Joint Meeting:	Authority's Finance & Budget Committee and Reservoir Committee's Finance & Economics Work Group	**2017 Sep 14**
Subject:	**Phase 1 Work Plan & Budget Review**	**1:30 – 3:00 PM**
Location:	Maxwell Office & Conference Call	

MEETING RECORD

Roll Call/Attendance:

☑	Chair: Davis WD	Jamie Traynham			
	Authority Committee:			Res. Comm Work Group:	
☑	Colusa Co WD	Joe Marsh	☐	Coachella V. WD	~~Robert Cheng~~
☑	OAWD	Jim Jones	☑	Colusa Co WD	Shelley Murphy
☐	TCCA	Jeff Sutton	☐	GCID	Thad Bettner
☐	_____	_____	☐	SCVWD	Cindy Kao/ Eric Leitterman
	Staff (Core Team):		(P)	SBVMWD	Doug Headrick
☑	General Manager	Jim Watson	☐	WR-M WSD	~~Rob Kunde~~
☑	EPP Manager	Rob Thomson	☐	Westside WD (P)	Allan Myers/ Dan Ruiz
☑	Business Manager	Kevin Spesert	☐	_____	_____

Purposes:

1. Update the Phase 1 work plan to reflect progress and to incorporate new information affecting the priority of the remaining work planned to be performed in Phase 1.

2 Update revenue projections for Phase 1 and provide a best-guess estimate of early funding to start Phase 2.

Agenda:

1. Overview

1.1 Key Assumptions

1.2 Budget Drivers

1.3 Budget Strategy (Risk Management):

1.4 Process used & Prioritization

1. Maintain basic business systems & functions
2. Application to the Water Commission
3. Environmental & Permitting
4. Operations/yield (includes rebalancing process)

5. Develop business systems (phase 1 & prep for Phase 2)
6. Community & landowner engagement
7. Phase 2 work plan and cost estimate
8. Develop program controls, procedures, and standards (prep for Phase 2)
9. Risk Management process & plan
10. Advance engineering & technical studies (includes cost estimates)
11. Rights of Way & real estate policies
12. Other activities

1.5 Proposed Next Steps

2. Phase 1 work plan & budget

2.1 Summary: FY2015 through FY2018

2.2 Comparison: Approved April 2017 vs. proposed reprioritization affecting FY2017 and FY2018

2.4 Status of Primary Consultant Contracts and Budgets

2.5 Sources of additional budget capacity

- Delayed start of work on business systems and program controls
- FY2017 Contingency
- MWD & Cal Water Service joining sooner

2.6 Proposed additional scopes of work

- WSIP Application
- Support Rebalancing process
- CEQA Supplemental Information

2.7 Proposed deferral of work into Phase 2

- Hydropower
- Grid Interconnection Studies

2.8 Discuss primary changes to Phase 1 work plan & budget

3.0 Next Steps

Adjourn

Proposed Work Plan & Budget

Purposes:

1. Update the Phase 1 work plan to reflect progress and to incorporate new information affecting the priority of the remaining work planned to be performed in Phase 1.

2. Update revenue projections for Phase 1 and provide a best-guess estimate of early funding to start Phase 2.

Key Assumptions:

1. Reservoir Committee's Phase 1 revenue is limited to $48.50/acre-ft. for Class 1 water and $24.25/acre-ft. for Class 2 water.

2. Phase 1 ends June 30, 2018.

Budget Drivers:

1. Early permitting consultations have identified new information that is material in nature and areas where additional clarification may be warranted.

2. Potential delay by the Water Commission would delay completing Phase 2 Agreements and timing of revenue to start Phase 2 (estimate 3 to 6 months).

3. Operational analysis performed for incorporation into the WSIP Application and Draft Feasibility Study/Draft EIR/S is insufficient to support the Rebalancing Process. The work plan did not include additional analysis needed by all participants to confirm their value proposition going into Phase 2.

4. Increased revenue has been received due to some participants signing their agreement earlier than planned (+ $ 1,500,000).

Budget Strategy (Risk Management):

1. Account for uncertainty in actual revenue received by ensuring the budget is less than the estimated total revenue projected to be received by participants in the Reservoir Comm.

2. Ensure there is contingency in the amended work plan, especially for the Reservoir Comm's scope of work.

3. For the Reservoir Committee's budget, incorporate at least a 3-month extension to Phase 1, with some functions budgeted for the full year. NOTE: The Authority budget already includes work for all of 2018.

4. Defer work into Phase 2 that is not directly associated with WSIP application, advancing the EIR/S, or essential early permit consultation (e.g. hydropower). Revisit this decision in spring of 2018 and if warranted, recommend starting some tasks in FY2018 (e.g. grid interconnection studies).

Process:

1. Post-Submission of WSIP Application:
   a. August 22: Confirmed Ch2m and AECOM progress (planned budget vs. actual)
   b. August 29: Met with Reclamation to discuss proposed work using CalFed & WIIN Act
2. For remainder of Phase 1, compared the work plan against current progress and new information. Identified the following high-priority items:
   a. WSIP Application: Need to develop a negotiation strategy & plan for schedule delay.
   b. Rebalancing: Participants, specifically south of Delta requesting additional operational analysis than was prepared for the WSIP Application, Draft Feasibility Study and Draft EIR/S.
   c. CEQA Supplemental Information: Verified merits of DFW concerns with Jim Lecky & Lenny Grimaldo (ICF). Brainstormed actions that could be completed within 60-day process and subsequent actions.
      - Impetus for extending the Draft EIR/S review duration
3. August 25, 29, 31 & Sept 5: For each of these items, developed concept-level scopes of work and requested cost estimates from Ch2m, AECOM, and ICF. This work was discussed:
   a. September 5: Operations Work Group (Ruiz, Kunde, Vanderwaal, Cavagnolo, Sutton, Marks, Cheng, Leitterman, Flores, Bettner)
   b. September 6: Site Works Work Group (Azevedo, Bettner, Sutton, Ruiz)
4. Results have been factored into the proposed update to the Phase 1 work plan and budgets for FY2017 and FY2018.
5. September 14: Budget review by the joint meeting of the Authority's Finance & Budget Committee and Reservoir Committee's Finance & Economics Work Group

Next Steps:

1. Incorporate feedback from the Joint meeting of the Authority's Finance & Budget Committee and Reservoir Committee's Finance & Economics Work Group.

2. Present updated information to Authority and Reservoir Committee for their consideration.

   Reservoir Committee (Sept 21):

   - Amended work plan (budget and scopes of work) with a priority on approving work proposed to be performed in the remainder of FY2017 and ideally work proposed to be performed in 2018.
   - Agreement to amend existing consultant services contracts to perform the highest priority work proposed for FY2017.

   Authority (Sept 18):

   - Amended work plan and concurrence with Reservoir Committee's proposed work plan
   - Conditionally approve contract amendments (increase capacity & scopes of work) for key consultant contracts (Ch2m, AECOM, ICF, Johns).

3. Formal approval of an FY2018 budget is planned to occur in November.

4. Consideration to extend Phase 1 is planned to occur in Spring of 2018

5. Revisit deferred work in early 2018.

Contents:

1. Phase 1 work plan & budget summary: FY2015 through FY2018

   NOTE: Proposed budget is less than expected revenue by approximately $340,000.

1. Phase 1 work plan & budget comparison: Approved April 2017 vs. proposed reprioritization affecting FY2017 and FY2018

2. Summary of primary changes in budget allocation and prioritization

3. Line-item details for FY2017 & FY2018

4. Summary of proposed contingency of approximately $ 545,000.

5. Proposed budget extension into 2018 Q3 & Q4. Some tasks can be deferred (e.g. project controls) and some tasks can not extend into Q3 or Q4. Estimated "contingency" is $140,000/month x 3 months = $420,000.

6. Revenue projection

   a. Through Phase 1 based on current acre-ft. participation and approved $48.50 for Class 1 water and $24.25 for Class 2 water.

   b. Absent a Phase 2 work plan and recognizing the need to provide some input to aid participants in the Reservoir Committee to plan their 2018 budget, an estimated early funding.

      NOTE: Assumes up to the full Phase 1 contract amount (e.g. difference of $60 – 48.50).

7. Working-level draft scopes of work that provide supporting documentation of new tasks/budget items (Scopes for Ch2m, AECOM, and ICF).

Sites Reservoir Project
Phase 1 Budget Summary

Expenses: As approved with April 2017 Adjustments

Grouping	Cost Center	Sum of Total 2015	Sum of Total 2016	Sum of Total 2017	Sum of Total 2018	Sum of Phase 1 Total
Admin	Authority	$ (132,319)	$ (540,699)	$ (548,404)	$ (637,264)	$ (1,858,686)
	Region	$ (693)	$ (21,032)	$ (232,000)	$ (144,000)	$ (397,725)
Admin Total		$ (133,012)	$ (561,731)	$ (780,404)	$ (781,264)	$ (2,256,411)
Reservoir	Operations	$ -	$ (241,520)	$ (326,300)	$ (44,280)	$ (612,100)
	Power	$ (906)	$ -	$ (595,133)	$ (390,140)	$ (986,179)
	Water	$ (116,475)	$ (2,664,686)	$ (8,139,969)	$ (2,603,441)	$ (13,524,571)
Reservoir Total		$ (117,381)	$ (2,906,206)	$ (9,061,402)	$ (3,037,861)	$ (15,122,850)
Grand Total		$ (250,393)	$ (3,467,937)	$ (9,841,806)	$ (3,819,124)	$ (17,379,261)

Expenses: Proposed Amend #2

Grouping	Cost Center	Sum of Total 2015	Sum of Total 2016	Sum of Total 2017	Sum of Total 2018	Sum of Phase 1 Total
Admin	Authority	$ (132,319)	$ (367,490)	$ (695,169)	$ (792,704)	$ (1,987,682)
	Region	$ (693)	$ (18,491)	$ (47,390)	$ (24,000)	$ (90,574)
Admin Total		$ (133,012)	$ (385,981)	$ (742,559)	$ (816,704)	$ (2,078,256)
Reservoir	Operations	$ -	$ (155,417)	$ (471,588)	$ (303,080)	$ (930,084)
	Power	$ (906)	$ -	$ -	$ (60,000)	$ (60,906)
	Water	$ (116,475)	$ (2,188,850)	$ (6,851,390)	$ (5,644,947)	$ (14,801,663)
Reservoir Total		$ (117,381)	$ (2,344,267)	$ (7,322,978)	$ (6,008,027)	$ (15,792,653)
Grand Total		$ (250,393)	$ (2,730,248)	$ (8,065,536)	$ (6,824,731)	$ (17,870,909)

Proposed Amend #2, Revenue

Grouping	Cost Center	Sum of Total 2015	Sum of Total 2016	Sum of Total 2017	Sum of Total 2018	Sum of Phase 1 Total
Admin	Authority	$ 280,000	$ 560,000	$ 721,000	$ 780,000	$ 2,341,000
	Region	$ -	$ -	$ -	$ -	$ -
Admin Total		$ 280,000	$ 560,000	$ 721,000	$ 780,000	$ 2,341,000
Reservoir	Operations	$ -	$ -	$ -	$ -	$ -
	Power	$ -	$ -	$ -	$ -	$ -
	Water	$ -	$ 3,776,600	$ 12,092,867	$ -	$ 15,869,467
Reservoir Total		$ -	$ 3,776,600	$ 12,092,867	$ -	$ 15,869,467
Grand Total		$ 280,000	$ 4,336,600	$ 12,813,867	$ 780,000	$ 18,210,467

Sites Reservoir Project
Budget Summary (FY2017 & FY 2018)

