STATE OF CALIFORNIA
Budget Change Proposal - Cover Sheet
DF-46 (REV 10/20)

Fiscal Year	Business Unit	Department	Priority No.
2023-24	3860	Department of Water Resources	Click or tap here to enter text.

Budget Request Name	Program	Subprogram
3860-077-BCP-2023-GB	3230	Click or tap here to enter text.

Budget Request Description
Urban Water Use Objectives (SB 1157)

Budget Request Summary
This proposal requests $7 million in General Fund to support State Operations over four years, beginning in FY 2023-24, to implement the legislative requirements established by Senate Bill 1157 (Statutes 2022, Chapter 679, Hertzberg). SB 1157 directs DWR to conduct studies quantifying benefits and impacts associated with the new reduced indoor residential water use standards.

Requires Legislation	Code Section(s) to be Added/Amended/Repealed
☐ Yes ☒ No	Click or tap here to enter text.

Does this BCP contain information technology (IT) components? ☐ Yes ☒ No *If yes, departmental Chief Information Officer must sign.*	Department CIO	Date
	Click or tap here to enter text.	Click or tap to enter a date.

For IT requests, specify the project number, the most recent project approval document (FSR, SPR, S1BA, S2AA, S3SD, S4PRA), and the approval date.

Project No. Click or tap here to enter text. **Project Approval Document:** Click or tap here to enter text.

Approval Date: Click or tap to enter a 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	Date	Reviewed By	Date
Ryan Bailey/Arthur Hinojosa	9/3/2022	Duard MacFarland	12/15/2022
Department Director	**Date**	**Agency Secretary**	**Date**
Cindy Messer	12/15/2022	Amanda Martin for Sec. Crowfoot	12/15/2022

Department of Finance Use Only

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

PPBA	Date submitted to the Legislature
Krystal Acierto	1/10/2023

Analysis of Problem

A. Budget Request Summary

To implement the legislative requirements established by SB 1157, this proposal is a one-time request, beginning in FY 2023-24, for $7 million over 4 years ($2,000,000 for FY 2023-24, $2,000,000 for FY 2024-25, $1,500,000 for FY 2025-26, and $1,500,000 for FY 2026-27) from the General Fund for external consulting costs. The resources will be used to: (1) perform a statewide, representative saturation end-use study, (2) quantify the benefits and impacts of the 2030 indoor residential water use standard on water, wastewater, and recycled water systems, (3) evaluate the long-term effects of telework on indoor residential water use using two years of data reflecting implementation of the 2025 indoor residential water use standard, (4) conduct studies and investigations to identify if variances to accommodate unique challenges related to indoor residential use including stranded assets, impacts on disadvantaged communities, environmental flows, wastewater or recycled water operations, and others, (5) collaborate with the State Water Board on any joint recommendations, (6) collaborate with a broad group of stakeholders. These studies and collaborative efforts require external consultants for big data acquisition and analysis, facilitation and communication services, and dedicated DWR staff, (7) and develop a report to legislature by October 1, 2028 on outcomes and recommendations as warranted.

B. Background/History

SB 1157 adopted the progressively reduced indoor residential water use standard (IRWUS) recommendations developed jointly by DWR and the State Water Board for 2025 IRWUS of 47 gallons per capita daily (gpcd) and 2030 IRWUS of 42 gpcd. The IRWUS is one of four efficient water use standards that make up an urban retail water supplier's urban water use objective (UWUO) described in SB 606 and Assembly Bill (AB) 1668 of 2018 (hereinafter referred to as the "2018 Legislation").

The 2018 Legislation established a new foundation for long-term improvements in water conservation and drought planning to adapt to climate change and the resulting longer and more intense droughts in the State of California (State). This approach is based on water use efficiency standards for certain categories of water use, including indoor residential water use. The water use efficiency standards are not standards for individual customers and are not enforced individually. These standards are used to calculate the UWUO, an efficient water use water budget, that urban retail water suppliers must meet across their service area as a whole; an urban retail water supplier water use may exceed one or more standards so long as, overall, water use remains within the UWUO. Reducing indoor residential water use to at or below the IRWUS may be the most viable option for an urban retail water supplier to meet their UWUO, which could have potential impacts on related water utilities.

Whether or not an urban retail water supplier can meet their objective by reducing indoor residential water use to at or below the IRWUS will depend on whether there is room for improved indoor residential water use efficiency by replacing inefficient fixtures and appliances with more efficient ones. Saturation end-use studies can inform the State and urban retail water suppliers how much indoor residential water use can be reduced by such actions. However, reducing indoor residential water use could impact related water utilities because water supply, wastewater, and recycled systems are designed for certain wastewater flows and quality.

Although DWR did assess potential benefits and impacts on related water utilities, it did not quantify the benefits and impacts, nor did DWR conduct end-use studies to better determine how much water is being used by inefficient fixtures and appliances. As such, SB 1157 requires DWR, in coordination with the State Water Board, to perform an end-use saturation study, quantify the benefits and impacts to associated water utilities, report to the legislature on findings and, if warranted, recommend, jointly with the State Water Board, a more appropriate

implementation date for the 2030 IRWUS and/or variances to accommodate unique challenges.

Saturation end-use studies and quantifying the benefits and impacts require substantial resources because outcomes are typically locally specific. While there may be locally specific saturation end-use studies that have been performed by individual urban retail water suppliers or other entities, these studies need to be evaluated and are not a comprehensive representation of Statewide indoor water use. Sufficient data likely exists for many areas that can be used to inform DWR's study, however, this data is not comprehensive and data gaps are expected in under-represented communities. To mitigate data gaps, deployment of measurement devices to measure water use at a sufficient level of detail to enable separating out the water use signals that are associated with different types of fixtures and appliances is needed.

