

STATE OF CALIFORNIA
Budget Change Proposal - Cover Sheet
 DF-46 (REV 08/15)

Fiscal Year 2016/17	Business Unit 3860	Department Water Resources	Priority No.
Budget Request Name 3860-001-BCP-DP-2016-A1		Program 3230	Subprogram

Budget Request Description
 System Reoperation Program, and Surface Storage Program: Reversion and new appropriation of funds

Budget Request Summary

This proposal requests the reversion of approximately \$2.765 million of the remaining balances from Fiscal Year (FY) 2014-15 through FY 2015-16 and a reduction of \$1.235 million in the FY 2016-17 baseline from Proposition 84, Chapter 4, Section 75041. This proposal also requests a new appropriation of \$4 million (State Operations) over four years (\$1 million per year from FY 2017-18 through FY 2020-21) to complete the System Reoperation study using 3 existing positions.

This proposal also requests the reversion of approximately \$225,000 of the remaining balances from FY 2014-15 and FY 2015-16 from Proposition 84, Chapter 4, Section 75041 and a new appropriation of \$225,000 (State Operations) over three years (\$75,000 per year for FY 2016-17 through FY 2018-19) for the Surface Storage Program using 0.25 existing position.

Requires Legislation <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Code Section(s) to be Added/Amended/Repealed	
Does this BCP contain information technology (IT) components? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes, departmental Chief Information Officer must sign.</i>	Department CIO	Date

For IT requests, specify the date a Special Project Report (SPR) or Feasibility Study Report (FSR) was approved by the Department of Technology, or previously by the Department of Finance.

FSR SPR Project No. Date:

If proposal affects another department, does other department concur with proposal? Yes No
 Attach comments of affected department, signed and dated by the department director or designee.

Prepared By Ajay Goyal	Date 1/29/2016	Reviewed By <i>[Signature]</i>	Date 3/18/16
Department Director <i>[Signature]</i>	Date 3-21-2016	Agency Secretary <i>[Signature]</i>	Date 3/22/16

Department of Finance Use Only

Additional Review: Capital Outlay ITCU FSCU OSAE CALSTARS Dept. of Technology

Request Type: Policy Workload Budget per Government Code 13308.05

PPBA	Original Signed by Amanda Martini	Date submitted to the Legislature 4-1-16
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BCP Fiscal Detail Sheet

BCP Title: System Reoperation Program, and Surface Storage Program

DP Name: 3860-001-BCP-DP-2016-A1

Budget Request Summary

	FY16					
	CY	BY	BY+1	BY+2	BY+3	BY+4
Salaries and Wages						
Earnings - Permanent	0	34	346	346	312	312
Total Salaries and Wages	\$0	\$34	\$346	\$346	\$312	\$312
Total Staff Benefits	0	14	145	145	131	131
Total Personal Services	\$0	\$48	\$491	\$491	\$443	\$443
Operating Expenses and Equipment						
5301 - General Expense	0	22	174	174	152	152
5302 - Printing	0	1	5	5	4	4
5304 - Communications	0	1	5	5	4	4
5320 - Travel: In-State	0	1	5	5	4	4
5322 - Training	0	1	15	15	14	14
5340 - Consulting and Professional Services -	0	0	375	375	375	375
5346 - Information Technology	0	1	5	5	4	4
5490 - Special Items of Expense	0	-1,235	0	0	0	0
Total Operating Expenses and Equipment	\$0	-\$1,208	\$584	\$584	\$557	\$557
Total Budget Request	\$0	-\$1,160	\$1,075	\$1,075	\$1,000	\$1,000
Fund Summary						
Fund Source - State Operations						
6051 - Safe Drinking Water, Water Quality and	0	-1,160	1,075	1,075	1,000	1,000
Total State Operations Expenditures	\$0	-\$1,160	\$1,075	\$1,075	\$1,000	\$1,000
Total All Funds	\$0	-\$1,160	\$1,075	\$1,075	\$1,000	\$1,000
Program Summary						
Program Funding						
3230 - Continuing Formulation of the California	0	-1,160	1,075	1,075	1,000	1,000
Total All Programs	\$0	-\$1,160	\$1,075	\$1,075	\$1,000	\$1,000

Personal Services Details

	CY	BY	BY+1	BY+2	BY+3	BY+4
Salaries and Wages						
VR00 - Various	0	34	346	346	312	312
Total Salaries and Wages	\$0	\$34	\$346	\$346	\$312	\$312
Staff Benefits						
5150350 - Health Insurance	0	7	75	75	68	68
5150600 - Retirement - General	0	7	70	70	63	63
Total Staff Benefits	\$0	\$14	\$145	\$145	\$131	\$131
Total Personal Services	\$0	\$48	\$491	\$491	\$443	\$443

