

# Immediate and Long-term Program Support Services

Proposed Sites Reservoir

Tehama-Colusa  
Canal

Glenn-Colusa  
Irrigation District  
Canal

Proposed  
Holthouse  
Reservoir

Proposed  
Terminal Regulating  
Reservoir

# Topics

- A. Program vs. Project Management
- B. Program Delivery Needs
- C. Near-term Program Support Needs
- D. Avoiding Conflict of Interest
- E. Next Steps

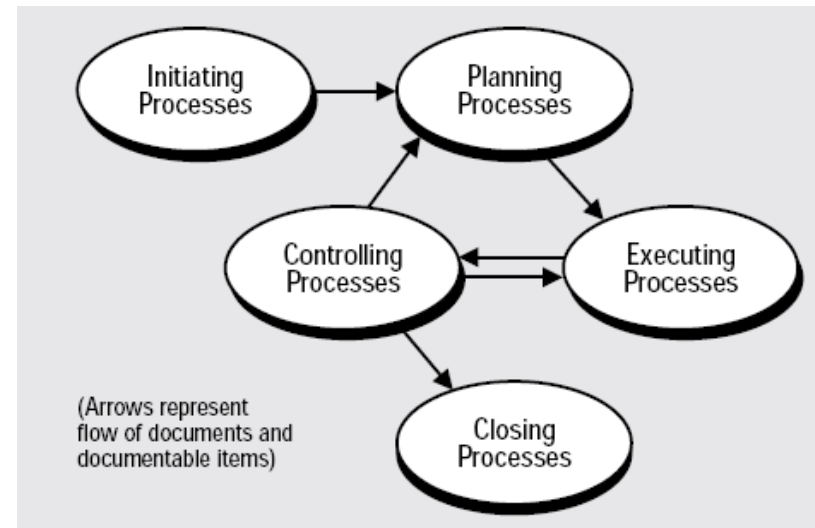
# A. Program vs. Project Management: Differences

## Programs:

1. Ongoing w/ multiple delivery packages & external stakeholders
  - Involves long term strategic planning
2. Tied to the financial calendar
3. Program Management is governance intensive
  - Disagreements will occur
4. Greater financial management responsibilities
  - Manage revenue in addition to costs
5. Utilize change management process

## Projects:

1. Focuses on 5 key processes



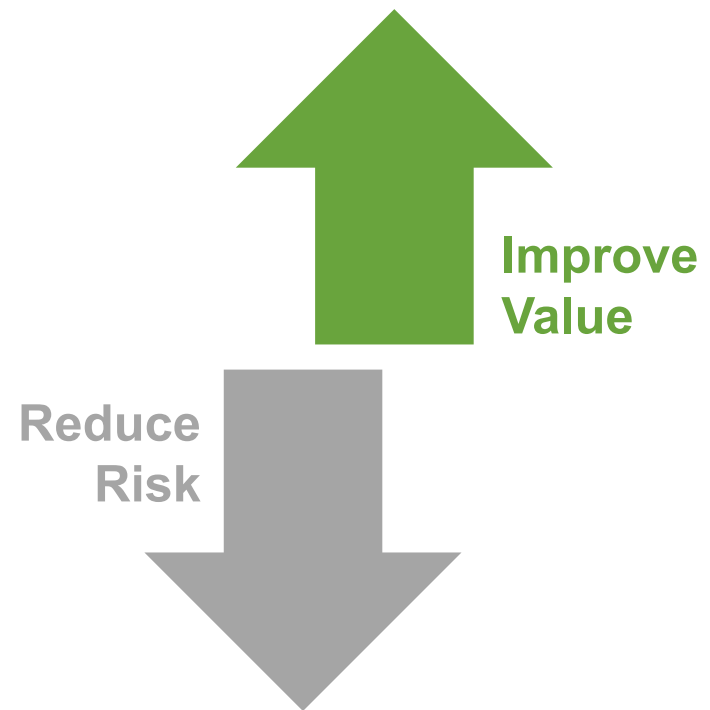
2. Focus on key management areas:

|                 |          |
|-----------------|----------|
| Integration     | Scope    |
| Communications  | Schedule |
| Human resources | Cost     |
| Procurement     | Quality  |
|                 | Risks    |

