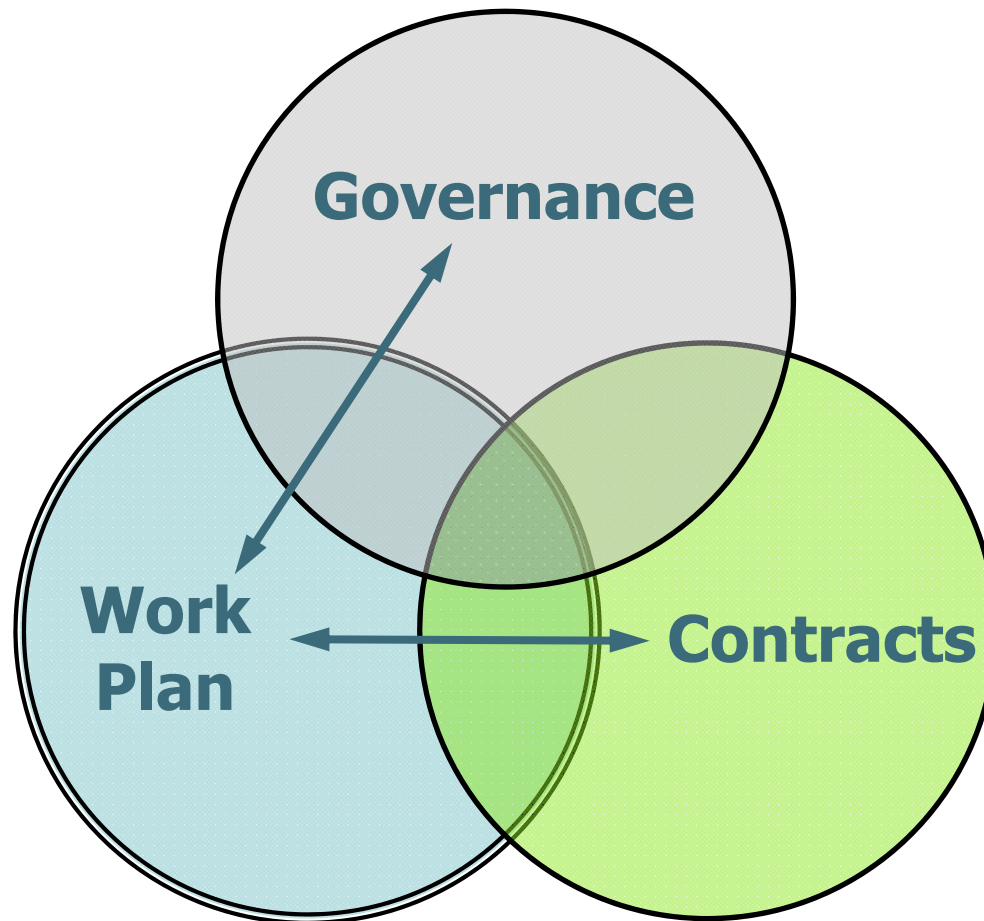


SITES RESERVOIR PROJECT: *Authority, Special Workshop*

December 5, 2016



Workshop Focus: Amended Work Plan



Governance

- **Authority:** **from 10 to 13**

Representation from all major watersheds and components of water management in the Sacramento Valley

- **Reservoir Committee:** **from 9 to 28**

Sac Valley interests maintain a majority of all major water factors

- Water Amount (class 1 + class 2)
- Sac Valley = 56.1%



Water Commission - Update

- **Draft Regulations - Nov 21 version**

Primary Areas of concern:

1. Overly prescriptive (climate change)
2. Environmental mitigation & compliance obligations
3. Early funding to complete environmental documentation & permits
4. Schedule – potential exists for delays

- **Public comments due Dec 7**

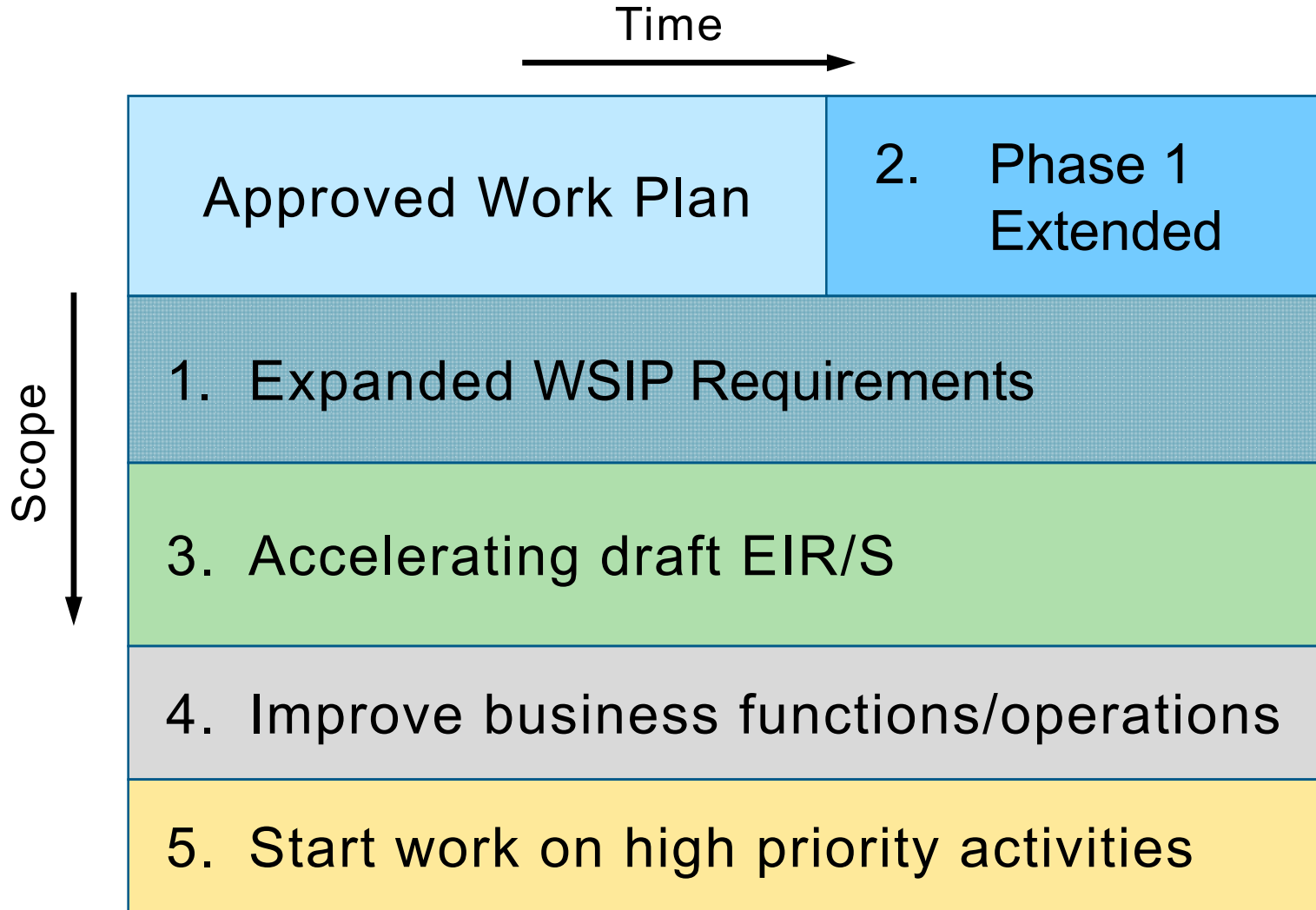
- **Water Commission approve Regulations Dec 14**