Analysis of Problem

A. Budget Request Summary

System Reoperation Program

This proposal requests the reversion of approximately \$2.765 million of the remaining balances from Fiscal Year (FY) 2014-15 through FY 2015-16 and a reduction of \$1 million in the FY 2016-17 baseline from Proposition 84, Chapter 4, Section 75041. This proposal also requests a new appropriation of \$4 million (State Operations) over four years (\$1 million per year from FY 2017-18 through FY 2020-21) to complete the System Reoperation Study using 3 existing positions.

As mandated by Senate Bill (SB) X2 1 (Water Quality, Flood Control, Water Storage, and Wildlife Preservation, 2008), this funding is needed to complete the feasibility analyses of the system reoperation strategies to meet the objectives of water supply reliability improvements, water quality improvements, flood risk reduction, and ecosystem enhancement and protection. Two major statutes (Sustainable Groundwater Management Act (SGMA) and Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Proposition 1)) have changed water management in California. The system reoperation analyses will need to incorporate and analyze the implementation of these statutes in the evaluation of reoperation strategies.

Surface Storage Program

This proposal requests the reversion of approximately \$225,000 of the remaining balances from FY 2014-15 and FY 2015-16 from Proposition 84, Chapter 4, Section 75041 and a new appropriation of \$225,000 (State Operations) over three years (\$75,000 per year for FY 2016-17 through FY 2018-19) to continue the Surface Storage Program. This funding will support 0.25 existing position to coordinate development of Surface Storage Studies with the U.S. Bureau of Reclamation (Reclamation), Sites Joint Powers Authority (Sites JPA), and stakeholders.

THE FOLLOWING REVERSIONS ARE REQUESTED:

\$1,422,509: Fund 6051 – Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Fund of 2006 (Prop 84) – Climate Change Program Ch.4, Section 75041 (3860-001-6051, Program 3230) FY 2014-15 – Budget Act of 2014 (Ch. 25, Stats. 2014).

\$1,567,491: Fund 6051 – Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Fund of 2006 (Prop 84) – Climate Change Program Ch.4, Section 75041 (3860-001-6051, Program 3230) FY 2015-16 – Budget Act of 2015 (Ch. 10, Stats. 2015).

THE FOLLOWING REDUCTION IS REQUESTED FOR THE FY 2016-17 BUDGET BILL:

3860-001-6051—For support of Department of Water Resources, payable from the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Fund of 2006..... 9,040,000 ~~7,805,000~~

Schedule:

(1) 3230-Continuing Formulation of the California Water Plan..... 6,111,000 ~~4,876,000~~

(2) 3245-Public Safety and Prevention of Damage..... 2,929,000

Provisions:

1. The amounts appropriated in this item may be transferred to the Water Resources Revolving Fund (0691) for direct expenditure in such amounts as needed to meet operational needs.

J. Background/History

Chapter 4 of Proposition 84 allocates \$65 million specifically to the Department of Water Resources (DWR) for the purpose of conducting statewide water planning and project feasibility studies for California's

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existing and future needs related to water supply, conveyance and flood control systems. For the past several decades, DWR has been the leading State agency with statewide jurisdictional responsibilities for flood management, long-term water supply planning, and project feasibility studies. The mission of DWR is to manage the water resources of California in cooperation with other agencies to benefit the State's people, and to protect and restore the natural environment. Under this mission statement, four of DWR's stated strategic planning goals are closely aligned with the Proposition 84 objectives.

Goal 1 – Develop and assess strategies for managing the State's water resources, including development of the California Water Plan Update.

Goal 2 – Plan, design, construct, operate, and maintain the State Water Project to achieve maximum flexibility, safety, and reliability.

Goal 3 – Protect and improve the water resources and dependent ecosystems of statewide significance, including the Sacramento San-Joaquin Bay-Delta Estuary.

Goal 4 – Protect lives and infrastructure as they relate to dams, floods, droughts, watersheds impacted by fire and disasters, and assist in other emergencies.