FY2017 Expenses					4/20/2017	9/12/2017	
Grouping	Cost Center	File Number	WIP	Description	Total	Total	Difference
Admin	Authority				$ (548,404)	$ (695,169)	$ 146,765
	Region				$ (232,000)	$ (47,390)	$ (184,610)
Admin Total					$ (780,404)	$ (742,559)	$ (37,845)
Reservoir	Operations				$ (326,300)	$ (471,588)	$ 145,288
	Power				$ (595,133)	$ -	$ (595,133)
	Water				$ (8,139,969)	$ (6,851,390)	$ (1,288,579)
Reservoir Total					$ (9,061,402)	$ (7,322,978)	$ (1,738,425)
Grand Total					$ (9,841,806)	$ (8,065,536)	$ (1,776,270)

FY2018 Expenses					4/20/2017	9/12/2017	
Grouping	Cost Center	File Number	WIP	Description	Total	Total	Difference
Admin	Authority				$ (637,264)	$ (792,704)	$ 155,440
	Region				$ (144,000)	$ (24,000)	$ (120,000)
Admin Total					$ (781,264)	$ (816,704)	$ 35,440
Reservoir	Operations				$ (44,280)	$ (303,080)	$ 258,800
	Power				$ (390,140)	$ (60,000)	$ (330,140)
	Water				$ (2,603,441)	$ (5,644,947)	$ 3,041,507
Reservoir Total					$ (3,037,861)	$ (6,008,027)	$ 2,970,167
Grand Total					$ (3,819,124)	$ (6,824,731)	$ 3,005,607

Sites Reservoir Project FY2017 & FY2018
Proposed Amended Work Plan - Summary of Primary Changes

Expense (-)	Expense
Category	(Multiple Items)
Function	(All)
Name	(All)

Working Draft: 9/12/2017

Proposed 2017 & 2018 Budget

Grouping	Cost Center	Action	WIP	File Number	Description	Values Sum of Total 2017	Sum of Total 2018
Admin	Authority	Approved	ADJ-1	10	AECOM Task 15: 2017 Feb 18 Flood, Damage Recovery (Labor)	$ (30,000)	$ -
		Increased	ADJ-1	10.7	Accounting & Taxes, TBD	$ (58,339)	$ (60,000.00)
				13	Augment Legal Services, Conant	$ (30,000)	$ (60,000.00)
				17	Accelerated Engagement Support	$ (67,500)	$ (200,000.00)
		New	ADJ-2	10	2017 Feb 18 Flood, Damage Recovery (Furniture)	$ (25,000)	$ -
		Reduced	ADJ-2	10	Owner-Controlled Contingency: Administrative	$ -	$ (50,000.00)
				10.753	Maxwell Office's Utilities	$ (1,050)	$ (1,800.00)
	Authority Total					$ (211,889)	$ (371,800.00)
	Region	Deferred	ADJ-1	10.7	Economic Benefits Study Part 1 (Sacramento Valley)	$ -	$ -
				16	Public Input to Prioritize Recreation	$ -	$ -
				40	Develop Land Acquisition Policies & Draft Procedures	$ (20,000)	$ -
	Region Total					$ (20,000)	$ -
Admin Total						$ (231,889)	$ (371,800.00)
Reservoi	Operations	Deferred	AM-1	30	H2O Manager, Services	$ -	$ -
					H2O Manager, Expenses	$ -	$ -
				42	Water Rights for Colusa Basin Drain Technical Assessment (Phase 2)	$ -	$ -
					Colusa Basin Drain Feasibility Study (Phase 2)	$ -	$ -
		Increased	AM-1	42	Water Rights Next Steps	$ (28,560)	$ (38,080.00)
		New	ADJ-2	42	Water Rights Strategy for Colusa Basin Drain (Divert Flood Flows & Release for Yolo Bypass)	$ -	$ -
				(blank)	Ch2m TO#4-Task 4: Operations of S. of Delta Demand (CalSim) for Rebalancing	$ (35,000)	$ (85,000.00)
					Ch2m TO#4-Task 8A: Gaming Tool for Rebalancing Process-Develop Tool	$ (50,000)	$ (50,000.00)
					Ch2m TO#4-Task 8B: Gaming Tool for Rebalancing Process-Refinements & User Training	$ -	$ (50,000.00)
					Ch2m TO#4-Task 8C: Gaming Tool for Rebalancing Process-Scenario Development	$ -	$ (50,000.00)
	Operations Total					$ (113,560)	$ (273,080.00)
	Power	Deferred	ADJ-2	30	PWR Manager, Services	$ -	$ -
					PWR Manager, Expenses	$ -	$ -
			AM-1	13	Legal Services, Hyropower	$ -	$ (40,000.00)
			Existing	30	Prepare Power Developer Solicitation (Defer to Phase 2)	$ -	$ -
					Prepare & File Permit Applications (FERC)	$ -	$ -
	Power Total					$ -	$ (40,000.00)
	Water	Approved	ADJ-1	Authority	Task 15: 2017 Feb 18 Flood, Damage Recovery (Labor)	$ -	$ -
		Deferred	ADJ-2	10	Project Ops Mgr Support Staff	$ -	$ (214,200.00)
					PMO Support Services	$ -	$ (123,276.00)
				10.7	Bond Counsel (Phase 2 Financing)	$ -	$ (214,200.00)
				10.8	Quality Program Manager (w/ Support staff)	$ -	$ (53,550.00)
					Technical Advisory Committee	$ (20,000)	$ (99,994.00)
				10.9	Risk Program Manager (w/ Support staff)	$ -	$ (242,800.00)
				24	Develop Mitigation Plan & Locations for inclusion into EIR/S	$ -	$ -
				30	Optimize Design of the Proposed Project	$ -	$ -
					EPC Manager, Services	$ -	$ (285,600.00)
					EPC Manager, Expenses	$ -	$ (18,000.00)
				32	Task 22: Operational Model for Holthouse Reservoir	$ -	$ -
			Existing	10.4	Land & ROW (Temporary Access) MOVED TO PHASE 2	$ -	$ -
				25	Incorporate Grid Interconnection into EIR/S	$ -	$ -
		Increased	ADJ-2	20	EPP Manager, Services	$ (452,237)	$ (495,040.00)
		New	ADJ-2	10	Task 16: Res Comm. Note Taking	$ (7,200)	$ (5,400.00)

Sites Reservoir Project FY2017 & FY2018
Proposed Amended Work Plan - Summary of Primary Changes

Grouping	Cost Center	Action	WIP	File Number	Description	Values Sum of Total 2017	Sum of Total 2018
Reservoi	Water	New	ADJ-2	10.7	Task 24: Analysis of Repayment Cost Scenarios	$ (30,000)	$ (15,000.00)
				20	EPP Manager (Staff Support)(Task 1B: NEPA/CEQA)	$ (35,700)	$ -
					EPP Manager (Staff Support)(Task 2B: WSIP)	$ (9,520)	$ (9,520.00)
					EPP Manager (Staff Support)(Task 3B: Early Permit Consultation)	$ (23,800)	$ (192,780.00)
					EPP Manager (Staff Support)(Task 4B: Support to Authority & Res. Comm)	$ (4,760)	$ (14,280.00)
				25	Ch2m TO#4-Task 5A: Prepare Supplemental EIR/S	$ (35,000)	$ -
					Ch2m TO#4-Task 5B: Prepare Supplemental EIR/S	$ (156,000)	$ -
				32	Task 12: Expanded Risk Assesssment	$ -	$ (72,000.00)
					Task 17: Delevan Intake & Pipeline Enlargement (to 3,000 cfs)	$ (34,000)	$ (45,000.00)
					Task 20: Relocation of Sites Pumping/Generating Plant	$ (10,000)	$ (27,000.00)
					Task 21: Evaluation of Emergency Release Concepts	$ -	$ (20,000.00)
				32.03	WSIP Contingency (Additional Analysis)	$ -	$ (90,000.00)
				32.04	Task 18: Colusa Basin Drain to Increase Storage (Pre-Feasibility Study)	$ (25,700)	$ -
				(blank)	Ch2m TO#4-Task 1: CalSim Alt D w/ CA WaterFix for Supplemental Info & Rebalancing	$ -	$ (100,000.00)
					Ch2m TO#4-Task 2A: Historic Hydrographs	$ (85,000)	$ -
					Ch2m TO#4-Task 2B: Historic Hydrographs	$ (40,000)	$ (120,000.00)
					Ch2m TO#4-Task 3A: Side-channel/Floodplain Areas for Seasonal Habitat	$ (60,000)	$ -
					Ch2m TO#4-Task 3B: Side-channel/Floodplain Areas for Seasonal Habitat	$ (20,000)	$ (60,000.00)
					Ch2m TO#4-Task 7: Engineering Support to AECOM Task #17 (Delevan Intake) & #19 (Stone Creek)	$ (25,000)	$ -
		Reduced	ADJ-2	10	Owner-Controlled Contingency: Non-Ch2m or AECOM Work	$ -	$ (100,000.00)
			AM-1	20	EPP Manager (Staff Support)	$ (35,700)	$ -
		Delayed	ADJ-2	10	Project Ops Manager, Services	$ (111,067)	$ (380,800.00)
					Project Ops Manager, Expenses	$ (6,300)	$ (21,600.00)
					Business/Community Ops Manager, Services	$ (58,800)	$ (201,600.00)
					Business/Community Ops Manager, Expenses	$ (7,000)	$ (24,000.00)
				10.6	Project Scheduler	$ -	$ (192,780.00)
				10.7	Cost Accountant & Bookkeeper (Formerly Controls Manager)	$ -	$ (192,780.00)
				11	Document Controls Manager	$ -	$ (192,780.00)
				13	Administrative Record Support/Compile	$ (20,000)	$ (80,000.00)
		Planned	ADJ-2	32	Task 23: Engineering Support During CWC Negotiations	$ -	$ (20,000.00)
	Water Total					$ (1,312,783)	$ (3,923,980.00)
Reservoir Total						$ (1,426,343)	$ (4,237,060.00)
Grand Total						$ (1,658,232)	$ (4,608,860.00)

Sites Reservoir Project FY2017 & FY2018
Proposed Amended Work Plan - Line Item Details

Expense (-)	Expense
Category	(Multiple Items)
Function	(All)
Name	(All)