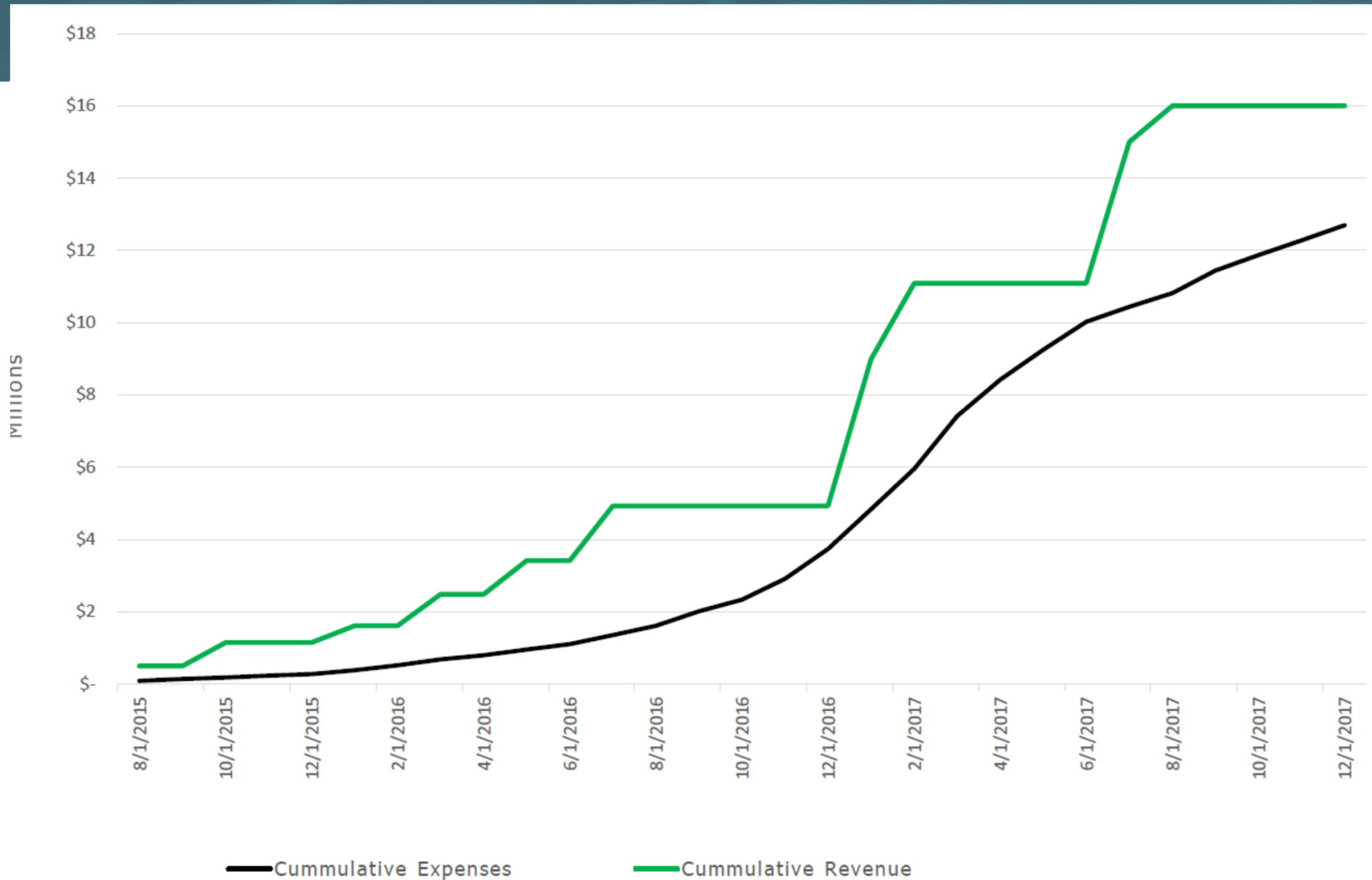
Process Management

- **Authority delegates** certain responsibilities to Reservoir Committee.
- **Authority is the legal entity** to enter into contracts
- **Work plan approval does *not* supplant the policy decisions**
- **Contingency is included** in the work plan & budgets
- **Budget is revised first** if revenue is less than expenses
- **The work is prioritized:**
 1. WSIP Application
 2. Extending Phase 1
 3. Accelerating EIR/S
 4. Business functions/operations
 5. High-priority activities
- **Contracts include 30-day stop work provisions**

Amended Phase 1 Work Plan



Amended Work Plan: Reservoir Comm. Cash Flow



Stakeholder Support – Bureau of Reclamation

- + Project is no longer in conflict with other USBR priorities
- + Commitment through congressional authorization period (Nov 2017)
- + Agreement on NEPA/CEQA ‘refresh’
- + Feasibility Study is on schedule
- + Integrated operations - continued discussions
- ? Recognition of non-federal project to use non-federal processes

Stakeholder Support – Department

- + Participation in Authority Meetings
- + CEQA Lead Agency Status
- ? Water Rights
- + Staff Support

Competitive Bidding

- Prior (Dec 2015) commitment to implement for Phase 2 work
- Phase 1 work plan balances this need with WSIP schedule
- Current Limitations has affected our ability to implement sooner

Develop a procurement strategy & plan

Develop Policies & Procedures

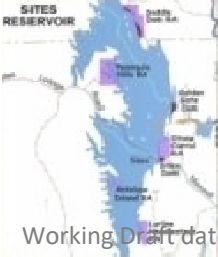
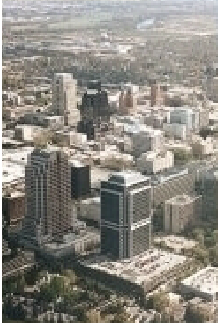
1. WSIP APPLICATION REQUIREMENTS

December 5, 2016



WSIP Regulations Application Technical Requirements

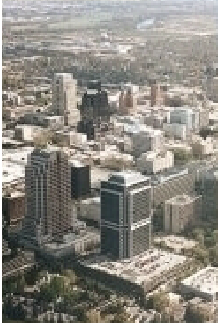
SITES PROJECT
AUTHORITY



- Detailed Operations Plan
- Substantiate and quantify all claimed physical benefits
- Demonstrate how the project improves operations of the state water system
- Calculate physical changes and resulting benefits as the difference between the with-project and without-project
- **Ecosystem Priorities Application Worksheet** – quantify benefits by spatial and temporal scale by water year type and species
- **Water Quality Priority Application Tables** – quantify benefits by spatial and temporal scale during the year (days or months)
- Extreme Climate Change/Sources of uncertainty analysis
 - 2030 and 2070 conditions