System Reoperation Program

System reoperation in the context of water resources means changing existing operation and management procedures for a water resources system consisting of supply and conveyance facilities and end user demands with the goal of increasing desired benefits from the system. System reoperation seeks to improve existing water facilities to meet existing system needs more efficiently and reliably. Although reoperation of existing facilities is generally regarded as the preferred alternative to constructing major new facilities, minor physical modifications to existing facilities may be necessary to eliminate system constraints and to meet operational goals. Changes to the water rights or regulatory framework for allocating water — for example, modifying existing water rights or creating new supply exchange agreements — may also be required.

SB X2 1 (Water Quality, Flood Control, Water Storage, and Wildlife Preservation, 2008) authorized \$15 million dollars from Proposition 84, Chapter 4, Section 75041 and directed DWR to conduct feasibility studies to identify potential options for reoperation of the State's flood protection and water supply systems that will optimize the use of existing facilities and groundwater storage capacity to achieve these objectives: (1) improve water supply reliability; (2) improve water quality; (3) reduce flood risk; and (4) enhance ecosystem protection and restoration. The \$15 million was split into three major efforts: (1) \$11.4 million for System Reoperation Program, (2) \$2 million for development of the Delta Plan, and (3) \$1.6 million for Climate Change Evaluation, Mitigation, and Adaptation. The system reoperation studies focus on the following areas:

(I) Integration of flood protection and water supply systems to increase water supply reliability and flood protection, improve water quality, and provide for ecosystem protection and restoration.

(II) Reoperation of existing reservoirs, flood facilities, and other water facilities in conjunction with groundwater storage to improve water supply reliability, flood hazard reduction, and ecosystem protection and to reduce groundwater overdraft.

(III) Promotion of more effective groundwater management and protection and greater integration of groundwater and surface water resource uses.

(IV) Improvement of existing water conveyance systems to increase water supply reliability, improve water quality, expand flood protection, and protect and restore ecosystems.

DWR has completed preliminary evaluation of reoperation of Shasta, Oroville, Folsom, and New Exchequer reservoirs, along with evaluation of improved integration of the Central Valley Project (CVP) and State Water Project (SWP).

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Surface Storage Program

In 2008, DWR was authorized \$12 million from Proposition 84, Chapter 4, Section 75041 to complete feasibility studies of the CALFED surface storage projects. This funding has been used to conduct investigations for the following projects in partnership with Reclamation, the Sites JPA, and Contra Costa Water District:

- (1) North-of-the-Delta Offstream Storage Project (NODOS): An administrative draft of the feasibility report and administrative draft Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) for NODOS were completed in 2014. Currently these documents are being refined by Reclamation and the Sites JPA. DWR continues to coordinate in the development of the documents.
- (2) Upper San Joaquin River Basin Storage Investigation (USJRBSI): The public draft of the feasibility report and the EIS for this investigation were completed in 2014. Currently Reclamation is in the process of finalizing these reports. DWR continues to coordinate in the development of the documents.
- (3) Los Vaqueros Reservoir Expansion Project (LVE): The construction of the Los Vaqueros Reservoir Expansion was completed in 2011. Currently the Contra Costa Water District (CCWD) in partnership with Reclamation is conducting feasibility studies for a second enlargement of the reservoir. DWR continues to coordinate in the development of the documents.

Resource History (Dollars in thousands)

Program Budget	PY - 4	PY - 3	PY - 2	PY - 1	PY
SYSTEM REOPERATION					
Authorized Expenditures	873	1,000	6,264	1,970	1,970
Actual Expenditures	873	635	1,100	1,000	1,000
Revenues					
Authorized Positions	3	3	3	3	3
Filled Positions	3	3	3	3	3
Vacancies	0	0	0	0	0

Program Budget	PY - 4	PY - 3	PY - 2	PY - 1	PY
SURFACE STORAGE					
Authorized Expenditures	4,243	5,010	1,554	130	130
Actual Expenditures	4,243	5,010	1,554	7	9
Revenues					
Authorized Positions	5	3	6	0.5	0.5
Filled Positions	5	1.5	6	0.1	0.1
Vacancies	0	1.5	0	0.4	0.4

Workload History

Workload Measure	PY - 4	PY - 3	PY - 2	PY - 1	PY
SYSTEM REOPERATION					
Develop Plan of Study	1.5 PY				
Formulate preliminary reoperation strategies	1.5 PY	3 PY	3 PY		
Preliminary evaluation of reoperation strategies				3 PY	3 PY

