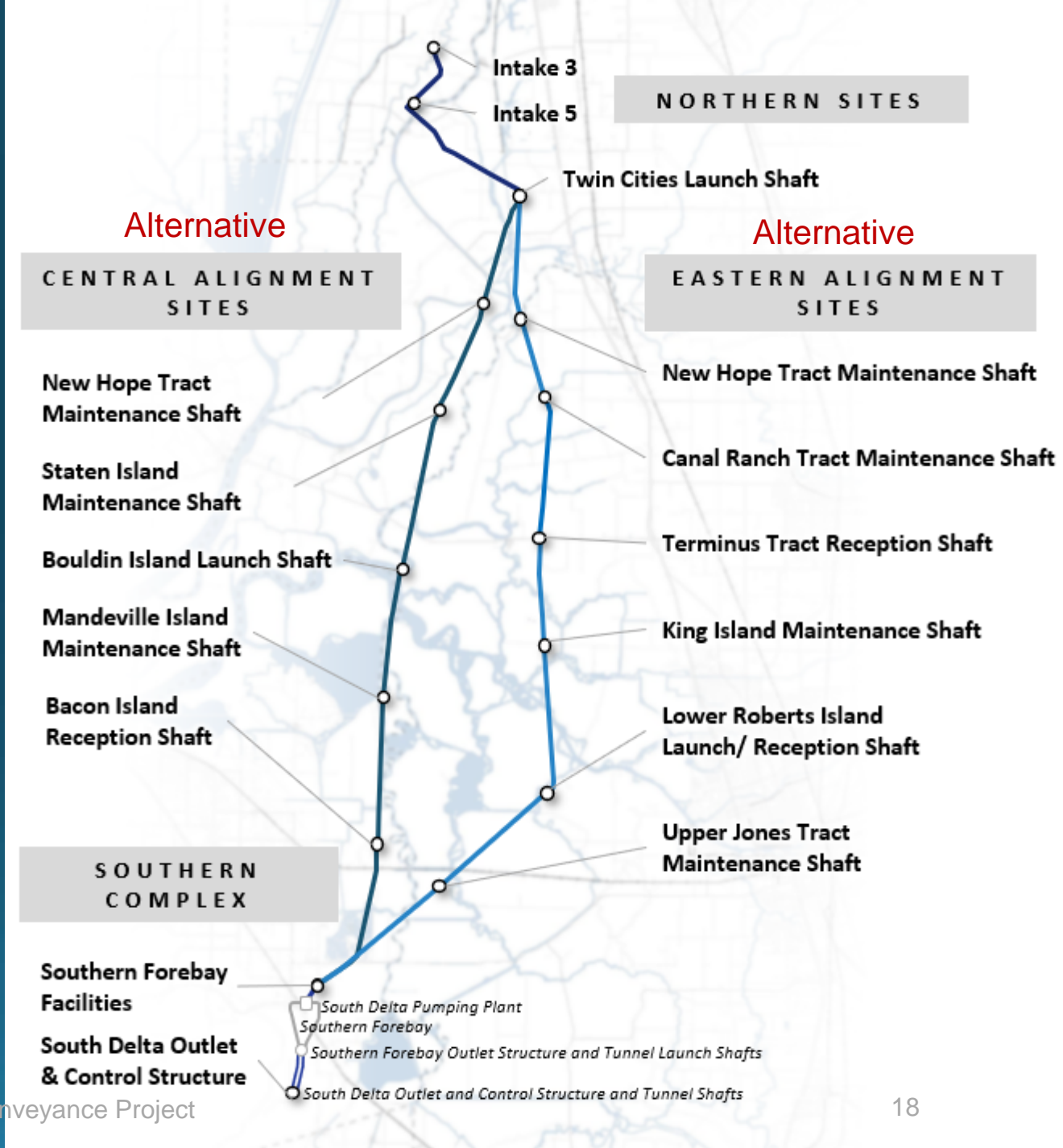
1 tunnel

Project had completed Planning Phase, Conceptual Engineering Report (CER), Final Environmental Impact Report (EIR), and Permits

Planning Phase

Cost Information Assumptions

- **Proposed Facilities Included in Estimate:**
 - One Tunnel - Total capacity 6,000 cfs
 - Two intakes at 3,000 cfs each
 - 42 miles of tunnels and associated shafts
 - Southern Complex Facilities
 - Pump Station
 - Forebay
 - Connections to existing CA Aqueduct