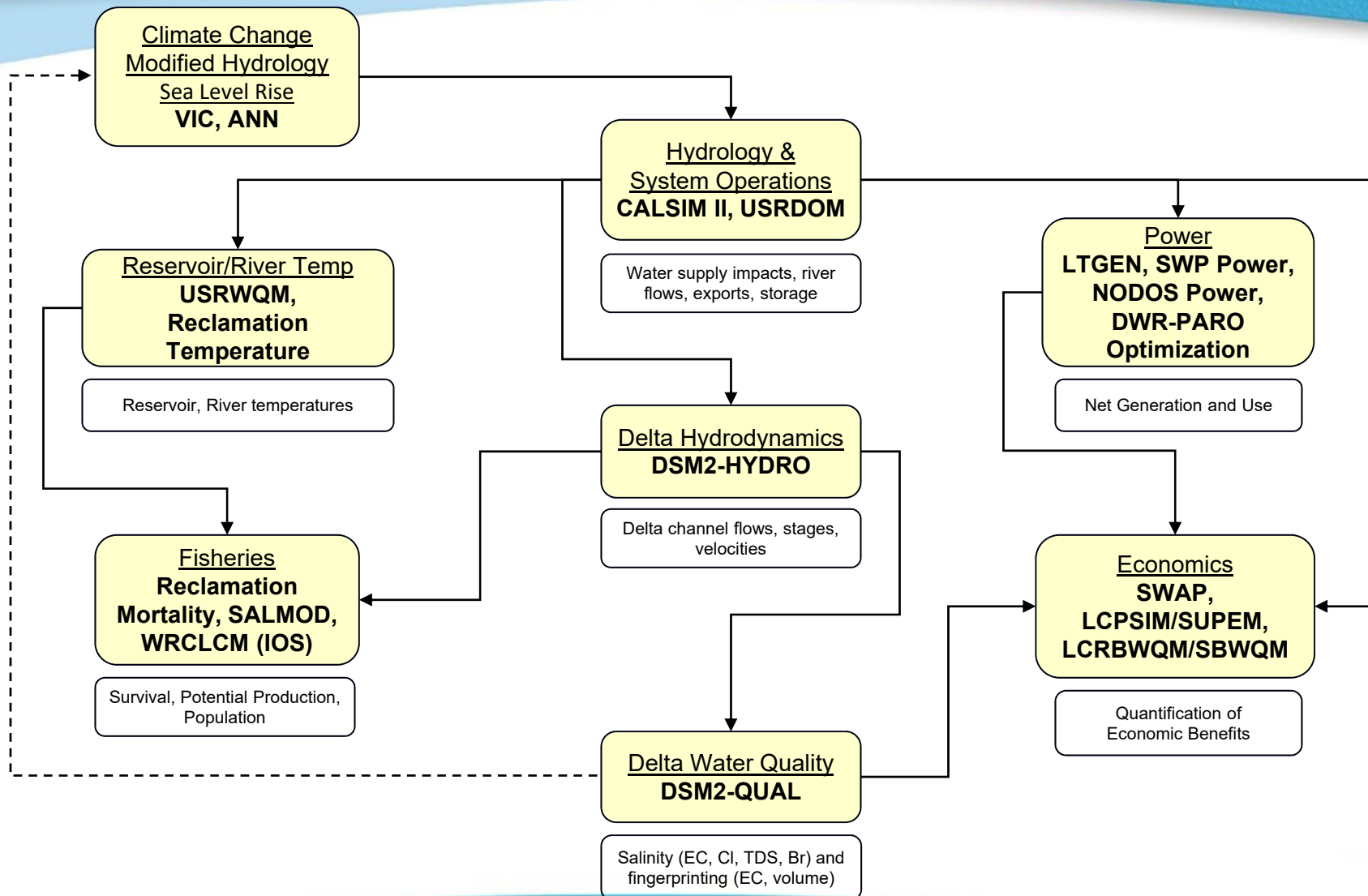
CalSim II Model

SITES PROJECT
AUTHORITY



- CalSim II is a planning model developed by DWR and USBR to simulate CVP/SWP operational scenarios
- CalSim II includes:
 - All major CVP/SWP storage, conveyance, and pumping facilities
 - System demands including all water rights and CVP/SWP contracts
 - Coordinated Operations Agreement (COA)
 - Various operating conditions (e.g. Level of Development, Climate Change, Facilities, Regulations...)
 - Includes representation of biological opinions and Delta requirements
 - Monthly time step
- Best available tool for long-term planning of the SWP/CVP system
- CalSim II provides output results to other models needed to quantify physical benefits (water temperature etc.)

Modeling Analytical Framework



AECOM Existing Scope of Work

Task	Description	Status
1	Kickoff Mtg	Complete
2	TRR Siting Study	Complete
3	Alternative Description	Complete
4	Mitigation Cost Tech Memo	Complete
5	Preliminary Benefit Cost Evaluation	Complete
6	Update Cost Estimate	Submitted Draft
7	Engineering Changes – Delevan, Roads, TRR	Submitted Draft
8	WSIP Application Feasibility Analysis	Ongoing
9	Agency and Landowner Mtgs	Spent
10	Grid Interconnection Study	Submitted Draft
11	Risk Workshop (1-Day)	Pending NTP
12	Financial Feasibility Support for WSIP Application	Pending NTP
13	Colusa Basin Drain Study	Complete

WSIP Application Scoring (Section 6009 of Proposed Regulation)

Component	Score
Public Benefit Ratio	33
Relative Environmental Value	27
Resiliency	25
Implementation Risk	15
Total	100

Note: Early funding for Phase 2 (environmental document and permit support) based on Implementation Risk score (7 out of 10)

WSIP Funding Timeline

PHASE 1:
Now-January 2017
CWC WSIP APPLICATION

PHASE 2:
2018-2020
FINAL EIR/S AND
PRELIMINARY
ENGINEERING

PHASE 3:
2020-2022
PERMITS, ROW, AND
FINAL DESIGN

PHASE 4:
2022-2032
CONSTRUCTION
AND CLOSE-OUT

PHASE 5:
2032
TRANSFER TO
OPS



WSIP Funding Timeline

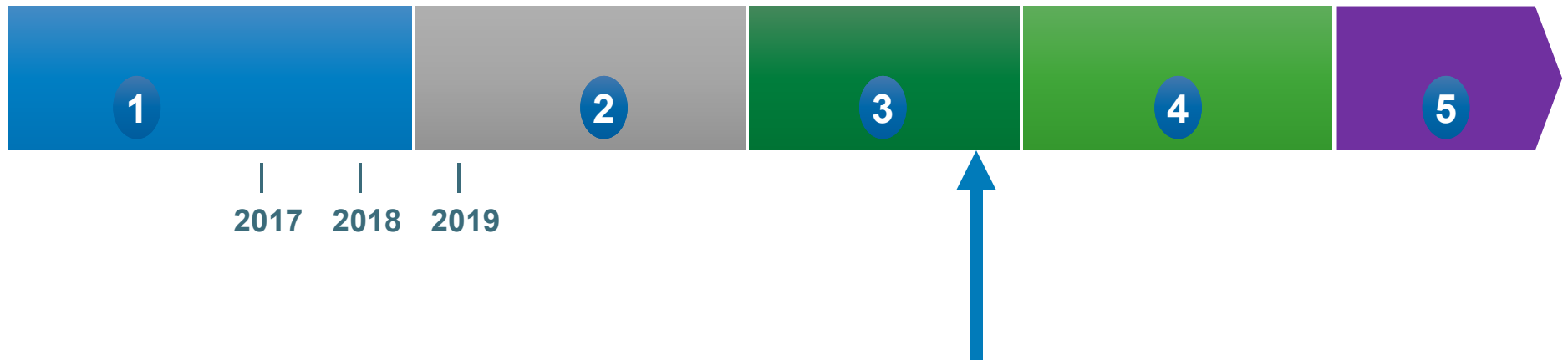
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OPS



Full funding amount encumbered when approvals, certifications, and agreements obtained - Section 6013(c)(5)

WSIP Funding Timeline

PHASE 1:
Now-January 2017
CWC WSIP APPLICATION

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2032
TRANSFER TO
OPS



Early funding of up to 5% of eligible amount for permits and environmental documentation - Section 6013(e)(4). Capped at \$135M for all projects.

Requires 7 points for implementation risk – Section 6010 (c)(5)

WSIP Application Scoring (Section 6009 of Proposed Regulation)

Component	Score
Public Benefit Ratio	33
Relative Environmental Value	27
Resiliency	25
Implementation Risk	15
Total	100



Public Benefit Ratio (33 Points)

$$\begin{array}{c} \text{Return on} \\ \text{Public} \\ \text{Investment} \end{array} = \frac{\text{Public Benefits}}{\text{Funding Request}}$$

Will also consider non-monetized benefits

- Drinking Water for Disadvantaged Communities
- Ability to support SGMA compliance



Relative Environmental Values (27 Points)