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Workload Measure	PY - 4	PY - 3	PY - 2	PY - 1	PY
SURFACE STORAGE					
Conduct analysis of engineering and environmental studies to develop and evaluate alternatives for NODOS, USJRBSI, and LVE	2 PY		2 PY		
Prepare administrative draft of the EIR/EIS and feasibility report for North-of-the-Delta Offstream Storage Project	3 PY	1.5 PY	4 PY		
Coordinate on NODOS, USJRBSI, and LVE with federal, state, and local agencies				0.1 PY	0.1 PY

C. State Level Considerations

Chapter 4 of Proposition 84 specifically designates DWR as the State agency responsible for completion of the specified feasibility studies. This proposal is consistent with DWR's mission to manage the water resources of California, in cooperation with other agencies, to benefit the State's people, and to protect, restore, and enhance the natural environment. This proposal is also consistent with several goals of DWR's Strategic Plan as discussed in Section B above.

In conducting the above specified feasibility studies, DWR will coordinate and solicit input from other State, regional, and local agencies that may have experience, expertise, or relevant data related to water resource planning, water supply reliability, climate change impacts, and improved flood management.

D. Justification

System Reoperation Program (\$4,000,000)

The original work plan prepared in 2009 was to complete the studies by 2014. However, the study proved to be very complex and required extensive engagement with stakeholders. As a result, the project schedule was extended to 2017. Phase 3 of the study was completed in 2015. Phase 4 of the study was planned to be completed in 2017. However, two major statutes (SGMA and Proposition 1) were enacted in 2014 that have changed water management in California. The future analyses will need to incorporate and analyze the implementation of these statutes in the evaluation of reoperation strategies. This necessitates extension of the study schedule to 2021.

In September 2014, the Legislature passed and Governor Brown signed into law the SGMA. The SGMA requires groundwater management agencies to develop groundwater sustainability plans by January 31, 2020 for groundwater basins designated by DWR as high or medium priority subject to critical conditions of overdraft. All other high and medium priority basins must develop groundwater sustainability plans by January 31, 2022. In November 2014, voters approved a \$7.12 billion water bond, Proposition 1 (Water Quality, Supply, and Infrastructure Improvement Act of 2014). Chapter 8 of Proposition 1 allocates \$2.7 billion to the California Water Commission (Commission) to implement a competitive investment program (Water Storage Investment Program) to fund public benefits of new water storage (surface and groundwater) projects and reservoir reoperation projects. The Commission is developing regulations for quantification of public benefits and the project selection process. The application solicitation for this funding is anticipated to begin in late 2017, and selection of projects and award of funding by the Commission will be done during 2019-22. The reoperation strategies will need to include sustainable groundwater management as an added objective and potential new surface and groundwater storage

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projects that may be funded by the Water Storage Investment Program. As a result, DWR needs to extend the schedule of the System Reoperation Program through June 2021.

The System Reoperation Program will achieve several actions mentioned in the California Water Action Plan (2014, and 2016 update). Those include: Action #4: Protect and restore important ecosystems; Action #6: Expand water storage capacity and improve groundwater management; Action #8: Increase flood protection; and Action #9: Increase operational and regulatory efficiency.

If this request for funding is not approved, DWR will not have the opportunity to evaluate the reoperation of the State's water system with SGMA and Proposition 1 funded projects, and mitigate for some of the severe challenges like changing climate, frequent flooding, drought, and declining fish population will be lost. If funding is delayed, most of the work currently being carried out in coordination with several agencies will be stalled; resuming that work will require significant additional funding and time.

Surface Storage Program (\$225,000)

North-of-the-Delta Offstream Storage Project (NODOS): In April 2014, DWR released the Preliminary Administrative Draft EIR/EIS and Feasibility Report for NODOS. DWR does not have sufficient funds to develop a public draft of the EIR/EIS. However, the federal partner – Reclamation, using federal funds, and the local partner – the Sites JPA, using local funds, are continuing to work on finalizing these documents for submission to the Commission in December 2017, and later engage with the regulatory agencies on permitting requirements through 2019. To ensure the State's interests and public trust resources are protected and adequately addressed in the efforts led by Reclamation and the Sites JPA, DWR needs to continue to coordinate with these agencies. In addition, DWR needs to continue coordination with non-governmental organizations (NGOs), legislators, media, stakeholders, agencies, and the public.

Upper San Joaquin River Basin Storage Investigation: Reclamation is in the process of finalizing the feasibility report and the EIS for this project. DWR needs to continue to coordinate in the development of the documents.

Los Vaqueros Reservoir Expansion Project: The Contra Costa Water District (CCWD) and Reclamation are developing the feasibility report and the environment documents for a second enlargement of the Los Vaqueros Reservoir. DWR needs to continue to coordinate in the development of the documents.