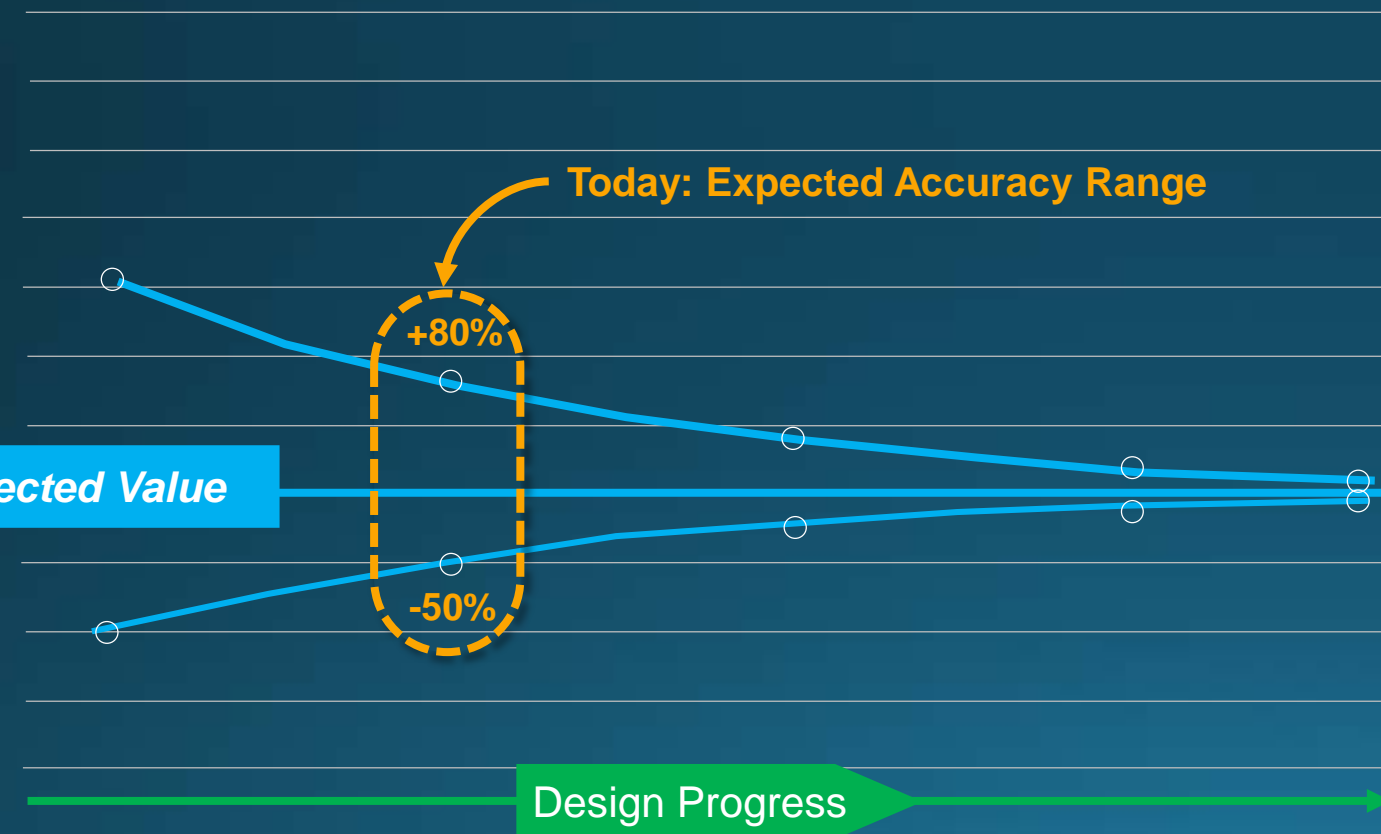


DCA Cost Assessment

- DCA Program Scope:** Cost assessment based on DWR's Proposed Project in NOP Conceptual Engineering Report (CER) is not completed
- Purpose:** Early cost assessment to inform PWA's investment in project planning
- DCA Cost Assessment:** \$15.9 billion in 2020 dollars
- Included:** Based on preliminary engineering but includes project costs for construction, management, oversight, mitigation, planning, soft costs and contingencies

DCA Cost Assessment – Refinement with Time

Confidence Interval Accuracy Range for most probable construction cost of \$12.1 billion
DCA Cost Assessment \$15.9 billion (non discounted dollars)



- The boundaries of the curve represent expected range of accuracy of construction cost
- In early stages, a much wider range of potential construction costs due to the uncertainty of available information
- As the design advances, the range of the construction cost diminishes