Working Draft: 9/12/2017

Proposed 2017 & 2018 Budget

Grouping	Cost Center	Action	WIP	File Number	Description	Values Sum of Total 2017	Sum of Total 2018
Admin	Authority	New	ADJ-2	10	2017 Feb 18 Flood, Damage Recovery (Furniture)	$ (25,000)	$ -
		No Change	ADJ-2	10	Administrative Support to GM (Full-time)	$ -	$ -
			AM-1	10	Roll-over from FY2016 into FY2017	$ 25,000	$ -
				11.5	Internet Technology (IT) Support	$ (6,000)	$ (6,000.00)
					Computers & Peripherals	$ (5,000)	$ (70,800.00)
			Existing	10	Mandelberg (facilitator)	$ -	$ -
				10.4	PIO/Mgr (Public Engagement & Outreach Team)	$ (249,962)	$ (180,000.00)
				10.7	Financial Audit	$ (5,000)	$ (10,000.00)
				10.753	Postage and Shipping Expense	$ (2,000)	$ (2,000.00)
					US Flag	$ -	$ -
					Publications & Print	$ (100)	$ (120.00)
				10.9	Board Insurance (10/1/x thru 9/30/x+1)	$ (2,183)	$ (2,183.00)
				14	Governmental Affairs, Federal	$ -	$ -
					Governmental Affairs, State	$ -	$ -
				15	Industry (Dues, Subscriptions & Ads)	$ (1,000)	$ -
				17	Educational Materials (Brochures, Fact Sheets, Newspaper Ads)	$ (20,000)	$ -
					Display or Booth at Public Event (e.g. ACWA or State Fair)	$ -	$ -
				30	URS (prior support)	$ -	$ -
				TBD	TBD	$ -	$ -
			Mod	10	General Manager, Expenses	$ (7,136)	$ (7,680.00)
					General Manager, Services	$ (77,921)	$ (77,920.80)
					Administrative Support to GM (part-time)	$ (2,400)	$ (2,400.00)
				10.6	Project Scheduler & Controls Manager	$ -	$ -
				10.7	Accounting & Taxes, Bond	$ (5,037)	$ -
				10.753	Misc Office Supplies	$ (600)	$ (600.00)
					Maxwell Office's Rent	$ -	$ -
				11	Document Controls Manager	$ -	$ -
				11.5	Update Website & Data Access/Storage	$ (1,200)	$ (1,200.00)
				13	Legal Services, Kenny	$ -	$ -
					Legal Services, Conant	$ (122,741)	$ (60,000.00)
		Reduced	ADJ-2	10	Owner-Controlled Contingency: Administrative	$ -	$ (50,000.00)
				10.753	Maxwell Office's Utilities	$ (1,050)	$ (1,800.00)
	Authority Total					$ (509,330)	$ (472,703.80)
	Region	No Change	AM-1	24	Preservation of Cultural Heritage (Website & EIR/S)	$ (27,000)	$ (24,000.00)
			Existing	10.7	Economic Benefits Study Part 2 (California)	$ -	$ -
				16	Public Education of Benefits	$ -	$ -
				TBD	TBD	$ -	$ -
	Region Total					$ (27,000)	$ (24,000.00)
Admin Total						$ (536,330)	$ (496,703.80)
Reservoi	Operations	Complete	Existing	25.02	Feasibility Report, TO #2 (X % of Task 9)	$ -	$ -
				25.03	TO#1-MOD 0/Task 3 - Env & Ops NTP#1 (Task #3: WSIP CalSim Support)	$ (60,597)	$ -
				25.05	TO#1-MOD 0(C)/Task 5.2 - Agency (USBR) Coord	$ -	$ -
					TO#1-MOD 0(C)/Task 6.2 - Agency (DWR / AFCEE) Coord	$ (45,000)	$ -
		Deferred	AM-1	30	H2O Manager, Services	$ -	$ -
					H2O Manager, Expenses	$ -	$ -
				42	Water Rights for Colusa Basin Drain Technical Assessment (Phase 2)	$ -	$ -
					Colusa Basin Drain Feasibility Study (Phase 2)	$ -	$ -
		Do Not Sho	Existing	TBD	TBD	$ -	$ -
		In Progress	ADJ-2	13	Water Rights Support	$ (50,000)	$ -

Sites Reservoir Project FY2017 &FY2018
Proposed Amended Work Plan - Line Item Details

Grouping	Cost Center	Action	WIP	File Number	Description	Values Sum of Total 2017	Sum of Total 2018
Reservoi	Operations	In Progress	AM-1	42	Water Rights Strategy Development	$ (54,431)	$ -
					Water Rights Technical Assessment	$ (33,000)	$ -
					Water Rights Supporting Documentation	$ (40,000)	$ -
					Water Rights Strategy for Colusa Basin Drain (Divert Flood Flows & Release for Yolo Bypass)	$ (45,000)	$ -
					Water Rights Next Steps	$ -	$ (15,000.00)
		Increased	AM-1	42	Water Rights Next Steps	$ (28,560)	$ (38,080.00)
		New	ADJ-2	42	Water Rights Strategy for Colusa Basin Drain (Divert Flood Flows & Release for Yolo Bypass)	$ -	$ -
				(blank)	Ch2m TO#4-Task 4: Operations of S. of Delta Demand (CalSim) for Rebalancing	$ (35,000)	$ (85,000.00)
					Ch2m TO#4-Task 8A: Gaming Tool for Rebalancing Process-Develop Tool	$ (50,000)	$ (50,000.00)
					Ch2m TO#4-Task 8B: Gaming Tool for Rebalancing Process-Refinements & User Training	$ -	$ (50,000.00)
					Ch2m TO#4-Task 8C: Gaming Tool for Rebalancing Process-Scenario Development	$ -	$ (50,000.00)
	Operations Total					$ (441,588)	$ (288,080.00)
	Power	Complete	Existing	13	Legal Services, Holland (Federal/Power)	$ -	$ -
		Deferred	ADJ-2	30	PWR Manager, Services	$ -	$ -
					PWR Manager, Expenses	$ -	$ -
			AM-1	13	Legal Services, Hyropower	$ -	$ (40,000.00)
			Existing	30	Prepare Power Developer Solicitation (Defer to Phase 2)	$ -	$ -
					Prepare & File Permit Applications (FERC)	$ -	$ -
		Do Not Sho	AM-1	30	(blank)	$ -	$ -
			Existing	TBD	TBD	$ -	$ -
		Reassign	ADJ-2	30	Owner-Controlled Contingency: Hydropower	$ -	$ -
			AM-1	14	FERC Permit & License Strategy	$ -	$ -
			Existing	30	Estimate Potential	$ -	$ -
		To Start	Existing	30	Understanding of Regulatory Changes	$ -	$ (10,000.00)
					Market Research/Interest	$ -	$ (10,000.00)
		On Hold	AM-1	30	Initial Grid Interconnection Study (Holthouse) - WAPA	$ -	$ -
					Initial Grid Interconnection Study (Holthouse) - PG&E	$ -	$ -
					Initial Grid Interconnection Study (Delevann) - WAPA	$ -	$ -
					Initial Grid Interconnection Study (Delevann) - PG&E	$ -	$ -
					Consultant Support & Oversignt Grid Interconnections	$ -	$ -
	Power Total					$ -	$ (60,000.00)
	Water	Complete	AM-1	25.01	TO#3-MOD 2/Task 1 (Subtask 1.5.1) – WSIP Operations Assumptions Refinement	$ (166,348)	$ -
					TO#3-MOD 2/Task 2 (Subtask 1.5.2) – WSIP Analytical Framework	$ (97,564)	$ -
					TO#3-MOD 2/Task 3 (Subtask 1.5.3) – WSIP Modeling of Alternative D	$ (246,750)	$ -
					TO#3-MOD 3/Task 4 (Subtask 1.5.4) – WSIP Application Metrics Development	$ (41,867)	$ -
				25.016	TO#2-MOD 1/Task 1-Task 1.6 - USBR Review Federal Feasibility Study	$ (40,200)	$ -
				25.06	TO#2-MOD 1(E)/Task 6.3 - CEQA Lead Agency Coordination Support (including AB52 Compliance)	$ (69,200)	$ -
				25.07	TO#2-MOD 1/Task 7 (D) Subtask 7.5.1 Public Draft Revisions to Introductory/Project Desc Chapters	$ (117,840)	$ -
					TO#2-MOD 1/Task 7 (D) Subtask 7.5.2 - Public Draft Impact Analysis and Required Revisions to Resource Chapters	$ (479,380)	$ -
					TO#2-MOD 1/Task 7 (D) Subtask 7.5.3 CALSIM (2015 version) Modeling of NODOS Alternatives A, B, and C	$ (75,320)	$ -
					TO#2-MOD 1/Task 7 (D) Subtask 7.5.4 - Public Draft Revisions to Appendices	$ (140,000)	$ -

Sites Reservoir Project FY2017 &FY2018
Proposed Amended Work Plan - Line Item Details

Grouping	Cost Center	Action	WIP	File Number	Description	Values Sum of Total 2017	Sum of Total 2018
Reservoi	Water	Complete	AM-1	25.07	TO#2-MOD 1/Task 7 (D) Subtask 7.5.5 - Public Draft Revisions Based on Reclamation Comments on Preliminary EIR/EIS	$ (45,500)	$ -
					TO#2-MOD 1/Task 7 (D) Public Draft Reclamation/Federal Agency Coordination to Produce Public Draft	$ (12,000)	$ -
					TO#2-MOD 1/Task #7	$ -	$ -
				25.09	TO#2-MOD 0(F)/Task 9 (Subtask 9.1.1): Revision of Administrarive Public Draft EIR/EIS	$ (172,000)	$ -
					TO#2-MOD 0(F)/Task 9 (Subtask 9.1.2):Preparation of Public Draft EIR/EIS	$ (138,000)	$ -
					TO#2-MOD 0(F)/Task 9 (Subtask 9.1.3): Rehabilitation Act Section 508 Compliance	$ (40,000)	$ -
				32.03	Task 14: EIR/S Support (geotechnical)	$ (56,676)	$ -
					Task 8.1 WSIP Feasibility Rpt: Economics	$ -	$ -
					Task 8.2 WSIP Ecosystem Priorities & Relative Values	$ -	$ -
					Task 8.3 Water Quality Priorities & Relative Values	$ -	$ -
			Existing	25.01	Ch2m CalSim Modeling & Draft EIR/S	$ -	$ -
					TO#1-MOD 0/Task 1: Feasibility Study Support	$ (30,713)	$ -
				25.02	TO#1-MOD 0(B)/Task 2-Confirm Analysis Approach/Base Case Assumptions	$ -	$ -
					TO#1-MOD 0(B)/Task #4: Permit Risk Evaluation	$ -	$ -
				25.05	TO#1-MOD 0(A)/Task 5.1 - Agency (USBR) Coord	$ (33,936)	$ -
					TO#1-MOD 0(A)/Task 6.1 - Agency (DWR / AFCEE) Coord	$ -	$ -
				25.08	TO#1-MOD 0/Task 8 - Env & Ops NTP#2 (Task #8: CalSim for EIR/S)	$ -	$ -
				25.09	TO#1-MOD 0/Task 9 - EIR/S 2nd Draft	$ -	$ -
				25.1	TO#1-MOD 0/Task #10 - Final Draft EIR/S	$ (49,456)	$ -
				25.11	TO#1-MOD 0/Task #11 - Public Meeting Assistance	$ (50,000)	$ -
				30	ACWA Storage Integration Work Group Technical Study Participation	$ -	$ -
				32.01	WSIP (Engineering & Technical Services)	$ -	$ -
					Tasks1, 2, & 3: WSIP Feasibility Report TO #1	$ -	$ -
				32.02	Tasks 4, 5, & 9: WSIP Feasibility Report, TO #2	$ (14,000)	$ (2,200.00)
					Task 10: Grid Interconnection Studies (WSIP Feasibility Report, TO #2)	$ (30,910)	$ -
				32.03	Task 6: WSIP Feasibility Report TO #3	$ (191,305)	$ -
					Task 7: WSIP Feasibility Report TO #3	$ (113,267)	$ -
				32.04	TO #4 (Task 13) Colusa Basin Drain Study (Feasibility Report)	$ -	$ -
					Task 11: WSIP Financial Feasibility TO #4	$ (21,000)	$ -
			Mod	25.07	TO#1-MOD 0/Task #7 - EIR/S 1st Draft	$ (277,499)	$ -
		Deferred	ADJ-2	10	Project Ops Mgr Support Staff	$ -	$ (214,200.00)
					PMO Support Services	$ -	$ (123,276.00)
				10.7	Bond Counsel (Phase 2 Financing)	$ -	$ (214,200.00)
				10.8	Quality Program Manager (w/ Support staff)	$ -	$ (53,550.00)
					Technical Advisory Committee	$ (20,000)	$ (99,994.00)
				10.9	Risk Program Manager (w/ Support staff)	$ -	$ (242,800.00)
				24	Develop Mitigation Plan & Locations for inclusion into EIR/S	$ -	$ -
				30	Optimize Design of the Proposed Project	$ -	$ -
					EPC Manager, Services	$ -	$ (285,600.00)
					EPC Manager, Expenses	$ -	$ (18,000.00)
				32	Task 22: Operational Model for Holthouse Reservoir	$ -	$ -
			Existing	10.4	Land & ROW (Temporary Access) MOVED TO PHASE 2	$ -	$ -
				25	Incorporate Grid Interconnection into EIR/S	$ -	$ -
		Do Not Sho	AM-1	10	Ops Project Administrator (Planned Monthly Services)	$ -	$ -
					Project Ops Manager (Planned Monthly Services)	$ -	$ -
			Existing	TBD	TBD	$ -	$ -
		In Progress	AM-1	25.01	TO#3-MOD 2/Task 5 (Subtask 1.5.5) – WSIP Technical Documentation	$ (112,800)	$ -