# Sites Reservoir & Program Management

The coordinated completion of discrete delivery packages

That creates a culture of repeatable success



## B. Program Delivery Needs:

### 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:

*2022-2029*

CONSTRUCTION  
AND CLOSE-OUT

### PHASE 5:

*2029*

TRANSFER TO  
OPS



# Services Needed to Deliver Sites Reservoir

- Preliminary Engineering/Conceptual Design
- Environmental/Permitting Services
- Financing Services
- Stakeholder Engagement
- Public Outreach
- Final Design
- Procurement
- Contracts Administration
- Construction
- Commissioning and Startup

## Discrete Delivery Packages:

1. Main Dams, Saddle Dams, Holthouse Res., Tunnel and I/O
2. Sites Pump/Gen Station/ Switchyard
3. TRR, Pump Station, and Switchyard
4. Western Pipelines (TRR and Delevan Pipelines West of I-5)
5. Eastern Pipelines (Delevan Pipelines East of I-5)
6. Delevan Intake Facility
7. Roads and Bridge
8. Substations and Transmission Lines
9. Recreation Areas

# Contract Packaging: Initial Assessment

| Services Required  |                       |                       |                |               |               |
|--|-----------------------|-----------------------|----------------|---------------|---------------|
|  | Professional Services |                       |                |               | Construction  |
|  | Program Management    | Env./Permit. Services | Project Design | Project CM    |               |
| Planning and concept-level Engineering   |                       | Awarded               | Awarded        |               |               |
| Outreach & Engagement  | Awarded               |                       |                | ✓             |               |
| Program Management Support Services  | ✓                     |                       |                | ✓             |               |
| Through Preliminary Engineering  | ✓                     |                       | ✓ ✓            |               |               |
| Geotechnical investigations  | ✓                     |                       | ✓              |               |               |
| Stakeholder and Landowner Coordination   | ✓                     |                       |                |               |               |
| Environmental Services (incl. Biological Surveys, Cultural Resources Studies and Monitoring, and Permits and Mitigation)       |                       | ✓ ✓ ✓                 |                |               |               |
| Real Estate and ROW Acquisitions   | ✓                     |                       |                |               |               |
| Dam, Saddle Dam, Holthouse Res., Tunnel and I/O (design including Geot. Investigations, Res. Clear and Grub and Quarry layout) |                       |                       | ✓ ✓            | ✓ ✓           | ✓ ✓ ✓         |
| Sites Pump/Gen Station and Switchyard  | ✓                     |                       | ✓              | ✓             | ✓             |
| Terminal Regulating Reservoir (TRR), Pump Station, and Switchyard  |                       |                       | ✓              | ✓             | ✓             |
| Pipelines (East & West)  |                       |                       | ✓              | ✓ ✓           | ✓ ✓           |
| Delevan Intake Facility  |                       |                       | ✓              | ✓             | ✓             |
| Bridge & Roads   |                       |                       | ✓              | ✓ ✓           | ✓ ✓           |
| Grid Interconnection Substation and Powerlines   |                       |                       | ✓              | ✓             | ✓ ✓           |
| Recreation Areas   |                       |                       | ✓              | ✓             | ✓             |
| <b>Number of Contracts</b>   | <b>3</b>              | <b>2 - 4</b>          | <b>12</b>      | <b>9 - 12</b> | <b>9 - 12</b> |
| ~ 4 dozen Concurrent & Large-sized Contracts   |                       |                       |                |               |               |



# Need to Address Multiple Challenges

- Multiple agencies approvals
- Concurrent design and construction
- Permitting complexities
- Need for compliance and transparency
- Need to control scope and budget creep
- Greater coordination and communication needs
- Broad range of technical issues
- Varying stakeholder expectations
- More complexity and risk
- External factors (e.g. market conditions at time of bid)