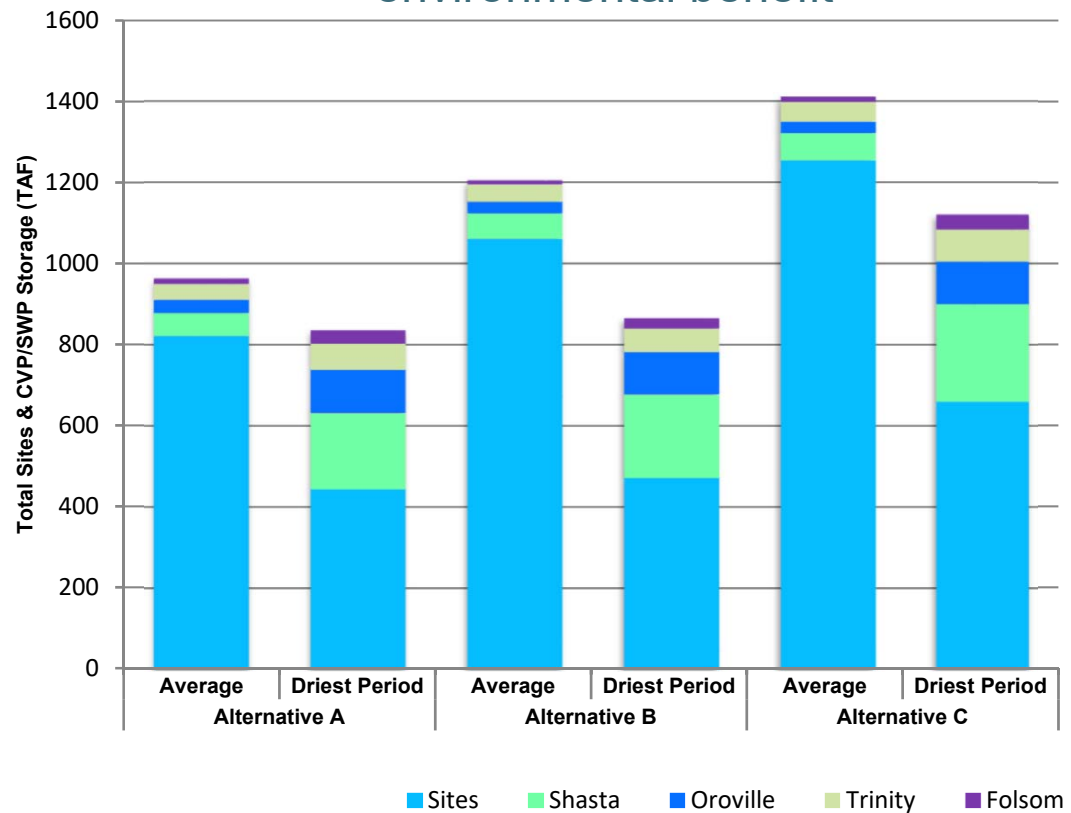
- Ecosystem Improvement - CDFW (303 questions)
- Water Quality - SWRCB (129 questions)



Resiliency (25 Points)

“Ability of a project to provide public benefits by accounting for flexibility and integration into the State water system and response to sources of uncertainty”

System-wide storage increase – environmental benefit



Implementation Risk (15 Points)

- Technical Feasibility
- Financial Feasibility
- Economic Feasibility
- Environmental Feasibility

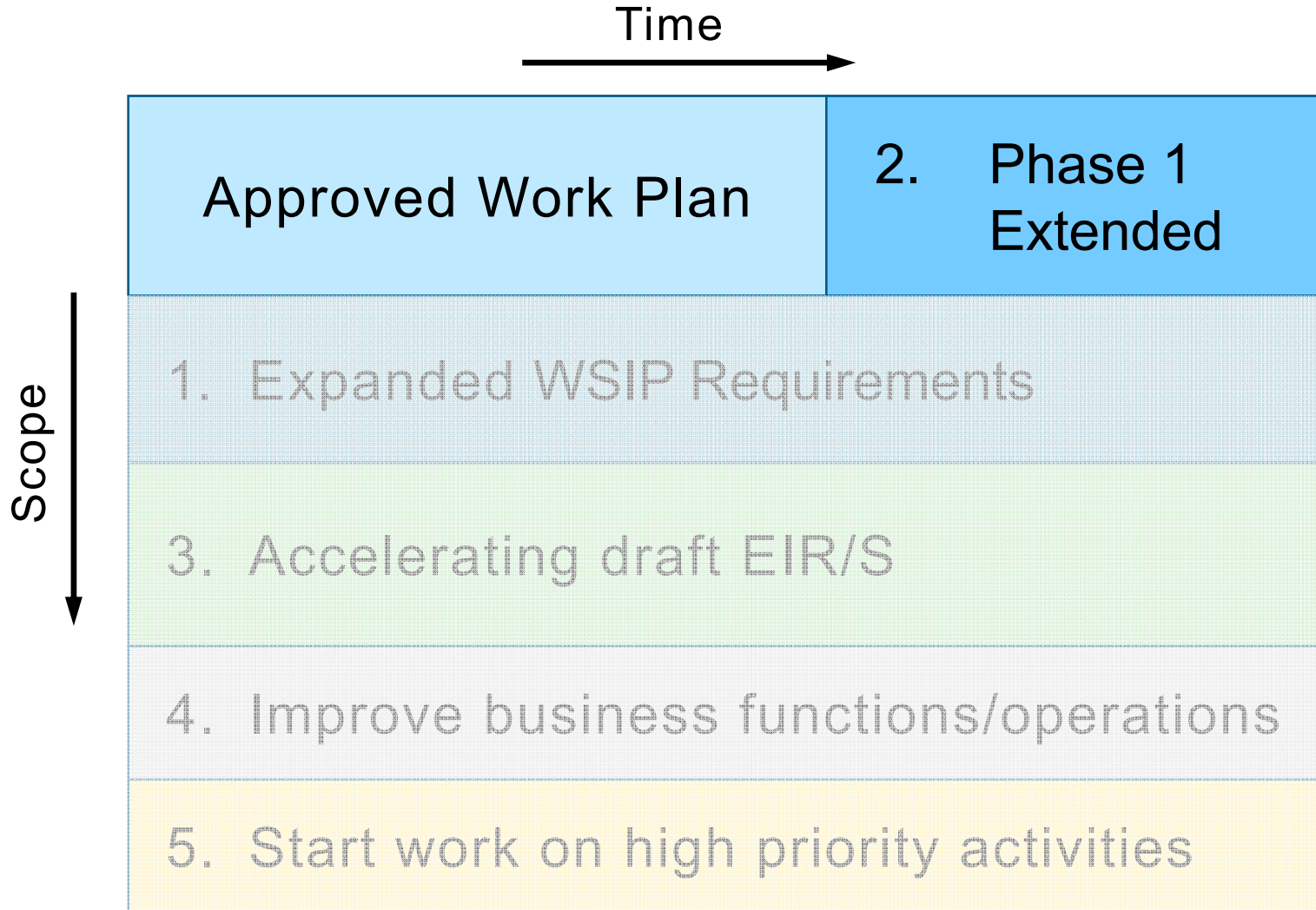


2. EXTENDING PHASE 1

December 5, 2016



Amended Work Plan: 2. Phase 1 Time Extension



Amended Work Plan: 2. Phase 1 Time Extension

Expense (-) Expense
 Category (Multiple Items)
 Function (All)
 Topic Add Time
 Name (All)

Working Draft: 11/14/2016



Grouping	Cost Center	File Number	WIP	Description	Values				
					Sum of Total 2015	Sum of Total 2016	Sum of Total 2017	Sum of Total 2018	Sum of Phase 1 Total
Admin	Authority				\$ (41,092)	\$ (485,873)	\$ (548,404)	\$ (637,264)	\$ (1,712,633)
	Region				\$ (693)	\$ (21,032)	\$ (60,000)	\$ (40,000)	\$ (121,725)
Admin Total					\$ (41,785)	\$ (506,905)	\$ (608,404)	\$ (677,264)	\$ (1,834,358)
Reservoir	Water				\$ (116,475)	\$ (476,824)	\$ (1,154,503)	\$ (566,902)	\$ (2,314,703)
Reservoir Total					\$ (116,475)	\$ (476,824)	\$ (1,154,503)	\$ (566,902)	\$ (2,314,703)
Grand Total					\$ (158,261)	\$ (983,729)	\$ (1,762,907)	\$ (1,244,165)	\$ (4,149,062)