Sites Reservoir Project FY2017 &FY2018
Proposed Amended Work Plan - Line Item Details

Grouping	Cost Center	Action	WIP	File Number	Description	Values Sum of Total 2017	Sum of Total 2018
Reservoi	Water	In Progress	AM-1	25.01	TO#3-MOD 3/Task 6 (Subtask 1.5.6) – WSIP Meetings, Coordination and Support	$ (50,000)	$ -
				32.03	Task 8.4 WSIP RFI Comment Response	$ -	$ -
					Tak 8.5 WSIP: CWC Coordination	$ -	$ -
			Existing	32.03	Task 8: WSIP Feasibility Report TO #3	$ (529,990)	$ -
		Increased	ADJ-2	20	EPP Manager, Services	$ (452,237)	$ (495,040.00)
		New	ADJ-2	10	Task 16: Res Comm. Note Taking	$ (7,200)	$ (5,400.00)
				10.7	Task 24: Analysis of Repayment Cost Scenarios	$ (30,000)	$ (15,000.00)
				20	EPP Manager (Staff Support)(Task 1B: NEPA/CEQA)	$ (35,700)	$ -
					EPP Manager (Staff Support)(Task 2B: WSIP)	$ (9,520)	$ (9,520.00)
					EPP Manager (Staff Support)(Task 3B: Early Permit Consultation)	$ (23,800)	$ (192,780.00)
					EPP Manager (Staff Support)(Task 4B: Support to Authority & Res. Comm)	$ (4,760)	$ (14,280.00)
				25	Ch2m TO#4-Task 5A: Prepare Supplemental EIR/S	$ (35,000)	$ -
					Ch2m TO#4-Task 5B: Prepare Supplemental EIR/S	$ (156,000)	$ -
				32	Task 12: Expanded Risk Assesssment	$ -	$ (72,000.00)
					Task 17: Delevan Intake & Pipeline Enlargement (to 3,000 cfs)	$ (34,000)	$ (45,000.00)
					Task 20: Relocation of Sites Pumping/Generating Plant	$ (10,000)	$ (27,000.00)
					Task 21: Evaluation of Emergency Release Concepts	$ -	$ (20,000.00)
				32.03	WSIP Contingency (Additional Analysis)	$ -	$ (90,000.00)
				32.04	Task 18: Colusa Basin Drain to Increase Storage (Pre-Feasibility Study)	$ (25,700)	$ -
				(blank)	Ch2m TO#4-Task 1: CalSim Alt D w/ CA WaterFix for Supplemental Info & Rebalancing	$ -	$ (100,000.00)
					Ch2m TO#4-Task 2A: Historic Hydrographs	$ (85,000)	$ -
					Ch2m TO#4-Task 2B: Historic Hydrographs	$ (40,000)	$ (120,000.00)
					Ch2m TO#4-Task 3A: Side-channel/Floodplain Areas for Seasonal Habitat	$ (60,000)	$ -
					Ch2m TO#4-Task 3B: Side-channel/Floodplain Areas for Seasonal Habitat	$ (20,000)	$ (60,000.00)
					Ch2m TO#4-Task 7: Engineering Support to AECOM Task #17 (Delevan Intake) & #19 (Stone Creek)	$ (25,000)	$ -
		No Change	ADJ-2	10	Administrative Support to GM (Full-time)	$ (15,450)	$ (192,000.00)
				10.7	Financial Advisory Services (Bond Strategy Development)	$ (23,800)	$ (214,200.00)
			AM-1	10	Administrative Support to GM (part-time)	$ (9,600)	$ (9,600.00)
				20	EPP Manager, Expenses	$ (36,000)	$ (72,000.00)
			Existing	10	General Manager, Expenses	$ (28,544)	$ (30,720.00)
					General Manager, Services	$ (311,683)	$ (311,683.20)
				10.4	Advance EIR/S Beyond Pre-Admin Draft	$ (160,000)	$ -
				10.7	Cost Development Model (Grant Management & Administration Services)	$ (76,472)	$ (89,994.00)
				10.9	Insurance (Commercial & General L & Professional L)	$ (7,500)	$ -
				13	CEQA Legal Counsel	$ (450,374)	$ -
					NEPA Legal Counsel	$ (50,625)	$ -
		Not Fund	ADJ-2	32	Task 19: Stone Creek Flows to Increase Storage (Pre-Feasibility Study)	$ -	$ -
				(blank)	Ch2m TO#4-Task 6: IOS Modeling for WSIP Application	$ -	$ -
		Reassign	ADJ-2	10.4	Operations (Annualized Yield) Support During CWC Negotiations	$ -	$ -
				22	Prepare Prop 1, Chapter 8 Solicitation (WSIP Contingency)	$ -	$ -
				25	Owner-Controlled Contingency: Env & Ops	$ -	$ (150,000.00)
				32	Owner-Controlled Contingnecy: WSIP	$ -	$ -
			AM-1	25	Owner-Controlled Contingnecy: Ops & CalSim	$ -	$ (150,000.00)
			Existing	32	Owner-Controlled Contingency: Engineering	$ (5,039)	$ -
		Reduced	ADJ-2	10	Owner-Controlled Contingency: Non-Ch2m or AECOM Work	$ -	$ (100,000.00)
			AM-1	20	EPP Manager (Staff Support)	$ (35,700)	$ -
		To Start	AM-1	25.01	TO#3-MOD 2/Task 7 (Subtask 1.5.7) - CWC Response and Technical Support	$ (35,000)	$ -

Sites Reservoir Project FY2017 &FY2018
Proposed Amended Work Plan - Line Item Details

Grouping	Cost Center	Action	WIP	File Number	Description	Values Sum of Total 2017	Sum of Total 2018
Reservoi	Water	To Start	AM-1	25.06	TO#2-MOD 2(E)/Task 6.4 - CEQA Lead Agency Coordination Support (including AB52 Compliance)	$ (100,000)	$ (150,000.00)
				25.12	TO#2-Mod 1/Task 12: Review of Public Comments/Proposed Response Approach	$ (100,000)	$ (50,000.00)
				25.13	TO#2-Mod 1/Task 13: Permits and Environmental Compliance Plan	$ (120,000)	$ (180,000.00)
			Existing	32.04	Task 12: Design & Construction Risk	$ -	$ (18,570.00)
		Delayed	ADJ-2	10	Project Ops Manager, Services	$ (111,067)	$ (380,800.00)
					Project Ops Manager, Expenses	$ (6,300)	$ (21,600.00)
					Business/Community Ops Manager, Services	$ (58,800)	$ (201,600.00)
					Business/Community Ops Manager, Expenses	$ (7,000)	$ (24,000.00)
				10.6	Project Scheduler	$ -	$ (192,780.00)
				10.7	Cost Accountant & Bookkeeper (Formerly Controls Manager)	$ -	$ (192,780.00)
				11	Document Controls Manager	$ -	$ (192,780.00)
				13	Administrative Record Support/Compile	$ (20,000)	$ (80,000.00)
		Planned	ADJ-2	32	Task 23: Engineering Support During CWC Negotiations	$ -	$ (20,000.00)
	Water Total					$ (6,286,390)	$ (5,544,947.20)
Reservoir Total						$ (6,727,978)	$ (5,893,027.20)
Grand Total						$ (7,264,307)	$ (6,389,731.00)

Sites Reservoir Project
Contingency Included in Plan

Working Draft: 9/12/2017

Expense (-)	Expense
Category	(Multiple Items)
Function	(All)
Name	(All)

Filter: Contingency

Grouping	Cost Cente	File Number	WIP	Action	Description	Sum of Total 2017	Sum of Total 2018	Sum of Phase 1 Total
Admin	Authority	10	ADJ-2	Reduced		$ -	$ (50,000)	$ (50,000)
	Authority Total					$ -	$ (50,000)	$ (50,000)
Admin Total						$ -	$ (50,000)	$ (50,000)
Reservoi	Power	30	ADJ-2	Reassign	Owner-Controlled Contingency: Hydropower	$ -	$ -	$ -
	Power Total					$ -	$ -	$ -
	Water	10	ADJ-2	Reduced		$ -	$ (100,000)	$ (100,000)
		22	ADJ-2	Reassign	Prepare Prop 1, Chapter 8 Solicitation (WSIP Contingency)	$ -	$ -	$ -
		25	ADJ-2	Reassign	Owner-Controlled Contingency: Env & Ops	$ -	$ (150,000)	$ (150,000)
			AM-1	Reassign	Owner-Controlled Contingnecy: Ops & CalSim	$ -	$ (150,000)	$ (150,000)
		32	ADJ-2	Reassign	Owner-Controlled Contingnecy: WSIP	$ -	$ -	$ -
			Existing	Reassign	Owner-Controlled Contingency: Engineering	$ (5,039)	$ -	$ (5,039)
		32	ADJ-2	New	WSIP Contingency (Additional Analysis)	$ -	$ (90,000)	$ (90,000)
	Water Total					$ (5,039)	$ (490,000)	$ (495,039)
Reservoir Total						$ (5,039)	$ (490,000)	$ (495,039)
Grand Total						$ (5,039)	$ (540,000)	$ (545,039)

SItes Reservoir Project
Risk Management: Phase 1 Budget includes Early Phase 2 Spending

Expense (-) Expense
Category (Multiple Items)
Function (All)
Name (All)