# A PM Delivery Strategy Addresses the Challenges

- Governance/oversight structure and communications protocol
- Consistent approach to permitting and regulatory compliance
- Collaboration and decision-making
- Depth and range of technical support
- Transparent and accountable performance reporting
- Consistent standards, procedures and management systems
  - Procurement
  - Document management
  - Cost and schedule control
  - Quality
  - Risk management
  - Safety compliance
  - Stakeholder engagement
  - Contract administration
  - Design management
  - Land acquisition
  - Construction management
  - Commissioning and turnover

# Program Management by Phase

| Program Management Work Elements       | Sites Reservoir Implementation Phases |  |  |  |                                |  |                                |  |                                |  |
|--|---------------------------------------|--|--|--|--------------------------------|--|--------------------------------|--|--------------------------------|--|
|  | 1                                     |  | 2  |  | 3                              |  | 4                              |  | 5                              |  |
|  | Proposition 1 Grant Application       |  | Preliminary Engineering and Certification of EIR/EIS |  | Final Design/ Pre-Construction |  | Construction and Commissioning |  | Project Start-Up and Operation |  |
| Program Planning                       |                                       |  |  |  |                                |  |                                |  |                                |  |
| Program Control                        |                                       |  |  |  |                                |  |                                |  |                                |  |
| Document Controls                      |                                       |  |  |  |                                |  |                                |  |                                |  |
| Stakeholder Management                 |                                       |  |  |  |                                |  |                                |  |                                |  |
| Preliminary Engineering                |                                       |  |  |  |                                |  |                                |  |                                |  |
| Quality Management                     |                                       |  |  |  |                                |  |                                |  |                                |  |
| Risk Management                        |                                       |  |  |  |                                |  |                                |  |                                |  |
| Permitting/Environmental Compliance    |                                       |  |  |  |                                |  |                                |  |                                |  |
| Land Acquisition                       |                                       |  |  |  |                                |  |                                |  |                                |  |
| Design Management                      |                                       |  |  |  |                                |  |                                |  |                                |  |
| Operations Strategy & Coordination     |                                       |  |  |  |                                |  |                                |  |                                |  |
| Change Management and Claims Avoidance |                                       |  |  |  |                                |  |                                |  |                                |  |
| Safety Management                      |                                       |  |  |  |                                |  |                                |  |                                |  |
| Partnering/Dispute Resolution          |                                       |  |  |  |                                |  |                                |  |                                |  |
| Value Engineering                      |                                       |  |  |  |                                |  |                                |  |                                |  |
| Construction Management                |                                       |  |  |  |                                |  |                                |  |                                |  |
| Commissioning                          |                                       |  |  |  |                                |  |                                |  |                                |  |
| Program Closeout                       |                                       |  |  |  |                                |  |                                |  |                                |  |

## C. Near-term Program Delivery Needs:

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*Now-January 2017*

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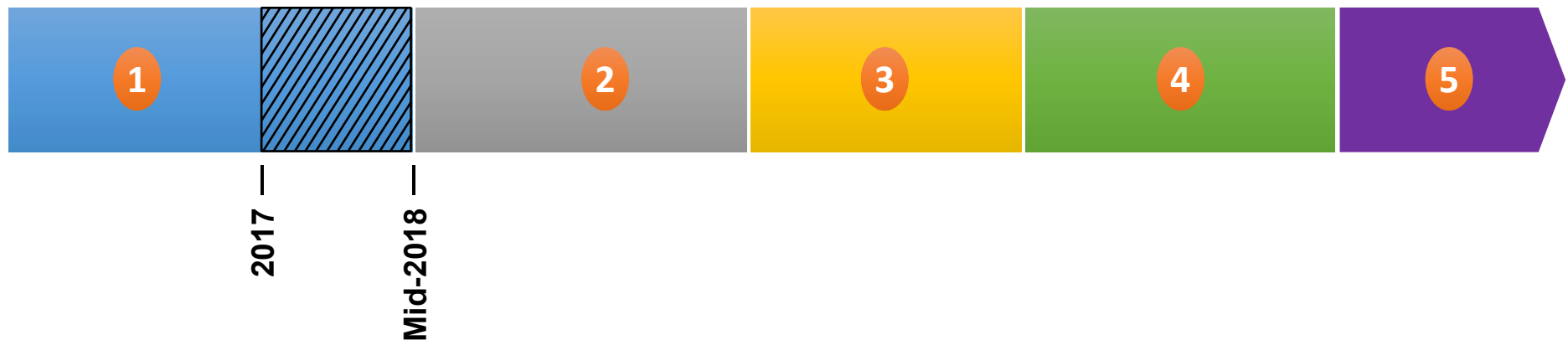
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CONSTRUCTION  
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TRANSFER TO  
OPS