Construction Costs

Significant Features	(\$ millions in 2020)	
	CWF ¹	DCA
Intakes 3 and 5	814	1,397
Tunnels (North and Main)	4,226	4,302
Clifton Court Forebay & South Delta Connectors and South Tunnels	679	1,357
Pump Plant (CWF to 6,000 cfs)	401	794
Utilities, Power, Roads, and Communication and Controls	454	508
Total	6,574	8,358

1. CWF costs are normalized to represent a single tunnel of smaller diameter and a 6,000 cfs pump plant.

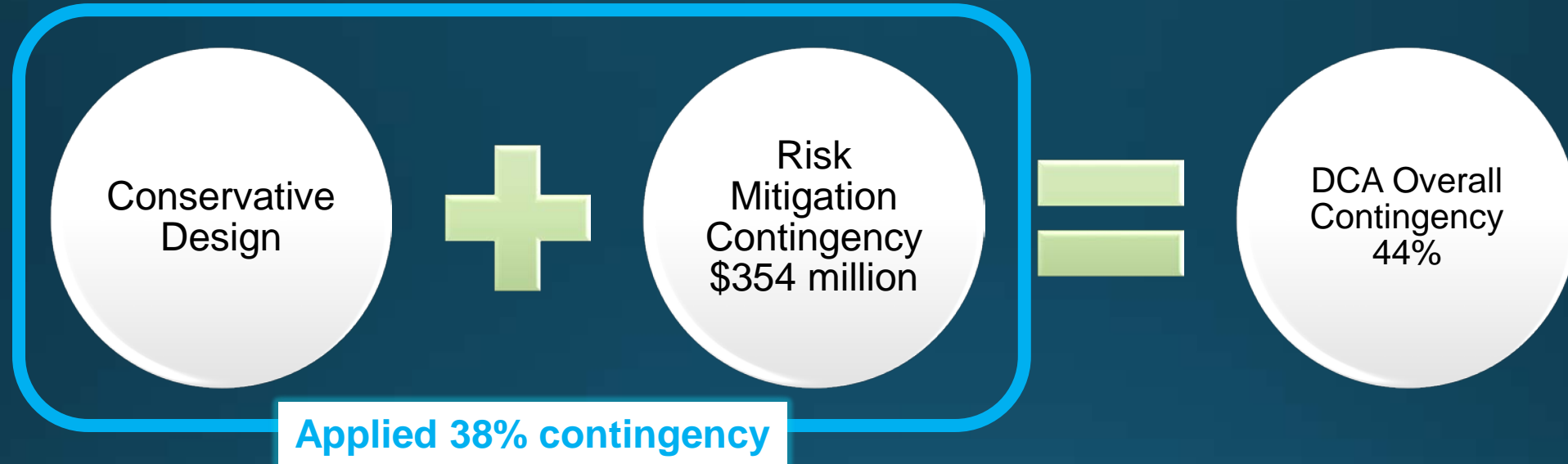


Intakes



Pump Station

Contingency Levels for DCA Cost Assessment



WaterFix Overall Contingency

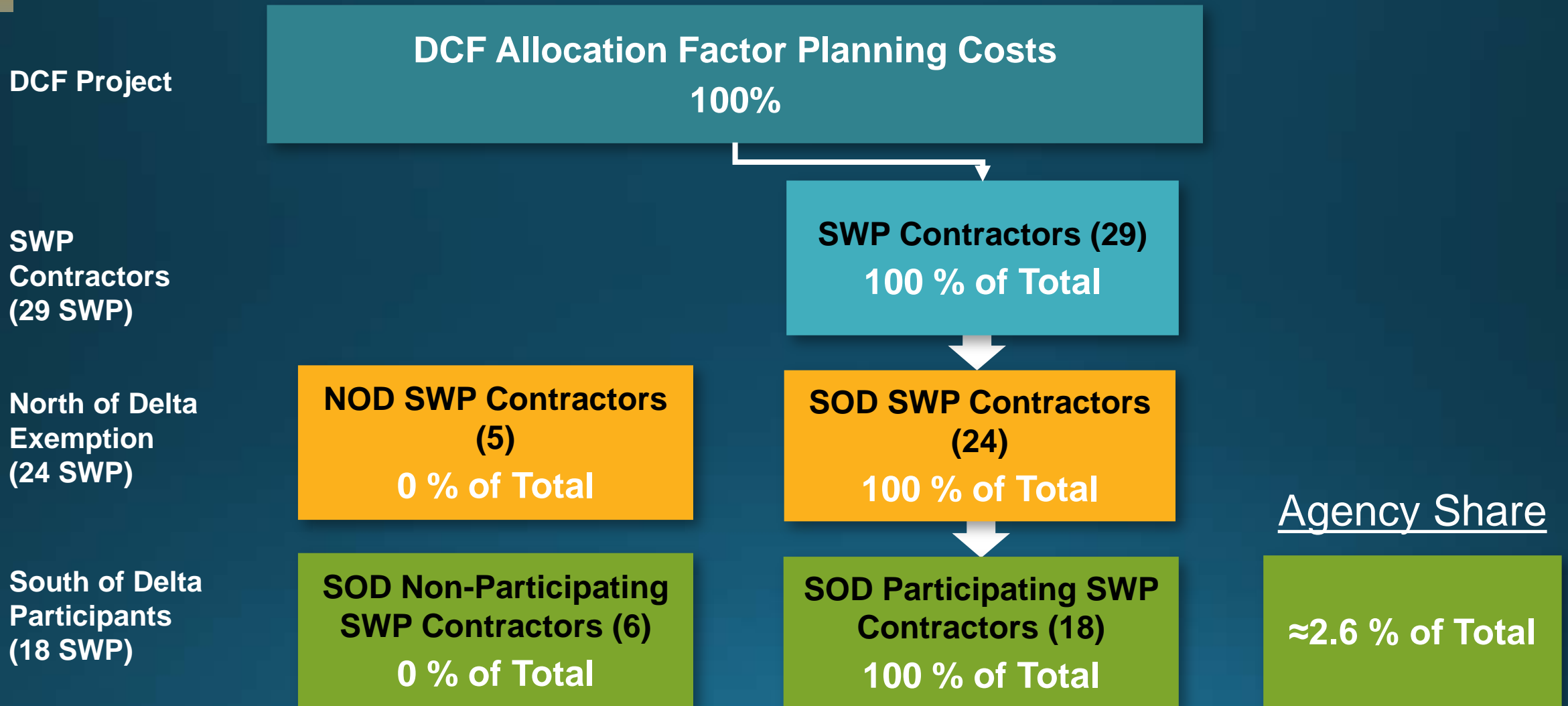
35% of construction costs

Contingency and Soft Cost Variance

Category	DCA Estimate (\$ Billions)	% of Baseline Construction Cost	Industry Range ⁴ (% of Baseline Construction Cost)	Applied Industry Range (\$ Billions)	Variance from Industry Range (\$ Billions)
Baseline Construction	8.37 ¹	100	100	8.37	-
Contingency	3.71 ²	44	10 to 30	0.84 to 2.51	1.20 to 2.87
Program Management	0.42	5	6	0.50	(.08)
Design & CM	2.42	29	10 to 15	0.83 to 1.26	1.16 to 1.59
Subtotal for Variance³	14.92	178	126 to 151	10.55 to 12.64	2.28 to 4.37
DCO oversight, mitigation, land acquisition	.98	n/a	n/a	n/a	n/a
Total Project	15.9	n/a	n/a	n/a	n/a

1. This removes \$354 M from the DCA construction costs since those were line item risk mitigation contingencies.