Working Draft: 9/12/2017

Proposed 2018 Q3 & Q4 Monthly Cash Flow

Approved End of Phase 1: 30-Jun-18

Grouping	Cost Cente	Action	WIP	File Number	Description	Sum of Jul-2018	Sum of Aug-2018	Sum of Sep-2018	Sum of Oct-2018	Sum of Nov-2018	Sum of Dec-2018
Admin	Authority	Increased	ADJ-1	10.7	Accounting & Taxes, TBD	$ (5,000)	$ (5,000)	$ (5,000)	$ (5,000)	$ (5,000)	$ (5,000)
				13	Augment Legal Services, Conant	$ (5,000)	$ (5,000)	$ (5,000)	$ (5,000)	$ (5,000)	$ (5,000)
				17	Accelerated Engagement Support	$ (20,000)	$ (20,000)	$ (20,000)	$ (20,000)	$ (20,000)	$ (15,000)
				11.5	Internet Technology (IT) Support	$ (500)	$ (500)	$ (500)	$ (500)	$ (500)	$ (500)
					Computers & Peripherals	$ (1,200)	$ (1,200)	$ (1,200)	$ (1,200)	$ (1,200)	$ (1,200)
			Existin	10.4	PIO/Mgr (Public Engagement & Outreach Team)	$ (15,000)	$ (15,000)	$ (15,000)	$ (15,000)	$ (15,000)	$ (15,000)
			Mod	10	General Manager, Expenses	$ (640)	$ (640)	$ (640)	$ (640)	$ (640)	$ (640)
					General Manager, Services	$ (6,493)	$ (6,493)	$ (6,493)	$ (6,493)	$ (6,493)	$ (6,493)
					Administrative Support to GM (part-time)	$ (200)	$ (200)	$ (200)	$ (200)	$ (200)	$ (200)
					Misc Office Supplies	$ (50)	$ (50)	$ (50)	$ (50)	$ (50)	$ (50)
				11.5	Update Website & Data Access/Storage	$ (100)	$ (100)	$ (100)	$ (100)	$ (100)	$ (100)
					Legal Services, Conant	$ (5,000)	$ (5,000)	$ (5,000)	$ (5,000)	$ (5,000)	$ (5,000)
		Reduced	ADJ-2	10	Owner-Controlled Contingency: Administrative						$ (50,000)
					Maxwell Office's Utilities	$ (150)	$ (150)	$ (150)	$ (150)	$ (150)	$ (150)
	Authority Total					$ (59,343)	$ (59,343)	$ (59,343)	$ (59,343)	$ (59,343)	$(105,343)
	Region	No Change	AM-1	24	Preservation of Cultural Heritage (Website & EIR/S)	$ (3,000)	$ (3,000)				
	Region Total					$ (3,000)	$ (3,000)				
Admin Total						$ (62,343)	$ (62,343)	$ (59,343)	$ (59,343)	$ (59,343)	$(105,343)
Reservoir	Water	Deferred	ADJ-2	10	Project Ops Mgr Support Staff	$ (23,800)	$ (23,800)	$ (23,800)			
					PMO Support Services	$ (13,697)	$ (13,697)	$ (13,697)			
				10.7	Bond Counsel (Phase 2 Financing)	$ (23,800)	$ (23,800)	$ (23,800)			
				10.8	Quality Program Manager (w/ Support staff)	$ (5,950)	$ (5,950)	$ (5,950)			
					Technical Advisory Committee	$ (19,999)	$ (19,998)	$ (19,997)			
				10.9	Risk Program Manager (w/ Support staff)	$ (7,140)	$ (7,140)	$ (7,140)			
					EPC Manager, Services	$ (47,600)	$ (47,600)	$ (47,600)			
					EPC Manager, Expenses	$ (3,000)	$ (3,000)	$ (3,000)			
		Increased	ADJ-2	20	EPP Manager, Services	$ (41,253)	$ (41,253)	$ (41,253)	$ (41,253)	$ (41,253)	$ (41,253)
		New	ADJ-2	10	EPP Manager (Staff Support)(Task 3B: Early Permit Consultation)	$ (11,900)	$ (11,900)	$ (11,900)			
		No Change	ADJ-2	10	Administrative Support to GM (Full-time)	$ (16,000)	$ (16,000)	$ (16,000)	$ (16,000)	$ (16,000)	$ (16,000)

SItes Reservoir Project
Risk Management: Phase 1 Budget includes Early Phase 2 Spending

			10.7	Financial Advisory Services (Bond Strategy Development)	$ (23,800)	$ (23,800)	$ (23,800)				
		AM-1	10	Administrative Support to GM (part-time)	$ (800)	$ (800)	$ (800)	$ (800)	$ (800)	$ (800)	
			20	EPP Manager, Expenses	$ (6,000)	$ (6,000)	$ (6,000)	$ (6,000)	$ (6,000)	$ (6,000)	
		Existin	10	General Manager, Expenses	$ (2,560)	$ (2,560)	$ (2,560)	$ (2,560)	$ (2,560)	$ (2,560)	
				General Manager, Services	$ (25,974)	$ (25,974)	$ (25,974)	$ (25,974)	$ (25,974)	$ (25,974)	
			10.7	Cost Development Model (Grant Management & Administration Services)	$ (9,999)	$ (9,998)	$ (9,997)				
	Delayed	ADJ-2	10	Project Ops Manager, Services	$ (31,733)	$ (31,733)	$ (31,733)	$ (31,733)	$ (31,733)	$ (31,733)	
				Project Ops Manager, Expenses	$ (1,800)	$ (1,800)	$ (1,800)	$ (1,800)	$ (1,800)	$ (1,800)	
				Business/Community Ops Manager, Services	$ (16,800)	$ (16,800)	$ (16,800)	$ (16,800)	$ (16,800)	$ (16,800)	
				Business/Community Ops Manager, Expenses	$ (2,000)	$ (2,000)	$ (2,000)	$ (2,000)	$ (2,000)	$ (2,000)	
			10.6	Project Scheduler	$ (21,420)	$ (21,420)	$ (21,420)				
			10.7	Cost Accountant & Bookkeeper (Formerly Controls Manager)	$ (21,420)	$ (21,420)	$ (21,420)				
			11	Document Controls Manager	$ (21,420)	$ (21,420)	$ (21,420)				
	Water Total				$(399,866)	$ (399,864)	$(399,862)	$(144,920)	$(144,920)	$(144,920)	
Reservoir Total					$(399,866)	$ (399,864)	$(399,862)	$(144,920)	$(144,920)	$(144,920)	
Grand Total					$(462,209)	$ (462,207)	$(459,205)	$(204,264)	$(204,264)	$(250,264)	

Sites Reservoir Project
Propsoed Revenue by Participant: At end of Phase 1 Proposed Fall FY 2018 (for Planning Purposes)

Phase 1 Limit | For Phase 2 Planning Purposes

	Reservoir Committee						Phase 2 Initial Payment (Budget Planning)		
	Current Quantities (2017 Sept 01)			Total Phase 1 Payments Required			$ 60.00	$ 11.50	$ 5.75
Participant	Total	Class 1	Class 2	Total	Class 1	Class 2	Total	Class 1	Class 2
American Canyon, City of	4,000.00	2,000.00	2,000.00	$ 145,500.00	$ 97,000.00	$ 48,500.00	$ 34,500.00	$ 23,000.00	$ 11,500.00
Antelope Valley-East Kern Water Agency	2,000.00	1,427.00	573.00	$ 83,104.75	$ 69,209.50	$ 13,895.25	$ 19,705.25	$ 16,410.50	$ 3,294.75
California Water Service	35,000.00	-	35,000.00	$ 848,750.00	$ -	$ 848,750.00	$ 201,250.00	$ -	$ 201,250.00
Castaic Lake Water Agency	5,000.00	3,567.00	1,433.00	$ 207,749.75	$ 172,999.50	$ 34,750.25	$ 49,260.25	$ 41,020.50	$ 8,239.75
Coachella Valley Water District	26,500.00	18,906.00	7,594.00	$ 1,101,095.50	$ 916,941.00	$ 184,154.50	$ 261,084.50	$ 217,419.00	$ 43,665.50
Colusa County	10,000.00	10,000.00	-	$ 485,000.00	$ 485,000.00	$ -	$ 115,000.00	$ 115,000.00	$ -
Colusa County Water District	32,111.00	32,111.00	-	$ 1,557,383.50	$ 1,557,383.50	$ -	$ 369,276.50	$ 369,276.50	$ -
Carter MWC	1,000.00	-	1,000.00	$ 24,250.00	$ -	$ 24,250.00	$ 5,750.00	$ -	$ 5,750.00
Desert Water Agency	6,500.00	4,637.00	1,863.00	$ 270,072.25	$ 224,894.50	$ 45,177.75	$ 64,037.75	$ 53,325.50	$ 10,712.25
Garden Highway MWC	4,000.00	-	4,000.00	$ 97,000.00	$ -	$ 97,000.00	$ 23,000.00	$ -	$ 23,000.00
Glenn County	-	-	-	$ -	$ -	$ -	$ -	$ -	$ -
Glenn-Colusa Irrigation District	20,000.00	20,000.00	-	$ 970,000.00	$ 970,000.00	$ -	$ 230,000.00	$ 230,000.00	$ -
Maxwell Irrigation District	-	-	-	$ -	$ -	$ -	$ -	$ -	$ -
Metropolitan Water District of S. CA	50,000.00	-	50,000.00	$ 1,212,500.00	$ -	$ 1,212,500.00	$ 287,500.00	$ -	$ 287,500.00
Orland-Artois Water District	20,000.00	20,000.00	-	$ 970,000.00	$ 970,000.00	$ -	$ 230,000.00	$ 230,000.00	$ -
Pacific Resources MWC	20,000.00	-	20,000.00	$ 485,000.00	$ -	$ 485,000.00	$ 115,000.00	$ -	$ 115,000.00
Placer County Water Agency	-	-	-	$ -	$ -	$ -	$ -	$ -	$ -
Roseville, City of	-	-	-	$ -	$ -	$ -	$ -	$ -	$ -
Reclamation District 108	20,000.00	20,000.00	-	$ 970,000.00	$ 970,000.00	$ -	$ 230,000.00	$ 230,000.00	$ -
Sacramento, City	-	-	-	$ -	$ -	$ -	$ -	$ -	$ -
Sacramento County Water Agency	-	-	-	$ -	$ -	$ -	$ -	$ -	$ -
San Bernardino Valley Municipal Water D	30,000.00	21,403.00	8,597.00	$ 1,246,522.75	$ 1,038,045.50	$ 208,477.25	$ 295,567.25	$ 246,134.50	$ 49,432.75
San Gorgonio Pass Water Agency	14,000.00	9,988.00	4,012.00	$ 581,709.00	$ 484,418.00	$ 97,291.00	$ 137,931.00	$ 114,862.00	$ 23,069.00
Santa Clara Valley Water District	24,000.00	17,123.00	6,877.00	$ 997,232.75	$ 830,465.50	$ 166,767.25	$ 236,457.25	$ 196,914.50	$ 39,542.75
Tehama-Colusa Canal Assoc	-	-	-	$ -	$ -	$ -	$ -	$ -	$ -
TC6: 4M Water District	500.00	500.00	-	$ 24,250.00	$ 24,250.00	$ -	$ 5,750.00	$ 5,750.00	$ -
TC6: Cortina Water District	300.00	300.00	-	$ 14,550.00	$ 14,550.00	$ -	$ 3,450.00	$ 3,450.00	$ -
TC6: Davis Water District	2,000.00	2,000.00	-	$ 97,000.00	$ 97,000.00	$ -	$ 23,000.00	$ 23,000.00	$ -
TC6: Dunnigan Water District	5,000.00	5,000.00	-	$ 242,500.00	$ 242,500.00	$ -	$ 57,500.00	$ 57,500.00	$ -
TC6: LaGrande Water District	1,000.00	1,000.00	-	$ 48,500.00	$ 48,500.00	$ -	$ 11,500.00	$ 11,500.00	$ -
TC6: Proberta Water District	3,000.00	3,000.00	-	$ 145,500.00	$ 145,500.00	$ -	$ 34,500.00	$ 34,500.00	$ -
Western Canal Water District	3,500.00	3,500.00	-	$ 169,750.00	$ 169,750.00	$ -	$ 40,250.00	$ 40,250.00	$ -
Westside Water District	25,000.00	25,000.00	-	$ 1,212,500.00	$ 1,212,500.00	$ -	$ 287,500.00	$ 287,500.00	$ -
Wheeler Ridge-Maricopa Water Storage I	20,000.00	14,269.00	5,731.00	$ 831,023.25	$ 692,046.50	$ 138,976.75	$ 197,046.75	$ 164,093.50	$ 32,953.25
Zone 7 Water Agency	20,000.00	14,269.00	5,731.00	$ 831,023.25	$ 692,046.50	$ 138,976.75	$ 197,046.75	$ 164,093.50	$ 32,953.25
Dept of Water Resources	-	-	-	$ -	$ -	$ -	$ -	$ -	$ -
US Bureau of Reclamation	-	-	-	$ -	$ -	$ -	$ -	$ -	$ -
Yolo County Flood Control & WCD									
Comments:				**15,869,466.75**	**$ 12,125,000**	**$ 3,744,467**	**$ 3,762,863.25**	**$ 2,875,000.00**	**$ 887,863.25**

Working Draft, Subject to Change

Attachment A-1

TASK ORDER #4

Sites Reservoir Supplemental EIR/EIS

Information and Operations Evaluation Support

Modification No. 01: This Task Order No. 4 is hereby authorized, and made part of, the Standard Agreement for Professionals Services executed November 3, 2015.

This task order identifies necessary tasks to provide supplemental EIR/EIS information and operations evaluation support.