- Authority costs through Dec 2018
- Reservoir Committee costs through June 2018

3. ACCELERATING THE EIR/S

December 5, 2016

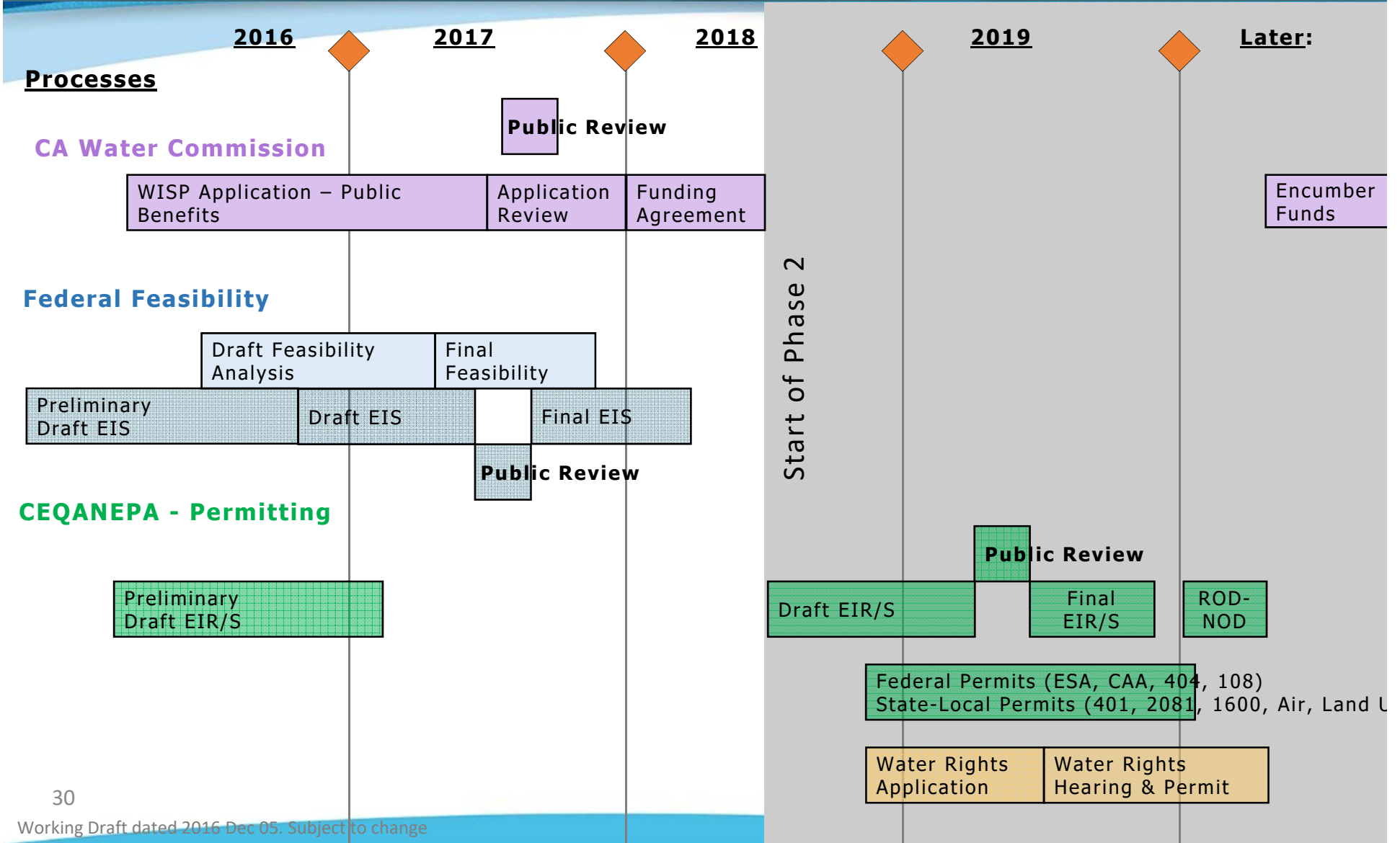


Environmental Analysis and Review

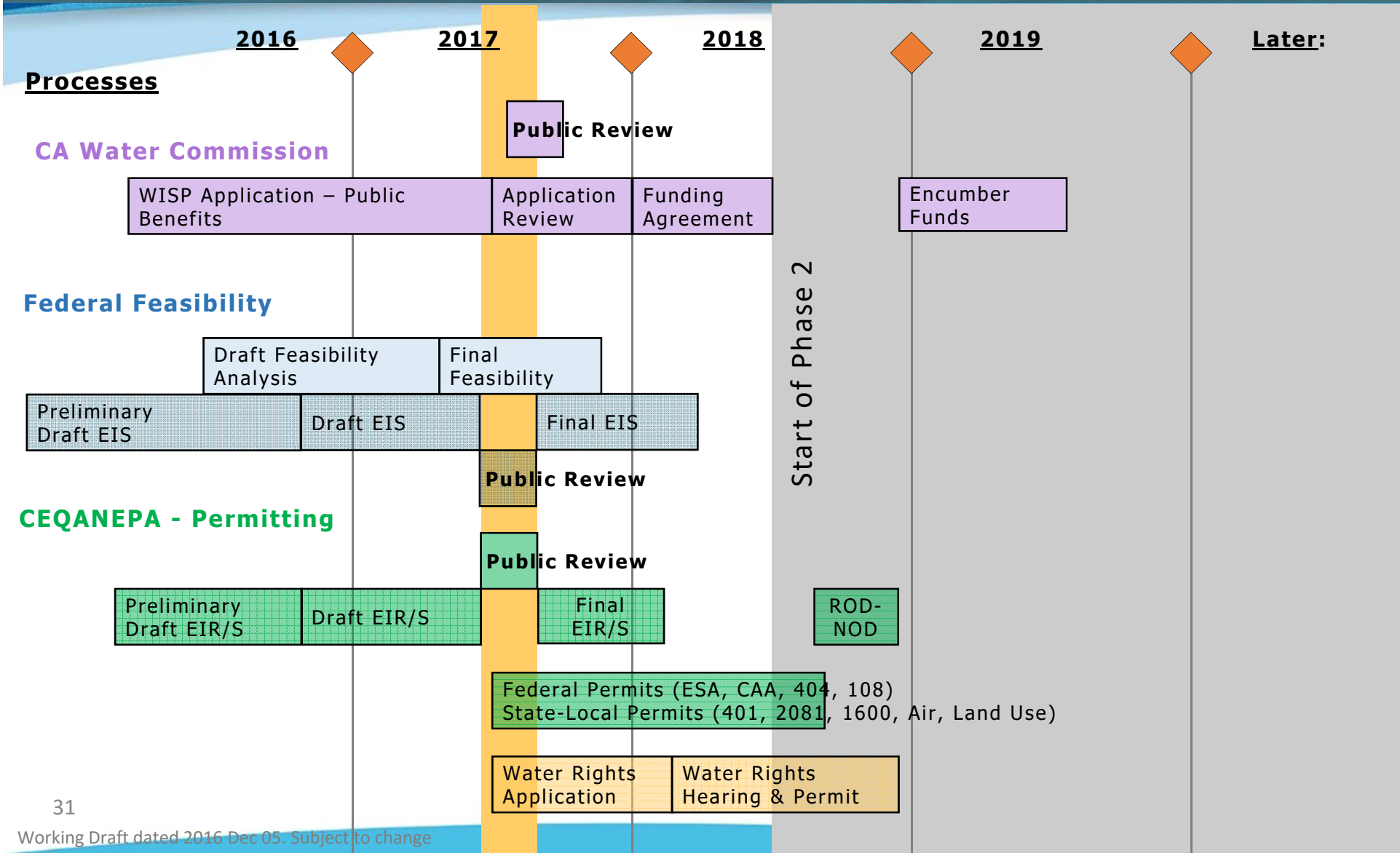
SITES PROJECT
AUTHORITY

- Overall Approach and Schedule
- Existing Scope and Schedule
- Propose Scope and Schedule
- Your participation