The Surface Storage Program will achieve several of the actions mentioned in the California Water Action Plan (2014, and 2016 update). Those include: Action #3: Achieve the co-equal goals for the Delta; Action #4: Protect and restore important ecosystems; Action #6: Expand water storage capacity and improve groundwater management.

If this request for funding is not approved or delayed, DWR will not be able to ensure the State's interests are adequately addressed in studies carried out by Reclamation, the Sites JPA, and the Contra Costa Water District.

WORKLOAD ANALYSIS:

System Reoperation Program

In FYs 2017-18 through 2020-21, 3 existing positions will continue to work with federal, State, and local agencies to evaluate opportunities for reoperation of the State's existing flood control and water supply systems to provide benefits to water supply reliability, water quality, flood protection, and ecosystem protection and restoration. The same work will be done in FY 2016-17 using previously approved funding.

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Budget Year +1 Analysis:

Supervising Engineer, Water Resources 0.65 Existing 1,156 hours

Plan, direct, manage, organize, and integrate a multidisciplinary team of engineers and scientists. Develop and implement analytical approaches for evaluation of the system reoperation strategies to benefit flood management, water supply, water quality, and the ecosystem. Coordinate with other DWR programs involved in evaluation of flood protection, water supply, and ecosystem restoration. Manage and direct the analysis of reoperation strategies and the preparation of technical reports and memorandums.

Senior Engineer, Water Resources 0.6 Existing 1,067 hours

Conduct engineering and modeling analyses related to evaluations of reoperation strategies. Conduct hydrologic and reservoir analysis with climate change of reoperation strategies for improved water supply reliability, flood control, ecosystem protection, and reducing groundwater overdraft. Assist in the preparation of technical reports and memorandums. Direct and manage the work of consultants and other DWR staff and conduct technical review of deliverables.

Engineer, Water Resources 0.75 Existing 1,334 hours

Assist in conducting engineering and modeling analyses for evaluations of reoperation strategies. Assist in analyzing the modeling results and report preparation.

Environmental Scientist 0.5 Existing 889 hours

Assist in conducting environmental studies aimed at mitigating impacts and enhancing the environmental benefits of SWP and CVP system-wide reoperation. Evaluate the effects of the reoperation strategies on the environment, and prepare the ecosystem restoration and protection sections of the System Reoperation report.

Senior Environmental Scientist 0.5 Existing 889 hours

Lead the environmental analysis associated with the reoperation of reservoirs in conjunction with groundwater storage. Coordinate the analysis with State and federal regulatory agencies. Prepare technical memorandums and reports documenting the analysis.

Surface Storage Program

In FY 2016-17, 2017-18, and 2018-19, 0.25 existing position will continue coordinating the development of the CALFED Surface Storage studies with Reclamation, CCWD, Sites JPA, and stakeholders.

Budget Year Analysis:

Supervising Engineer 0.25 Existing 445 hours

Coordinate the development of Surface Storage Studies with Reclamation, CCWD, Sites JPA, NGOs, legislators, media, stakeholders, agencies, and the public.

E. Outcomes and Accountability

During the next five years, for the System Reoperation Program, DWR will be formulating and evaluating the reoperation of the existing reservoirs with future uncertainties and potential water infrastructure improvements that may occur as a result of SGMA and the Water Storage Investment Program of Proposition 1. Work will be done in FY 2016-17 using previously approved funding. The reoperation analysis of the existing reservoirs will address uncertainties related to climate change. In addition, the

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analysis will include potential operations with improved ecosystem flows, recharging of depleted groundwater basins and potential new surface and groundwater storage projects and new Delta conveyance. During the next three years, DWR will need to continue to coordinate with Reclamation, the Sites JPA, CCWD, and other stakeholders on the development of the CALFED surface storage projects.

Projected Outcomes

Workload Measure	CY	BY	BY+1	BY+2	BY+3	BY+4
System Reoperation Study looking at reoperating existing reservoirs (Shasta, Oroville, Folsom, New Exchequer, and CVP/SWP systems) under new climate, current/new Delta conveyance, and new water storage projects	Evaluation of reoperation of Shasta, Oroville, Folsom, New Exchequer, and CVP/SWP Systems	Reoperation analysis to improve ecosystem flows	Reoperation analysis to improve recharge depleted groundwater basins	Reoperation analysis to improve recharge depleted groundwater basins	Reoperation analysis with new storage projects likely funded by Prop 1	Reoperation analysis with new storage projects likely funded by Prop 1
Surface Storage Program	Coordinate with federal, State, and local agencies on ongoing development of surface storage studies.					