2. This adds \$354 M to the DCA stated contingency of 3.3 to include risk mitigation contingencies.
3. Does not include DCO oversight, mitigation, land acquisition, capital costs, and O&M costs.
4. Based on level of detail provided in DCA documents and estimate

DCF Allocation Factor (%) – Planning Costs



Agreements

Agreements for Future Board Consideration

1. Agreement in Principle (AIP) for the SWP Delta Conveyance Contract Amendment
 - Agency's DCF Participation Factor $\approx 2.6\%$
2. Funding Agreement for DCF Planning Costs
3. Delta Conveyance Design and Construction Authority (DCA) JPA Agreement



Agreement in Principle (AIP) for SWP Delta Conveyance Contract Amendment

Delta Conveyance AIP

- Option to opt-out of DCF costs and benefits
- Option to assume additional DCF costs and benefits
- Effective Date will be on or after the contract extension billing transition date
- Costs and DCF water supply are allocated based on the DCF Participation Table
- Adopt “Pay-As-You-Go” Billing Provisions for both the Capital and Minimum Components

Funding Agreements

Key Provisions

- Funding Agreements for 385 million for planning costs from 2021-2024
- Authorizes contributed funds to be spent on DCA invoices
- Provides flexibility to provide additional funds without amendment to the Agreement
- Does not allow funds to be spent to reimburse DWR previously contributed funds