The revised EIR/EIS, operations plan, modeling and associated support for the Water Storage Investment Program (WSIP) application submitted on August 14, 2017 is the latest iteration of the evaluation of the proposed Sites Project.

During Phase 1, additional information needs were identified that require evaluation. These include information regarding seven major topics/areas of required assistance:

- Anticipated interaction between the proposed Sites Project and the proposed CA WaterFix
- Historical flow patterns along the Sacramento River and needed aquatic species bypass flow criteria
- Identification of side-channel/floodplain areas and flows for habitat
- Delta Exporter participants needs and options for Sites Project deliveries.
- Supplemental Information to the Draft EIR/EIS
- IOS model WSIP approach development
- Technical Engineering Assistance to Support the Evaluation of Conveyance Options for Sites Reservoir

The seven tasks in this Scope of Work (SOW) will provide information to begin to evaluate these issues for use in future studies. Tasks 2 and 3 are divided into two subtasks “A” and “B” to describe A) the work that will be conducted in the initial 60-day period, and B) the additional work that will be conducted following completion of the initial evaluation. This task order will extend through March 31, 2018 per the current contract.

Task	Within 8 weeks	Beyond 8 weeks
Task 1 – Sites Project and CA Water Fix Integrated Results Update	$ 100,000.00	$ -
Task 2 – Historical Hydrographs, Fisheries Needs and Potential Sites Project Diversion Criteria	$ 85,000.00	$ 160,000.00
Task 3 – Identification of Side-channel/Floodplain Areas and Flows for Habitat	$ 60,000.00	$ 80,000.00
Task 4 – Delta Exporter Participants Needs and Options for Sites Project Deliveries	$ -	$ 120,000.00
Task 5 – Support of EIR Supplemental Information Document	$ 35,000.00	$ 150,000.00
Task 6 – IOS Model WSIP Approach	$ -	$ 100,000.00
Task 7 – Technical Engineering Support	$ 45,000.00	$ -
Task 1 - 7 Grand Total	$ 325,000.00	$ 610,000.00

Task 1 – Sites Project and CA WaterFix Integrated Results Update ($100,000; all effort within initial 60 days)

Purpose: To evaluate the potential conflicts and benefits of coordinated operations of the Sites Project and CA WaterFix from a biological and water supply perspective.

Integrated analysis of Sites Project and CA WaterFix will be updated under this task. Integrated analysis is useful to describe potential conflicts and benefits of operating the two proposed projects together. Previously, an integrated analysis of Sites Project and CA WaterFix was developed based on project descriptions and assumptions for the Sites Project Draft EIR/S Alternatives modeled in 2011 and the Bay Delta Conservation Plan modeled in 2012. With the WSIP application effort, models have been updated for the Sites Project. Models have also been recently updated for the CA WaterFix program in support of ongoing permitting process.

The work effort will include the following:

1) Prepare for and attend two meetings for setting the assumptions and scope the modeling effort and review key findings once the modeling is completed
2) Prepare merged CALSIM II model with latest capabilities for Sites Project and CA WaterFix operations. Assume current level of development based on DWR 2015 Delivery Capability Report (DCR 2015). Assume that the merged model would reflect the CA WaterFix operations represented in the latest publicly available CALSIM II model (to be obtained from CA DWR)
3) Conduct two model simulations of combined Sites Project and CA WaterFix operations that can be compared with existing Without Project, Sites Project (only) or CA WaterFix (only) modeling simulations
4) Prepare post-processed model outputs
5) Prepare a brief TM to summarize findings

The Without Project condition assumed is based on DWR's DCR 2015 CALSIM II model. All the models developed in this task are assumed to be at current climate consistent with the Without Project condition model.

Schedule:

Task 1 will be completed 60-days from NTP subject to scheduling of meetings and receiving direction from the Authority.

Task 2 – Historical Hydrographs, Fisheries Needs and Potential Sites Project Diversion Criteria ($245,000; $85,000 effort within initial 60 days)

Purpose: Evaluate available hydrologic information to identify critical flow conditions for fish and assess potential refinements to diversion operations.

The Sites Project operations plan prepared for the WSIP application considered potential requirements regarding the amount of flow that could be diverted to fill the project. These assumed flow criteria were applied at four locations (Sacramento River flow at Red Bluff, Hamilton City, Wilkins Slough, and Freeport) considering variations of flows at a daily time-step. Analysis of daily flows for historical, without project and with project conditions were previously developed and considered in the evaluations of criteria that support the project EIR/S and WSIP application. Discussions with CDFW have identified a need to further evaluate potential impacts of Sites Project operations on aquatic species due to the reduction in water levels, backwater habitat and any other changes in water surface elevation or flow rate because of diversions. This task is to evaluate available hydrologic information and work with Sites Team members and CDFW to identify critical flow conditions for salmonids, sturgeon and smelt, and refinement of diversion operations.

<u>Subtask 2A – Initial 60-Day Evaluation</u>

1) Prepare for and attend up to two meetings
2) Review readily available hydrologic information provided in the 2011 Upper Sacramento River Daily Operations Model (USRDOM) dataset. Review available hydrologic information for historical and projected Without Project flow conditions for selected reaches along the Sacramento River from Keswick to Knights Landing including weir-spills into the Sutter Bypass and the Sacramento River at Freeport.
3) In coordination with CDFW and Sites Project Team, develop initial information for assessing the importance of flow for aquatic habitat for select fish species and life stages and at various locations; and identify preliminary metrics that characterize the seasonal flow needs for fish
4) Conduct a CALSIM II model simulation with modified diversion operations to mitigate potential impacts to aquatic species. The modified diversion logic will include two operations changes. The simulations will use either existing Delta conveyance or CA Water Fix operations that can be compared with the Without Project baseline.
5) Run a USRDOM simulation to provide more detailed assessment of operations on a daily time step.
6) Prepare a brief draft and final TM to summarize findings

The Without Project and With Project conditions will be based on DWR's DCR 2015 CALSIM II model. All the models developed in this task are assumed to be at current climate consistent with the Without Project condition model.

Schedule:

Work under subtask 2A will completed in 60 days from notice to proceed (NTP).

Subtask 2B – Further Refine Hydrologic Evaluation

1) Prepare for and attend up to six meetings throughout the subtasks listed below
2) Prepare additional hydrologic information for historical and projected without project flow conditions for selected reaches along the Sacramento River from Keswick to Knights Landing including weir-spills into the Sutter Bypass and the Sacramento River at Freeport. Information will include daily and monthly flows and be used to develop flow frequency analyses and flow-duration analyses
3) In coordination with CDFW and the Sites Project Team, further develop and refine information for assessing the importance of flow for aquatic habitat for select fish species and life stages; and identify metrics that characterize the seasonal flow needs for fish
4) Develop a spreadsheet screening tool to evaluate flow information, potential operations requirements, estimates of Sites Project fills, and potential impacts on the biological instream flow metrics defined in steps 2 and 3.
5) Use the spreadsheet tool to evaluate the following:
    a. Current diversion operations in the Sites Project EIR and WSIP application
    b. In coordination with CDFW, evaluate up to six potential modifications to the diversion criteria for further consideration
    c. Select two scenarios to be further evaluated with CALSIM II; a scenario may include multiple modifications to diversion operations.
6) Conduct CALSIM II model simulations of two scenarios (selected in step 5) with the project under either existing Delta conveyance or CA Water Fix operations.
7) Run USRDOM to provide more detailed assessment of impacts on a daily time step. Evaluate two scenarios with completed CALSIM II results from step 6.
8) Prepare a brief draft and final TM to summarize findings

The Without Project and With Project conditions will be based on DWR's DCR 2015 CALSIM II model. All the models developed in this task are assumed to be at current climate consistent with the Without Project condition model.

Task 3 – Identification of Side-channel/Floodplain Areas and Flows for Habitat ($140,000; $60,000 effort within initial 60 days)

Purpose: Evaluate potential effects of Sites Reservoir diversions on Sacramento River ecologically-important riverine habitats and features, including riparian, seasonal wetlands, and floodplain habitats, as well as side-channel and back-channel areas.

The Sites Project operations plan prepared for the WSIP application considered potential requirements regarding the amount of flow that could be diverted to fill the project (bypass criteria). Flows are an important factor in the availability and quality of aquatic and terrestrial habitat along the Sacramento River, and the geomorphic processes that support habitat development. More information is needed to determine the potential effects of Sites Reservoir diversions on Sacramento River flows, and potential impacts to habitat forming and sustaining processes, including:

- Hydrologic connectivity onto floodplains, seasonal wetlands, and riparian areas
- Geomorphic processes such as bank scour, channel avulsion, bar formation, and secondary channel formation
- Activation of existing side-channel and back-channel features

Existing information will be used to identify ecologically-important riverine habitats and features, including riparian, seasonal wetlands, and floodplain habitats, as well as side-channel and back-channel areas along Sacramento River. Flow – stage curves will be compiled from existing information (previously developed for CVFPP) and additional HEC-RAS analyses. Inundation information for various flow conditions will be developed using model results and flow – stage curves based on existing LIDAR and bathymetry data (CVFED). Relationships of flows to inundation of ecologically-important riverine habitats and features, activation of side-channel features, residence times and geomorphic processes will be compiled.

Subtask 3A – Initial 60-day Evaluation

1) Use readily available information for development of initial ecosystem metrics
2) Prepare the HEC-RAS model for simulating a selected river reach between Keswick Dam and Knights Landing for analysis. Convert to HEC-RAS version 5.0
3) Verify calibration of the model to assess quality of simulated model results for low flow conditions covering the range of flows needed for this analyses
4) Conduct HEC-RAS simulations for a range of up to 6 flow conditions and process model results for the selected reach. Configure flow boundary conditions based on appropriate hydrology.
5) Prepare preliminary draft TM and graphics.

Schedule:

Work under subtask 3A will completed in 60 days from notice to proceed (NTP).

Subtask 3B – Further Refine Side-channel/Floodplain Areas and Flows for Habitat

1) Prepare for and attend up to two meetings throughout the subtasks listed below
2) In coordination with CDFW and the Sites Project Team, refine and add to the initial information (developed in Task 2) for assessing the importance of flow, inundation, residence time and geomorphic processes at various locations for maintenance and resilience of aquatic, riparian, and floodplain habitats, and identify specific metrics
3) Research and compile available information to supplement Task 2 and identify gaps in information
4) Select up to three reaches for more detailed assessment; select the range of flows to be used for evaluation

5) Prepare HEC-RAS model for this analysis using DWR Central Valley Flood Evaluation and Delineation (CVFED) Sacramento River Routing Model including:
    a. Clip the model to the study area and configure the boundary conditions based on appropriate hydrology
    b. Verify calibration of the model to assess quality of simulated model results for low flow conditions covering the range of flows needed for this analyses
6) Conduct HEC-RAS model simulations (up to 12 simulations) to provide model results for selected reaches
7) Prepare maps to graphically show habitat and side-channel inundation areas
    a. Verify and extend flow-stage rating curves (previously developed for DWR Central Valley Flood Protection Plan)
    b. Prepare inundation mapping results for the select locations and flows from Subtask 4
    c. Develop flow-inundation area, stream power (scour / deposition) and residence time relationships
    d. Use the initial metrics developed in Task 2 to assess conditions for areas selected in Step 4
    e. Perform post-processing of results
8) Prepare a brief TM to summarize findings

Task 4 – Delta Exporter Participants Needs and Options for Sites Project Deliveries ($120,000; no effort within initial 60 days)

Purpose: Evaluate Sites Project operations to provide water deliveries to meet south-of-delta project participant water supply needs.

Previously, Sites Project Colusa Basin participants had an opportunity to investigate their assumptions and options for water supply from the project. Other participants, specifically Delta exporter participants, have requested additional information about how the Sites Project would perform to meet their water supply needs. This task will include meetings and development of assumptions and model simulations to support the evaluation.