F. Analysis of All Feasible Alternatives

Alternative 1: Conduct the efforts described in this proposal.

This is the recommended proposal as described in detail in the above narrative. This will allow DWR to achieve several of the actions mentioned in the California Water Action Plan (2014 and 2016 update).

Pro: System Reoperation Program: Complete the System Reoperation feasibility studies as mandated by SB X2 1. These studies will illustrate how DWR can improve water supply reliability and water quality, reduce flood risk, and enhance ecosystem by reoperation of existing large surface water reservoirs, flood control facilities, and ground water banks. As California continues to experience water shortages and continues to face challenges of climate change, including, depleted groundwater basins, and declines in ecosystem; reoperation of existing infrastructure will become an important water management strategy in California over the next decade.

Surface Storage Program: To ensure the State's interests are adequately addressed in studies led by Reclamation, Sites JPA, and CCWD; DWR needs to continue coordinating with these agencies. Furthermore, this alternative will allow DWR to continue to respond to frequent inquiries from the media, stakeholders, legislators, NGOs, agencies, and the public.

Con: Most costly alternative for DWR.

Alternative 2: Delay the funding and program delivery.

The opportunity to achieve several of the actions mentioned in the California Water Action Plan will be lost.

Pro: There is short-term financial savings.

Con: System Reoperation Program: DWR will not be able to meet the mandate of Senate Bill X2 1 and the opportunity to mitigate for some of the severe challenges like changing climate, frequent flooding, drought, depleting groundwater basins, and declining fish population will be lost.

Surface Storage Program: DWR will not be able to ensure the State's interests are adequately addressed in studies carried out by Reclamation and the Sites JPA. This could result in projects that could adversely impact the operations of the SWP.

Alternative 3: Assign the studies to other State agencies.

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The proposed planning of surface storage projects, and reoperation of existing water supply and flood facilities could be re-assigned to other State agencies, such as the State Water Resources Control Board.

Pro: Reduced DWR expenditures.

Con: No other State agency has a comparable level of staff expertise related to water storage planning, flood control, operations of SWP and CVP, the evaluation of climate change impacts on water supplies, and groundwater storage. If other State agencies lead these studies, they would still need modeling data and simulation studies from DWR, as well as extensive consultation with DWR subject matter experts on the proposed study impacts and conclusions.

Alternative 4: Contract for external professional services for these efforts.

DWR could contract for professional consultants to conduct these planning studies.

Pro: DWR staff could potentially be redirected to other DWR projects.

Con: The majority of efforts described in this proposal cannot be performed effectively and efficiently through contract services alone. For instance, many existing DWR staff already have the background and experience necessary for conducting the hydrologic, engineering, environmental, modeling, and planning analyses required for the work described herein. While many professional consultants may have similar expertise, it would come at a higher cost. Moreover, as opposed to consultants, DWR staff can quickly begin work on this effort, without the additional delays and costs involved in a consultant solicitation process; contract development, negotiation, and approval; and contactor oversight. Further, taking away this work from DWR staff currently working on these studies will potentially result in staff being displaced and the Department will lose the expertise of planning and reoperating large water storage projects. It will be costly to develop this expertise again in the future.

G. Implementation Plan

System Reoperation Program

To ensure the studies provide cutting edge techniques of operating existing reservoirs under varying conditions (drought, climate change, ecosystem, new infrastructure, regulations, etc.), the study schedule has been extended to match the implementation schedules of the recently enacted SGMA and of the Water Storage Investment Program of Proposition 1, which will provide funding for new water storage and reservoir reoperation projects.

Surface Storage Program

To ensure the State's public trust resources and interests are protected and adequately addressed in the CALFED surface storage studies (NODOS, Upper San Joaquin River Basin Storage, and Los Vaqueros enlargement) led by Reclamation, CCWD, and the Sites JPA; DWR needs to continue coordinating with these agencies. Further, DWR will continue to respond to frequent inquiries from the media, stakeholders, legislators, NGOs, agencies, and the public.

H. Supplemental Information

Contracts will be used for consultants to support modeling analyses related to evaluations of reoperation strategies.

I. Recommendation

DWR recommends Alternative 1 to achieve several of the actions of the California Water Action Plan (2014 and 2016 update) and continue the efforts intended by Proposition 84. Funding these programs will allow the State of California to better address its future water needs.