Schedule – Current Plan



Schedule – Proposed (accelerated) Plan



CH2M HILL Existing Scope

SITES PROJECT
AUTHORITY

Task	Description	Status
1	Feasibility Study Support	Complete
2	Confirm Analysis Approach/Baseline Assumptions	Complete
3	Modeling Support - Feasibility Study	Ongoing
4	Permit Risk Evaluation	Complete
5.1	Initial Reclamation/Agency Coordination	Complete
5.2	Continued Reclamation/Agency Coordination	Ongoing
6.1	Initial DWR Coordination	Complete
6.2	Continued DWR Coordination	Ongoing
7	1 st Draft Proposition EIR/EIS Doc Prep	Ongoing
8	Modeling Support - EIS/EIR	Complete
9	2 nd Draft Proposition 1 EIR/EIS	Pending NTP
10	Final Draft Proposition 1 EIR/EIS	Pending NTP
11	Public Meeting Assistance	Pending NTP

- DWR released “Preliminary Administrative Draft” EIR/EIS in 2013 (on DWR website) – funding limitations
- Authority assumed CEQA lead role
 - *revise preliminary EIR/EIS to include local alternative to support WSIP application (“publically available” draft – current scope)*
 - *DWR now a CEQA responsible agency*
- CWC recently released draft guidance on required assumptions incorporating climate change
 - *2030 and 2070 conditions*
 - *Extensive output/modeling required – needed for application and identification of benefits*

Why Revise EIR (and EIS) Now?

SITES PROJECT
AUTHORITY

- WSIP application scoring (up to 15 points) associated with “implementation risk” and feasibility
 - *Minimum score of 7 out of 10 required for funding to complete environmental document/permitting (Environmental Documents and Permits, Section 6010 (c)(5))*
- Consolidate/early receipt and response to comments (CWC/WSIP and public NEPA/CEQA)
 - *ONLY if draft is deemed sufficient by Authority to issue as public draft*
- Federal feasibility study schedule requires final study (including final EIS) by November 2017

Primary Required Revisions

SITES PROJECT
AUTHORITY

Document in various stages of completion when funding ended in 2013 – needed revisions:

- Update to account for changed conditions and recent NEPA/CEQA documents/regulatory changes
 - *2013 (and earlier)*
 - *Consistent with recent related documents approach (e.g. Long-Term Operations EIS)*
- Update base condition and cumulative impacts

Primary Required Revisions

SITES PROJECT
AUTHORITY

- Update biological mitigation requirements
 - *Confirm appropriate compensatory mitigation and ratios*
- Substantiate impacts (or lack of) and better “connect the dots”
 - *Aquatic Resources – tie to model results*
 - *Terrestrial*
 - *Groundwater*
 - *Water Quality*
 - *And associated appendices...*
- Update climate change and greenhouse gas discussion
 - *DWR and Reclamation approaches*
 - *Recommending to utilize WSIP results as much as possible and tie in existing alternatives*

Revised Scope/Approach

SITES PROJECT
AUTHORITY

Shift effort from developing/incorporating Authority preferred alternative (Alternative D) to revising/updating document

Key items:

- *Introduction, Approach, and Project Description chapters*
- *Alternatives screening*
- *Base case revisions (and justification)*
- *Impact justification and consistent rationale*
- *2015 (versus 2010) Calsim modeling*
- *Revision of appendices*
- *Response to Reclamation comments on 2013 preliminary EIR/EIS*
- *Additional Reclamation coordination*
- *CEQA lead agency support*

Mid-Late 2017 and 2018 Activities

SITES PROJECT
AUTHORITY

- Review of Public Comments/Develop Proposed Response Approach (Task 12)
 - *Review public and CWC comments and recommended path forward*
- Permits and Environmental Compliance Plan (Task 13)
 - *Overall compliance plan for all environmental approvals other than CEQA/NEPA*
 - *Initial agency coordination*

Authority Members Review

SITES PROJECT
AUTHORITY

- Goals and Objectives
- Project Description and Alternatives (Chapter 3)
 - *Released for review November 18 to managers group*
- Notice of Preparation release
- Notice of Availability release
- Review of EIR/EIS sections (major comments and key issues)
 - *Initial sections released for review October 10*
 - *Additional 14 sections released for review November 11*
 - *Remaining sections mid-February*
- Support of USBR process

4. IMPROVE BUSINESS FUNCTIONS

December 5, 2016



Amended Work Plan: 4. Business functions

Grouping	Cost Center	File Number	WIP	Description	Values				
					Sum of Total 2015	Sum of Total 2016	Sum of Total 2017	Sum of Total 2018	Sum of Phase 1 Total
Reservoir	Water	10	NEW	Ops Manager, Expenses	\$ -	\$ -	\$ (21,600)	\$ (10,800)	\$ (32,400)
				Ops Manager, Services	\$ -	\$ -	\$ (185,640)	\$ (123,760)	\$ (309,400)
				Ops Mgr Support Staff	\$ -	\$ -	\$ (124,950)	\$ (142,800)	\$ (267,750)
				Ops Project Administrator	\$ -	\$ -	\$ (271,320)	\$ (180,880)	\$ (452,200)
				Support Services (Monthly Reporting +)	\$ -	\$ -	\$ (164,368)	\$ (82,184)	\$ (246,552)
		10.6	Mod	Project Scheduler	\$ -	\$ -	\$ (117,810)	\$ (80,325)	\$ (198,135)
		10.7	Mod	Cost Analyst & Controls (Formerly Controls Manager)	\$ -	\$ -	\$ (101,745)	\$ (74,970)	\$ (176,715)
		11	Mod	Document Controls Manager + Support	\$ -	\$ -	\$ (160,650)	\$ (64,260)	\$ (224,910)
		30	NEW	EPC Manager, Expenses	\$ -	\$ -	\$ -	\$ (18,000)	\$ (18,000)
				EPC Manager, Services	\$ -	\$ -	\$ -	\$ (285,600)	\$ (285,600)
Water Total					\$ -	\$ -	\$ (1,148,083)	\$ (1,063,579)	\$ (2,211,662)
Reservoir Total					\$ -	\$ -	\$ (1,148,083)	\$ (1,063,579)	\$ (2,211,662)
Grand Total					\$ -	\$ -	\$ (1,148,083)	\$ (1,063,579)	\$ (2,211,662)

5. WORK ON HIGH PRIORITY ACTIVITIES

December 5, 2016



High Priority Items – NOP and Authorizations

- **Notice of Preparation**
- **Permits and Permit Planning**
- **Water Rights**



Notice of Preparation

What it Does -

- Establishes Sites JPA as the lead agency
- Defines roles for other California agencies
- Starts the Sites Project CEQA clock

Authority Actions –

- Internal Review
- Distribute to the CEQA Clearinghouse
- Prepare for a scoping meeting



NOP Status

Where we are -

- Prepared draft NOP for Authority consideration
- Obtained 'buy-in' from DWR
- Developed a go-forward plan with USBR
- Initiated planning for release

What's next –

- Authority approval
- Detailed planning (meeting and comments)
- NOP release



Federal Permits

- **Federal Endangered Species Act**
- **Clean Water Act (Sections 404 & 401)**
- **Rivers and Harbors Act (Section 408)**
- **National Historic Preservation Act (Section 106)**
- **Federal Power Act**
- **Clean Air Act**
- **American Indian Religious Freedom Act**



California Permits/Authorization

- **CDFW Incidental Take: Endangered Species Act (CESA – Sect 2081)**
- **Streambed Alteration: Fish and Game Code (Section 1601- 1603)**
- **Encroachment Permit: Central Valley Flood Protection Board**
- **Best Management Practices: Glenn & Colusa counties pollution control districts**
- **Safety of Dams: DWR**
- **Water Rights: SWRCB**