The process will generally include:

- Review assumptions used for the WSIP application and participants' potential water supply needs including year type conditions and monthly patterns (comparing information provided by participants and results of materials used for the WSIP application)
- Formulate assumptions for what-if analyses (in addition to WSIP application) considering
    - Range (magnitude and variation) of participants' water supply needs
    - Accounting of Project flows, including Sites Reservoir releases, Delta exports and deliveries to participants
    - Rules governing participants' potential deliveries, Delta exports and cooperative operations with the SWP and/or CVP (i.e. integrated with SWP operations vs. like

water transfer under Monterey Agreement Article 55 or other export window/priority combination)

- Review results of what-if analyses (prepared in support of the process)
- Support participants in selecting best options to move forward with in Phase 2

The work effort will include the following:

1) Prepare for and attend up to four meetings for setting the assumptions and scope the modeling effort and to review key findings once the modeling is completed
2) Prepare CALSIM II model capabilities for the range of analyses including activating and testing the water transfer (WTS) logic and tailoring it to specific needs of the analyses, including development and testing of WTS logic in conjunction with CA Water Fix (from Task 1); the WTS logic will allow for Preliminary tracking and accounting of Delta Exporter participants deliveries from Sites Project
3) Prepare post-analysis tools to support tracking and accounting of Delta participant's deliveries – prepare spreadsheet for tracking, accounting and presentation of Delta Exporter participant's deliveries, shortfalls and controls
4) Conduct up to four model simulations of Delta Exporter participant's delivery operations with the project under either existing Delta conveyance that can be compared with existing Without Project
5) Prepare post-processed model outputs in similar format to the DCR 2015 Report
6) Prepare a brief TM to summarize findings

The Without Project condition assumed is based on DWR's DCR 2015 CALSIM II model. All the models developed in this task are assumed to be at current climate consistent with the Without Project condition model. Additional effort will be needed to develop WSIP 2030 based models if desired.

Schedule:

Task 4 will begin following completion of the analyses needed to supplement the Draft EIR/EIS.

Task 5 –Supplemental Information to the Draft EIR/EIS ($185,000; $35,000 effort within initial 60 days)

Purpose: Develop supplemental information to the Sites Reservoir Project Draft Public EIR/EIS including proposed mitigation measures to minimize fisheries impacts.

The following outlines the scope and products that would be made available to include toward the development of supplemental information to the Sites Reservoir Project Draft Public EIR/EIS currently out for public review. It is assumed this informational document will be no more than 25 pages in length and will identify no new categories of potentially significant impacts or require additional field review. It is assumed that a small portion of this task will be conducted during the initial 60-day period to support timely completion of the entire task. The work effort will include the following:

1. Mitigation measure descriptions will be developed based on information developed by AECOM (under their separate scope of work) and tasks identified above for the proposed mitigation measures. These are expected to include or account for:
    a. Increased capacity of the Delevan diversion and pipeline up to 3000 cfs and reduction of the proposed diversions at the Red Bluff Pumping Plant

b. New diversions from the Colusa Basin Drain and/or from Stoney Creek/Black Butte Reservoir forebay into the TCCA canal.
c. Development replacement habitat along or adjacent to the Sacramento River

2. Based on the refined/ augmented information on historical (and current) hydrology identified in tasks identified above, baseline conditions for aquatic species, habitat needs and opportunities in the Sacramento River from Red Bluff to the Delta will be updated and summarized in the supplemental information document, focusing on the reach from Red Bluff to the confluence on the Feather River.

3. Potential replacement habitat locations will be identified and general recommended enhancement actions identified based on other similar efforts conducted in the Sacramento River and other river systems in part based on input from Project participants (e.g. RD-108 and GCID).

4. Potential impacts (and benefits as appropriate) to special status aquatic species associated with proposed changes in flow in the Sacramento River resulting from Sites Project diversions will be qualitatively identified.

5. Impacts to other relevant resource/issue areas will be qualitatively assessed based on the potential for impacts within each resource/issue area.

6. An approximately 25-page draft and final supplemental information document will be prepared in close coordination with the Authority. Comments on the final supplemental information document are assumed to be minimal based on Authority and Reclamation participation in the development of the draft document.

7. A total of two meetings in Sacramento are assumed as part of this task.

Task 6 – IOS Model WSIP Approach Development ($100,000; no effort within initial 60 days)

Purpose: Develop and implement a modeling approach to conduct winter run life cycle analyses over a range of potential future hydrologic conditions to demonstrate Sites Project Fisheries benefits.

The stochastic Interactive Object-Oriented Simulation Model (IOS) accounts for the entire life cycle of the winter run from eggs to returning spawners, but has limited capability to incorporate hydrologic variability. This makes the application of IOS difficult under uncertain future conditions including climate change and sea level rise. An approach will be developed to apply IOS in a probabilistic hydrologic context that allows for application of the model under uncertain future conditions, such as those prescribed by the California Water Commission in year 2030 level climate change scenario. This approach is anticipated to allow simulation of winter run life cycle analyses over a range of potential future hydrologic conditions.

The work effort will include:

1) Review of relevant literature and potential alternative approaches
2) Evaluation and selection of a recommended approach

3) Preliminary test simulations to validate approach
4) Prepare and conduct a full test simulation
5) Prepare a brief TM to summarize the methodology and results.

Task 7 – Technical Engineering Assistance to Support the Evaluation of Conveyance Options for Sites Reservoir ($45,000; all effort within initial 60 days)

Purpose: Provide technical assistance in evaluation of alternative conveyance options to fill Sites Reservoir.

Assistance will be provided in the evaluation of conveyance options for Sites Reservoir. Support will be provided for two primary subtasks:

~~1) Provide background and engineering support (including order of magnitude cost estimate support) related to the potential use of Stony Creek flows to supplement proposed TCCA Sacramento diversions. Support will include historic knowledge including through development of the previous Stony Creek Fish, Wildlife, and Water Use Management Plan and potential diversion facilities.~~

2) Provide engineering support (including order of magnitude cost estimate support) related to potential enlargement of proposed Delevan intake and discharge facility including fish screen configuration, length, and construction. Review of relevant literature and potential alternative approaches
3) A total of two preliminary engineering drawings will be developed.
4) This task assumes one meeting in Sacramento.

IN WITNESS WHEREOF, the parties hereto have caused this Task Order No. 4 to be signed and intend to be legally bound thereby.

CLIENT:		**CH2M HILL Engineers, Inc.:**	
Signature	_____	Signature	_____
Name (printed)	_____	Name (printed)	Allan Highstreet
Title	_____	Title	Vice President
Date	_____	Date	_____

AECOM

WORKING DRAFT SCOPE OF WORK

Amendment 3 to AECOM Contract

September 8, 2017

The amendment is for additional services provided by AECOM to support the to the Sites Project Authority.

MAXWELL OFFICE FLOOD CLEANUP AND REPAIRS COORDINATION AND SUPPORT (TASK 15)

AECOM (Kevin Spesert) is providing support to the Authority in response to flooding that damaged the Authority office on February 18, 2017. Mr. Spesert's services have included:

- Meeting with Colusa County and the insurance carrier on behalf of the Authority to get the Maxwell clean-up underway
- Coordinated removal of all of the JPA furniture and equipment out of the office and put it in storage
- Interaction with the County's contractors for clean-up and repairs to the building

RESERVOIR COMMITTEE MEETING MINUTES (TASK 16)

AECOM will provide meeting minutes for the Reservoir Committee meetings beginning in April 2017 through May 2018. There will be no meeting in August 2017. Minutes will be provided for a total of 12 meetings.

DELEVAN PIPELINE ENLARGEMENT (TASK 17)

More water could be diverted at the Delevan intake if diversions are reduced at Red Bluff. AECOM will provide a conceptual level (not feasibility level) review of the following features:

- Enlarging the Delevan Intake (including screens) for 3,000 cfs diversion capacity and with release capacity up to a maximum of 3,000 cfs. *Requires review of screen configuration by others (separately contracted - not included in cost – should be in engineering task in CH2M Hill scope).*
- Enlarging the Delevan Pipeline for 3,000 cfs capacity (pumped)
- Evaluation of impact to facility layout for the Delevan Pumping/Generating Plant (roads, levees, etc.)

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- Evaluation on the effect of enlarging the pumping plant on energy requirements/transmission lines (poles versus towers)
- Approximate costs for tunneling versus adding a third pipeline
- Concept level cost estimate

It is assumed that there will be no enlargement of Holthouse Reservoir or the Sites Pumping/Generating Plant.

Deliverables will be a draft and final tech memo with figures (no revised plans) and cost estimate. Anticipate up to three Reservoir Committee or Board Meeting presentations of findings.

COLUSA BASIN DRAIN DIVERSION (TASK 18)

AECOM previously evaluated the Colusa Basin Drain as a potential intake location for Sites Reservoir (AECOM, 2016). The average annual diversion was estimated at 40 to 60 TAF for intake capacities of 250 to 2,000 cfs. AECOM would further evaluate the cost for facilities and options to divert water from the Colusa Basin Drain.

- Conceptual engineering for pumping plants and pipelines to divert water into Sites Reservoir
- Concept level cost estimates
- Assumes that MBK can review and clarify assumptions on yield under their existing contract with the Authority

Deliverables will be a draft and final tech memo with figures (no revised plans) and cost estimate. Anticipate up to three Reservoir Committee or Board Meeting presentations of findings.

~~STONY CREEK DIVERSION (TASK 19)~~

~~DWR previously evaluated the Stony Creek Pipeline, a new pipeline that would convey flows from the existing Black Butte Afterbay on Stony Creek to the T-C Canal. Diversion capacities of 1,000- and 2,000 cfs were evaluated that would use existing conveyance space in the lower portion of the T-C Canal. The Stony Creek intake was feasible, but more expensive than using the pumps at Red Bluff and, therefore, dropped from consideration at that time. Diversion concepts would include the potential use of an Obermeyer Dam to support diversions into the T-C Canal. AECOM would complete the following tasks.~~

- ~~Conceptual engineering for diversion of water into Sites Reservoir, possibly using an Obermeyer Dam~~
- ~~Concept level cost estimates~~
- ~~Coordination with TCCA regarding potential impacts to operation of the T-C Canal~~

~~Deliverables will be a draft and final tech memo with figures (no revised plans) and cost estimate. Anticipate up to three Reservoir Committee or Board Meeting presentations of findings.~~

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RELOCATION OF SITES PUMPING/GENERATING PLANT (TASK 20)

AECOM will evaluate moving the Sites Pumping/Generating Plant from the west side of Holthouse Reservoir to the east side. This would reduce impacts to T-C Canal operations and provide additional head for discharge through the Delevan pipeline. AECOM will provide a concept-level engineering design and cost estimate.

Deliverables will be a draft and final tech memo with figures (no revised plans) and cost estimate. Anticipate up to three Reservoir Committee or Board Meeting presentations of findings.

EVALUATION OF EMERGENCY RELEASE (TASK 21)

This task should not be implemented prior to Task 19. Effort includes an updated evaluation of potential emergency release options for the Sites and Holthouse Dams with quantified improvements over previous design. Analysis would show the base flow without changes and the improved release with the proposed changes (e.g., would flows be reduced to the Colusa Basin Drain with the modified reservoir configuration and additional Delevan pipeline).

The results of the evaluation will indicate how much water would go to the Sacramento River versus how much would go into the Colusa Basin Drain under 1) current configuration; 2) enlarged Delevan pipeline; 3) reconfigured Holthouse Reservoir with east end Sites Pumping/Generating Plant; and 4) a combination of items 2 and 3. The evaluation will not provide an updated flood study with inundation areas for either the Colusa Basin Drain or the Sacramento River, based on the additional flows. However, the evaluation would be suitable to define the parameters of a flood study. Eventually a new flood study may be required for the project. This is likely a Phase 2 item.