# Immediate Needs

Purpose: To Establish a reliable framework for managing and delivering the program including:

- 1 Initial Management Support
- 2 Initial Program Support
- 3 Risk & Quality Management Plans
- 3 Contracting and Delivery Alternatives Evaluation

# 1

## Initial Management Support

### Operations Manager

- Stakeholder correspondence
- Cost share requirements
- State and local requirements
- Manage program documents and coordinate reviews
- Maintain program risk register

### Project Administrator

- Budget updates and financial reporting
- Document control support

## 2

# Initial Program Support

- Create Standards and Procedures
  - Business & office functions,
  - Cost and Schedule Management,
  - Document Management,
  - Procurements
- Manage schedule and budget and develop reporting formats
- Set up program document management system
- Provide inputs to Outreach & Engagement effort
- Support Board presentations and cashflow reporting

3

## Risk & Quality Management Plans

- Used by bonding agents to establish the financing costs
- Decision-making should use risk-adjusted costs and schedules

4

## Contracting and Delivery Alternatives Evaluation

- Contracting delivery strategies
- Pros and cons
- Ranking of alternatives

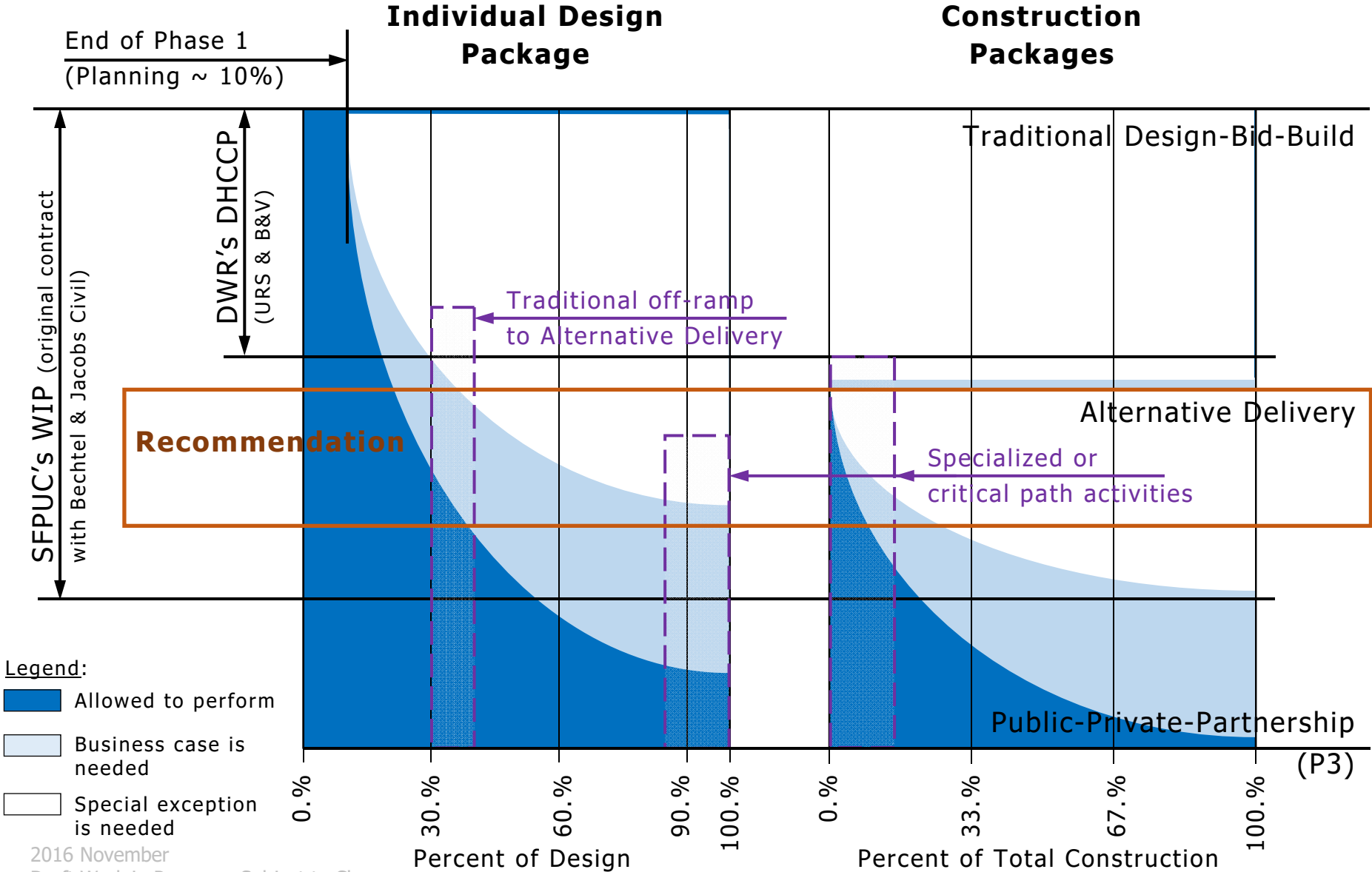


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# D. Benchmarking: PM Support Services & Design-Construct



## D. Avoiding Conflict of Interest

- Preserve all options
- Obtain best talent and resources through all project phases
- Encourage competition – especially w/ alternative delivery
- Ensure competitive pricing

## D. Avoiding Conflict of Interest

| Potential or Perceived Conflict of Interest Scenarios  |   |   |   |
|--|---|---|---|
| Scenario   |   | Potential Issue   | Remedy  |
| Description  | Benefit   |   |   |