Planning

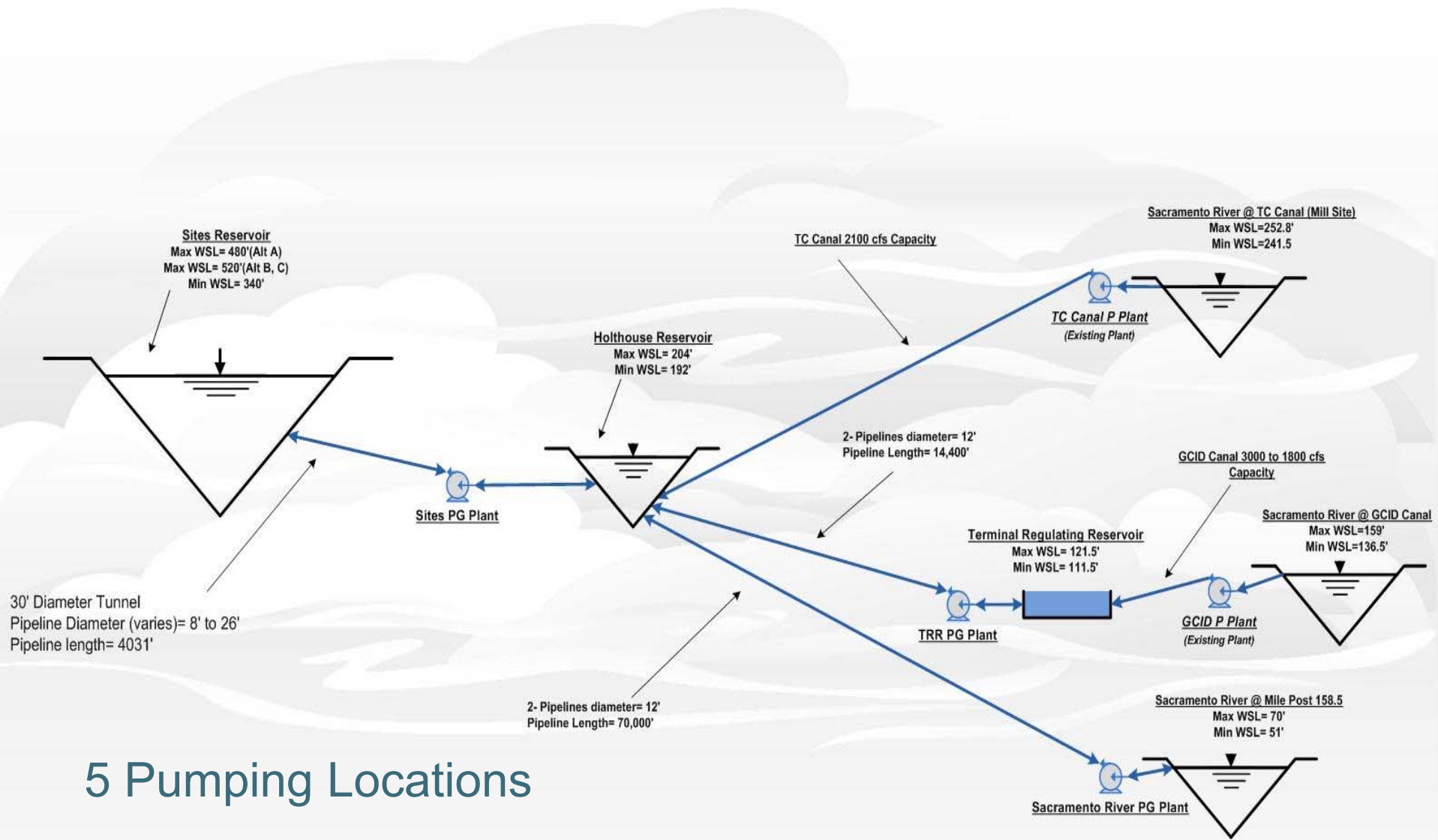
- **Strategy and issue development**
- **Initial discussions**
 - **SWRCB staff re: Water Rights**
 - **CDFW: CESA and Section 1602**
 - **USFWS/NMFS: Federal ESA**
 - **COE: 404 permit**
 - **RWQCB: 401 Certification**
 - **Tribes: AB52 and government-to-government consultation**

Previous Studies

Study	Author	Conclusions
Power Planning Study	DWR	<ul style="list-style-type: none">• Pumpback better utilizes excess capacities of system• 30-yr NPV of \$23M
NODOS Project Benefits Study	Energy Exemplar and Pinnacle Consulting	<ul style="list-style-type: none">• BC ratio for pumpback facilities is 1.8

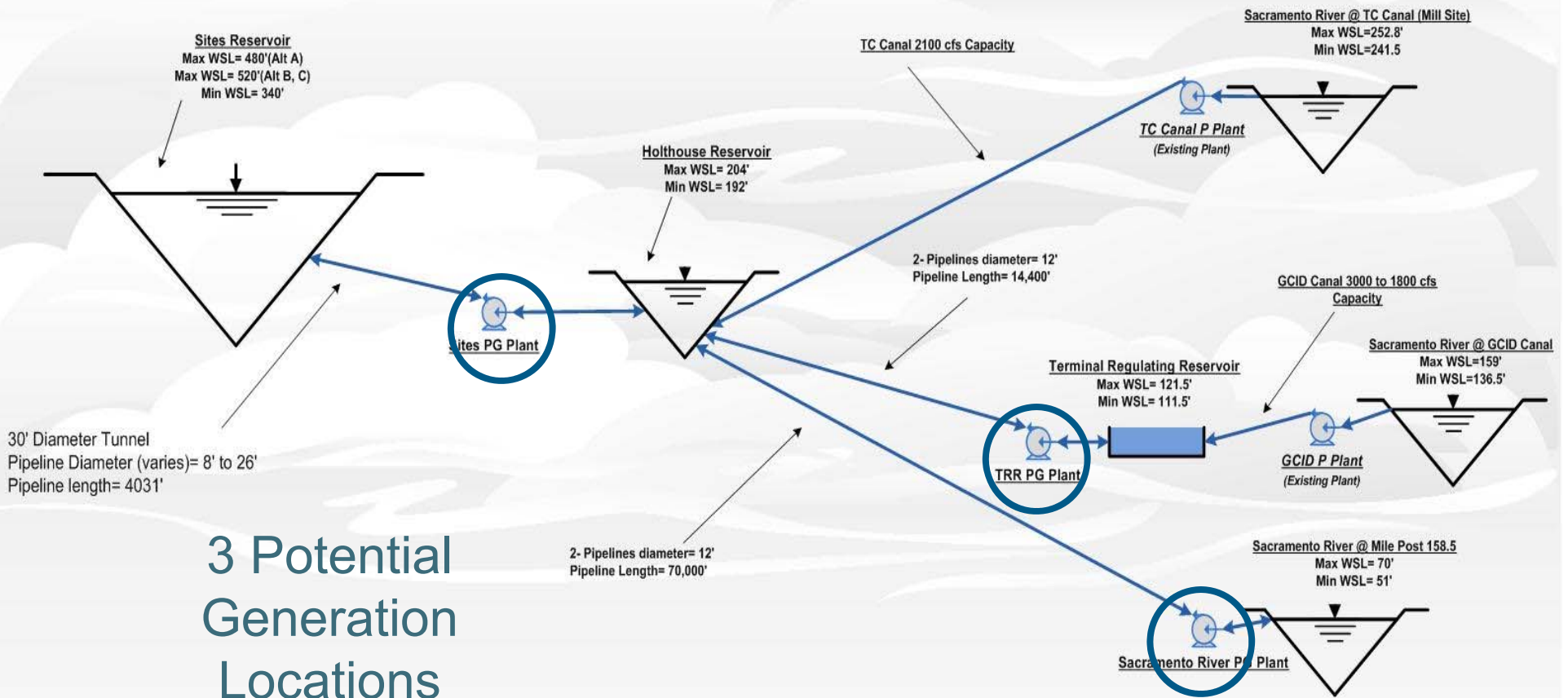


Pumping and Power Generation – Pumping Mode



5 Pumping Locations

Pumping and Power Generation – Generation Mode



3 Potential Generation Locations

Pumping Cost/Generation Revenue

Operation	Annual Cost/Revenue
Pumping Cost	-\$14,733,000
Generation on Release	\$13,311,000
Pumpback Generation	\$2,795,000
Power Cost Savings (Optimized)	\$1,844,000
Total	\$4,639,000