Deliverables will be a draft and final tech memo with figures. Anticipate up to three Reservoir Committee or Board Meeting presentations of findings.

~~OPERATIONAL MODEL FOR HOLTHOUSE RESERVOIR (TASK 22)~~

~~AECOM will develop a spreadsheet model to evaluate Holthouse Reservoir operations at a timescale sufficient to support equipment sizing and operational impacts to the T-C Canal.~~

NEGOTIATION SUPPORT FOR WSIP FUNDING (TASK 23)

AECOM will provide updated benefits, cost allocation, and cost assignment to support the negotiation of funding for WSIP. Additional work includes revisions to the request for early funding. The assumed level of effort does

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not include the redesign of Sites Reservoir facilities (e.g., downsizing the reservoir).

ANALYSIS OF REPAYMENT COST SCENARIOS (TASK 24)

AECOM will evaluate the construction cost and repayment cost for a variety of project scenarios as directed by the Reservoir Committee and Board. Costs will be extrapolated using prior studies and will be at an appraisal level. Yields will also be estimated from prior studies, or can be incorporated from modeling work by others. It is assumed that deliveries will be in the same proportions that were used in the WSIP application for this screening analysis. Effort will include the development of curves for project repayment under various scenarios. The following scenarios were evaluated in the WSIP application.

Deliveries in TAF/Yr for WSIP Application

Period	WSIP Public Benefits			Non-Proposition 1 Eligible Benefits			Total Water
	Coldwater Pool [a]	Yolo Bypass	Incremental Level 4 Refuge	Agricultural Water Supply	M&I Water Supply	Recaptured Water Supply	
2030	109	39	35	137	106	11	437
2045	102	39	33	148	110	11	443
2070	90	39	31	167	117	11	455
Average (2030–2122)	**94**	**39**	**32**	**161**	**114**	**11**	**451**

To estimate the total unit costs (i.e. capital repayment and O&M), the following scenarios will be evaluated.

1. Average total water deliveries of 420, 440, and 460 TAF. It is assumed that project costs will be proportionately distributed between all project purposes based on the changes in water deliveries.
2. WSIP assigned 59% of project costs to the Authority. Repayment will be estimated for 60%, 65%, 70%, 75%, and 80% assignment of costs to the Authority (i.e., less funding for public benefits) using the 2030 period deliveries.
3. It is assumed that the ratio of North of Delta to South of Delta deliveries will be a constant.
4. Unless directed otherwise all cost curves will be estimated using financial and funding assumptions consistent with those used for the WSIP application.

AECOM will also address up to six of the following scenarios.

1. Analysis of a 1.2 MAF reservoir without a Delevan intake
2. Analysis of a 1.2 MAF reservoir with a 2,000 cfs Delevan intake
3. Analysis of a 1.8 MAF reservoir with a 3,000 cfs capacity for Delevan

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4. Analysis of a 1.2 MAF reservoir with 1 Delevan intake pipeline and 1 CBD intake pipeline
5. Analysis of a 1.8 MAF reservoir with a 3,000 cfs intake for Delevan and a 1,000 cfs intake on the CBD.
6. Analysis of a 1.8 MAF reservoir with a 2,000 cfs intake for Delevan and a 250 cfs intake for the CBD.
7. Analysis of a 1.8 MAF reservoir with a 3,000 cfs intake for Delevan and 1,000 cfs from Stony Creek.
8. Analysis of a 1.8 MAF reservoir with a 3,000 cfs intake for Delevan, a 1,000 cfs intake for the CBD, and 1,000 cfs from Stony Creek.

Similar scenarios may be substituted by the Reservoir Committee and Board for those described above.

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EXHIBIT A: SERVICES

Services: *See attached Scope of Work*

Period of Performance: February 18, 2017 through October 31, 2018

Task 15 Amendment – Flood Cleanup Support	$25,820
Task 16 Amendment – Reservoir Committee Minutes	$9,540
Task 17 – Delevan Enlargement	$79,000
Task 18 – Colusa Basin Drain Diversion	$25,000
~~Task 19 – Stony Creek Diversion~~	~~$25,000~~
Task 20 – Relocation of Sites Pumping/Generating Plant	$37,000
Task 21 – Evaluation of Emergency Release Concepts	$20,000
Task 22 – Operational Model for Holthouse Reservoir	$100,000
Task 23 – Negotiation Support for WSIP Funding	$20,000
Task 24 – Analysis of Repayment Cost Scenarios	$45,000

Deliverables: *See attached Scope of Work*

AECOM Project Manager

Name	Jeff Herrin
Title	Project Manager
Address	2870 Gateway Oaks Drive, Sacramento, CA 95833
Phone Number	(916)679-2084
Email Address	Jeff.Herrin@aecom.com

By signing Exhibit A, the Sites Project Authority (a) approves AECOM to begin work solely on Tasks 15 through 24 (per attached Scope of Work) with a total budget of $386,360 And (b) intends to manage AECOM's services using a 3-month rolling forecast of incurred cost as provided monthly by AECOM's Project Manager combined with the 30-day provision in Exhibit B, section 6 to the Agreement.	**Client: Sites Project Authority** _____ Signature _____James C. Watson_____ Printed Name _____General Manager_____ Printed Title

APPENDIX B: SCOPE OF SERVICES

The Sites Project Authority (Authority) was formed to develop, own, and manage the Sites Reservoir Project (Project) and requires continuation of support in the development and coordination of the Project and related analyses, authorizations and permits. ICF Jones & Stokes, Inc. (ICF) will continue to provide Mr. Rob Thomson and other staff as requested by the Authority. Mr. Thomson will continue to serve as the owner's Environmental Planning and Permitting Compliance (EPP) Manager, reporting directly to the General Manager (Jim Watson). Mr. Thomson will also serve as ICF's Project Manager responsible for coordinating and managing other ICF staff supporting the Project.

The not to exceed amount for this scope of services, for the period from September 1 2017, to August 31, 2018 is $550,000.

Scope of Services:

Task 1: Support Development of the NEPA and CEQA Compliance Process and Documents

Mr. Thomson will continue to serve as the primary point of contact for the Authority regarding the preparation and revision of the Draft EIR/S by other consultants. Revision of the EIR/S will be in accordance with the Authority-approved strategy. Revision of the Draft EIR/S, technical studies, and related documents will be primarily prepared by CH2M with support from AECOM and ICF staff, as necessary.

It is expected that the Authority will direct the development of 'supplemental information' during the Draft EIR/S public review period. This information is intended to clarify and augment the information in the draft to facilitate review by regulatory agencies.

In addition, effort anticipated in this period of performance includes:

a) Preparing for and participation in the public meetings on the Draft EIR/S

b) Responding to requests for information and clarifications on the contents of the Draft EIR/S, and

c) Preparing for responding to comments on the Draft EIR/S including review of comments, organizing the responses to comment effort (scheduled to occur after this period of performance) and the initial drafting of thematic responses to comments

Mr. Thomson, with support from ICF staff, as necessary, will direct and control the revision of the Draft EIR/S and the planning for the comment response phase.

Mr. Jim Lecky will be the primary point of contact for direct interaction with the permitting agencies to augment the Draft EIR/EIS to address concerns by resources agencies. This would include:

a) The description of additional information and reanalysis of impacts to aquatic species to address needs of resource agencies and ensure they are addressed in the documents

b) Additional mitigation measures that could be included to further reduce or eliminate impacts described immediately above

Mr. Lecky will also support the initial development of responses to comments on the DEIR/EIS. As necessary Mr. Lecky may task additional staff at ICF to participate in the review and analysis of relevant information and development of issue papers to facilitate agreement of relevance and appropriate use of information in the impact analyses.

Mr. Lecky will also work cooperatively with resource agency staff to explore additional measures to minimize and mitigate impacts of the project on biological resources. And where appropriate, work with contractors to integrate such measures into the NEPA/CEQA documents.

Task 2: Support Development of the Water Storage Investment Program (WSIP) Proposal

In coordination with the General Manager and consultants, Mr. Thomson, with assistance from ICF staff, will support the explanation of studies and application submitted to the California Water Commission. Mr. Thomson will also act as the coordination point for the Authority consultants in the development of responses to all comments and questions by the Commission regarding environmental planning and permitting issues and other aspects of the Authority's proposal.

Mr. Lecky will also support and direct other ICF staff to develop responses to comment on the WSIP application.

Task 3: Support Future Permit Acquisition Planning

The principal effort for preparation and acquisition of permits for the Project is planned to occur after the Water Commission's initial funding decision in mid-2018. Permit planning and informal coordination for the remainder of 2017 and into 2018 will primarily focus on preliminary coordination with key permitting agencies with regard to permit conditions, permit process and assisting in providing coordination with the Draft and Final EIR/EIS.

Mr. Thomson, with support from ICF staff, will be the primary point of contact regarding all permit planning and coordination, including initial, informal coordination with the regulating agency staff. Preparation of applications, technical studies, and all other related documents will be prepared by consultant(s) selected by the Authority.

Mr. Jim Lecky will be the primary point of contact for direct interaction with the permitting agencies primarily addressing aquatic species issues. He will directly interface with others in the consulting team including:

a) Identify the appropriate and available scientific information that may be applicable to environmental resources that could be influenced by the Sites Project.

b) Interface with regulatory agencies to understand and communicate the Sites Project goals and constraints and the agencies requirements.

c) Work with ICF Staff and CH2M analysts to provide information regarding the feasibility of measures proposed by agency staff to minimize and mitigate adverse effects of the project on fishery resources.

d) Work with agency staff to identify information gaps and develop strategies for filling those gaps without delay in the project timeline. These analyses will inform the development of adaptive management strategies, which will be important to managing project impacts in the near term as well as in the face of environmental uncertainties associated with climate change scenarios.

Under the direction of the General Manager, ICF will contribute to other future permit acquisition support needs such as preparation of preliminary materials that support permit planning and informal coordination. Efforts could include resource maps, conceptual figures, or focused technical memorandums related to minimizing and mitigating adverse effects. Specific tasks, deliverables, and timelines will be identified and approved through discussions with the General Manager.

Task 4: Support Board and Committee Communications

In coordination with the General Manager, Mr. Thomson, will continue to support the communications with the Authority Board, Reservoir Committee and work-groups. Mr. Thomson, with assistance from appropriate ICF or other contractor staff, will prepare documents and briefing materials addressing environmental planning and permitting issues for use by the Board, Committees and work-groups.

Working Draft
Subject to Change

Table 1. Cost Estimate for Sites Project Authority Sept 2017 to Sept 2018

	Consulting Staff							
Employee Name	Thomson Rob	Lecky Jam	Grimaldo Len	Briard Mon				
Project Role	*Environmental Program Manager*	*ESA Advisor*	*Biologist*	*Environmental Planner*				
Task *Labor Classification*	Sr Proj Dir	Tech Dir	Tech Dir	Sr Consult II	Subtotal	Labor Total	Direct Expenses	Total Price
Support Preparation of the EIR/S	400	80	20	40	$134,300	$134,300		
Support Preparation of the WSIP Application	160	40	16	16	$57,480	$57,480		
Support Preparation of Applicable Permits and Approvals	400	720	40	40	$289,400	$289,400		
Support Authority Board	160	48	8	20	$58,160	$58,160		
Total hours	1,120	888	84	116				
ICF E&P 2017 Billing Rates	$260	$235	$235	$170				
Subtotals	$291,200	$208,680	$19,740	$19,720	$539,340	$539,340		
Direct Expenses								
521.00 Meals, and Lodging							$15,000	
522.00 Airfares							$22,500	
523.05 Travel, Auto, incld. Mileage at current IRS rate (.535/mile)							$9,500	
Mark up on all non-labor costs and subcontractors: 10%							$4,700	
Direct expense subtotal							$51,700	
Total price								$591,040