| <p><b>Phase 1:</b> If the current Planning &amp; Engineering Services Team supports the near-term program management functions</p> | <ul style="list-style-type: none"> <li>Efficient transition of knowledge gained from studies to management</li> </ul>   | <p>Unequal Access to Information or Biased Ground Rules (subsequent procurements)</p> | <ul style="list-style-type: none"> <li>Deliverables made public and reviewed by an Independent Program Advisor</li> <li>Independent Program Advisor prepares SOW for PM Services</li> <li>Independent review of PM's budget and invoices</li> </ul> |
| <p><b>Subsequent Phases:</b> If the current team performs some delivery packages (e.g. dam or intake design)</p>                   | <ul style="list-style-type: none"> <li>Efficient creation of work packages for design or design build options</li> <li>Efficient knowledge transfer from studies to preliminary and final design</li> </ul> | <p>Impaired objectivity or perceived inherent bias (reviewing one's own work)</p>     | <ul style="list-style-type: none"> <li>Independent Design Reviews managed by Independent Program Advisor</li> <li>Independent Construction Managers to review work</li> <li>Independent Program Advisor audits PMs quality control</li> </ul>       |

## D. Steps to Address Conflict of Interest

- Develop a Conflict of Interest Management Plan
- Contractually - for clarity and protections both ways
- Periodic assessments or audits
- Use of independent, industry-based, advisory groups,
  - Consider using industry representation/participation (e.g. American Council of Engineering Companies or American Society of Civil Engineers)
- Use of independent advisors, retained by the Authority
  - Required for Dam Safety
  - Additional to address both technical and management topic areas.

JCW1

**Slide 21**

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**JCW1**

Modified after Nov 21 meeting to reinforce the concept that there are multiple industry groups who can support this aspect. AND, that the Authority will need to retain independent advisors

Jim Watson, 12/3/2016

## E. Next Steps

- Amended Work Plan includes estimated scopes of work for key functions
- Develop a detailed proposal with Reservoir Committee and Authority's input
- Obtain approval