Source: DWR, Power Planning Study, 2013

Energy Exemplar/Pinnacle Study showed benefits of \$9M/yr including ancillary benefits

Proposed Hydropower Activities – Interconnection Studies

- Initial Grid Interconnection Study (Pumping and Generation) for Holthouse (PG&E) - \$100,000
- Initial Grid Interconnection Study (Pumping and Generation) for Delevan Intake (WAPA) - \$100,000
- Updated Grid Interconnection Study for Holthouse (WAPA) - \$100,000



Proposed Hydropower Activities – Coordination (\$240K)

- Develop scope and coordinate interconnection studies
- Evaluate interconnection study results and develop recommendation
- Perform demand analysis
- Evaluate ownership options and provide recommendation
- Develop FERC/LPP strategy

Could delay start of construction (increase duration of Phase 2) by 6 to 12 months if a power provider hasn't been finalized



Proposed Hydropower Activities – File with FERC

- Budget includes \$60K should the Authority decide to file on power generation rights with FERC

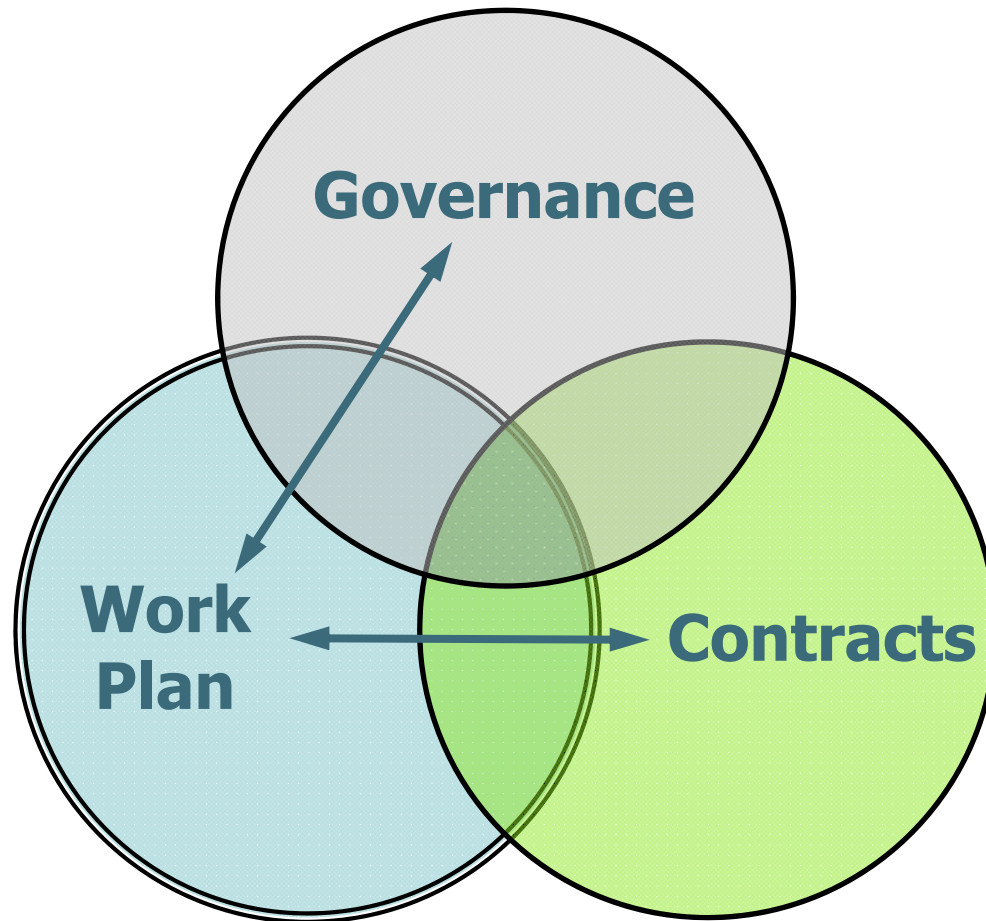


RECAP: AMENDED WORK PLAN & BUDGETS

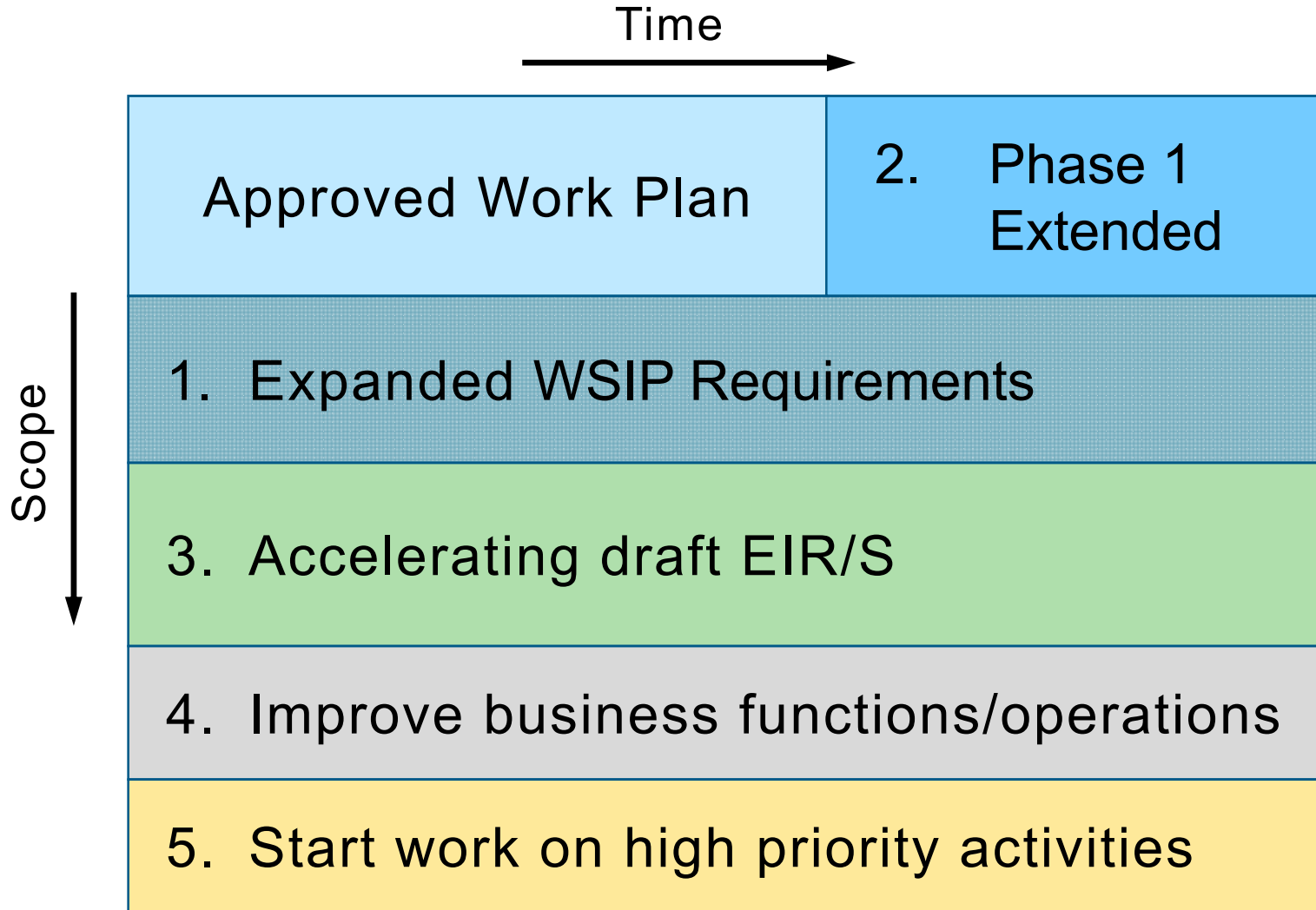
December 5, 2016



Workshop Recap:



Amended Phase 1 Work Plan



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