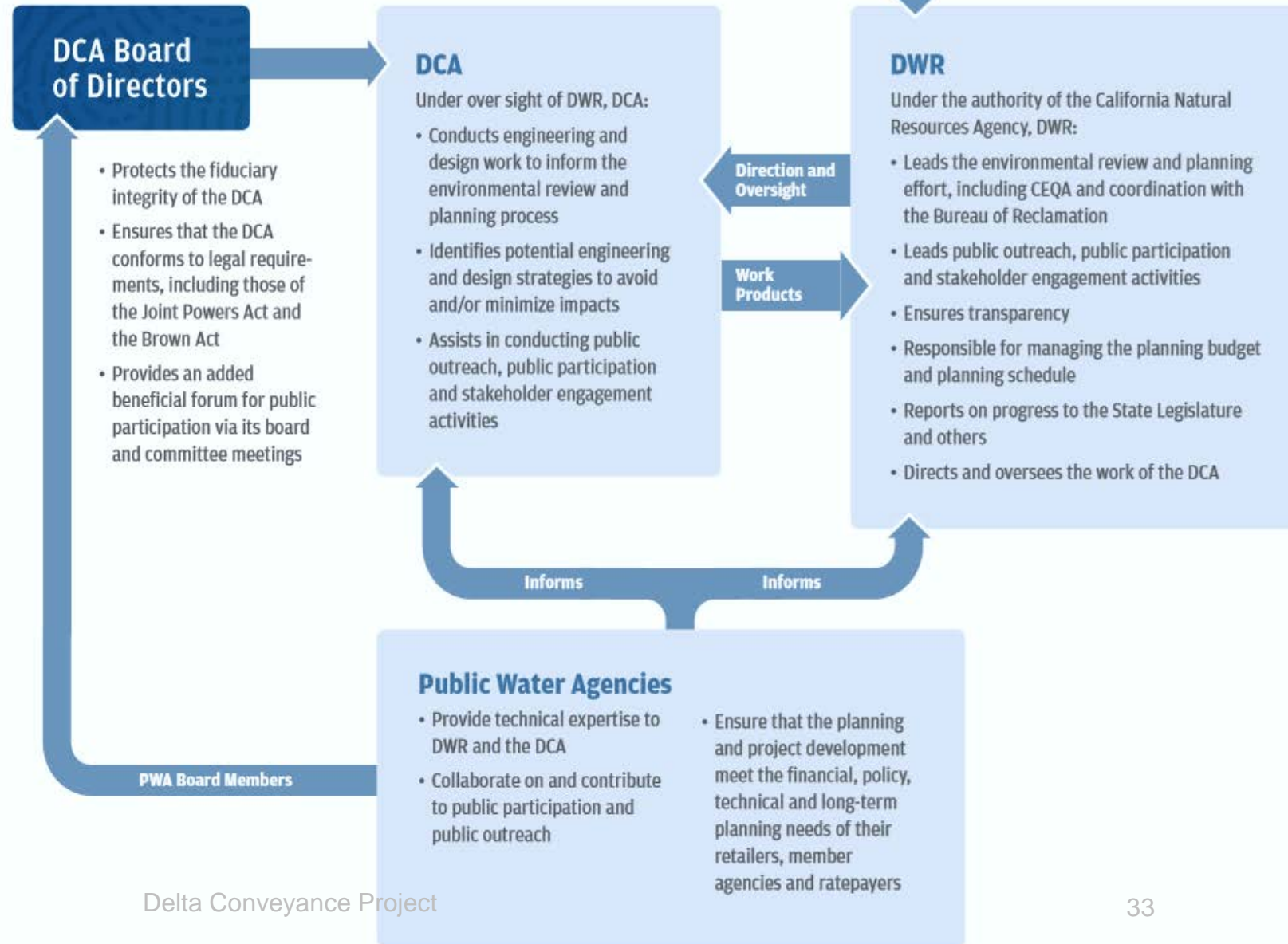
Options:

- Statement of Charges Pay Go or Lump Sump Payments
- Authorization for entire share of 385 million in planning costs or only first two years
- Will allow for additional funds to be contributed upon showing of Board authorization

DCA Governance Changes

Delta Conveyance Design and Construction Authority (DCA)

Roles & Responsibilities for Delta Conveyance



DCA Governance

- Status – Amendment still under discussion
- Similar to SWC organization governance
 - Board of Directors representing various classes
 - Single Agency Representation – MWDSC, KCWA, SCVWD
 - Multi Agency Representation –
 - South Bay
 - East Branch (2 representatives)
 - West Branch and others
 - Provision for possible CVP participation
 - Supper majority provisions

Committee Member Questions / Comments

- Identify additional information for next months consideration of topic