Potential impacts will depend on specific local conditions of both the amount of water use and the physical and operational characteristics of water, wastewater systems and recycled water facilities. As identified in the qualitative assessment of the benefits and impacts described in DWR's IRWUS recommendations, the benefits and impacts to each water utility are unique. This is because each water utility often does not share common boundaries, distribution, or collection networks, and each utility has many unique characteristics and operations that directly affect the quantification of benefits and impacts. In particular, for primarily residential areas, it is the indoor residential water use that feeds into wastewater systems that are designed to carry a certain flow, volume, and quality of wastewater. Actions to mitigate impacts due to changes in the wastewater flows may be costly or may result in stranded assets. These could lead to affordability impacts. Furthermore, with the State goal to increase recycled water use, reduced wastewater amounts and quality effects on each recycled water system's production will need to be evaluated. Therefore, under SB 1157, DWR is to also consider making recommendations to the State Water Board on variances (adjustments) to the UWUO to accommodate unique challenges associated with the IRWUS and if a longer implementation period would help suppliers successfully plan for and mitigate the impacts of the 2030 IRWUS on related water utilities.

C. State Level Consideration

Implementation of SB 1157 directives. This proposal is based on SB 1157 directives to DWR and Actions 2.1 and 2.5 of the 2020 Water Resilience Portfolio, which detail actions that the Newsom Administration will take to help California achieve greater water use efficiency. Legislation requires DWR to coordinate with the State Water Board in implementing SB 1157 directives and collaboration with a broad group of stakeholders including environmental groups, experts in indoor plumbing, water, wastewater, and recycled water agencies in the directed studies and investigations.

Required studies provide State important information for policy and finance decisions. In accordance with SB 1157 directives, DWR will evaluate indoor residential water use including a saturation end-use study in coordination with urban retail water suppliers to identify and understand the reasons for differences in indoor residential water use, where efficiencies can be improved, and the overall room for improvement through mitigating fixture and appliance inefficiencies or if changing consumer behavior is a better target. This information will inform State policy decisions and financial assistance directions for improving indoor residential water use efficiency.

Required studies address potential for water affordability impacts of the new indoor residential water use standard. Implementing SB 1157 also supports implementation of AB 685 (2012, CWC §106.3), which declares that everyone in California has a right to clean, safe, affordable, and

accessible water adequate for human consumption and sanitary purposes. The legislation instructed all relevant state agencies to consider the human right to water when revising, adopting, or establishing policies, regulations, and grant criteria pertinent to water uses. The studies, investigations, and recommendations conducted per SB 1157 will identify potential impacts on the affordability of water and provide recommendations to allow for adjusting urban retail water supplier's water budgets accordingly; and the studies will also ascertain if a later implementation date might mitigate some impacts in accordance with State directives.

Required studies inform the State about the long-term effects of telework on indoor residential water use. SB 1157 requires DWR to include regional and statewide studies that provide additional information on the long-term effects of telework. Much of the data used to inform the joint IRWUS recommendation used data prior to the pandemic and indoor residential water use may have changed considerably simply because more people are using water at home instead of at a commercial, industrial, or institutional facility, whose water use is not part of the UWUO. This shift in place of water use could affect an urban retail water supplier's ability to meet their UWUO and this analysis will provide necessary information to the State on water use trends.

Required collaboration and coordination ensures stakeholder and other agencies' participation. SB 1157 requires that the study and recommendations include timely and inclusive input and feedback from a broad group of stakeholders including, but not limited to, environmental groups, experts in indoor plumbing, water, wastewater, and recycled water agencies towards the determination of the SB 1157 mandates. The SB 1157 work group will facilitate proactive planning and coordination, both for participation in the data collection and saturation end-use study, and in developing strategies to enhance collaboration between the affected water industries. This ensures that study analysis and any recommendations have adequate, necessary State agency and stakeholder input to provide the State with necessary information on effects and implications of policy decisions.

D. Justification

One-time funding for consultants and technical experts is needed to assist existing DWR staff in carrying out the new SB 1157 directed tasks: performing a representative saturation end-use study and quantifying the benefits and impacts of the 2030 IRWUS (CWC §10609.4(b)(1), assessing the impacts on affordability using two years of reflecting application of the 2025 IRWUS and developing recommendations for an alternate compliance date of the 2030 IRWUS (CWC §10609.4(b)(2)), recommendations on variances to accommodate unique challenges related to the IRWUS to the State Water Board (CWC §10609.4(b)(3)), and timely and inclusive collaboration with stakeholders (CWC §10609.4(b)(4)).

Costs were estimated based on analysis of costs associated with the limited initial studies (similar but more limited in nature) and the leveraging of existing data and analysis protocols to the maximum extent possible. However, meeting the legislative directive for quantification of impacts and determination of end uses requires collection and analysis of new data, in particular, indoor residential water use data in single family residences within disadvantaged communities (DACs) and urban retail water supplier service areas where detailed residential water use data has not yet been collected. DWR does not have the capability to handle private data storage and handling of billions of customer-level records needed to conduct the analysis and may not receive permission to access private data even with non-disclosure agreements. Tasks associated with this BCP include:

Task 1) Consultants and technical experts will analyze private data collected from at least 12,500 households in California representing statewide demographics including age of housing, income levels, community populations for different regions of California. Data

from households within DACs may require more expensive measurement equipment due to limited at home wi-fi capabilities. Additionally, much existing data has not been consolidated and will need to be collected and geographically integrated for quantification of potential benefits and impacts.

- Assess data gaps and design study and collection of data to mitigate the gaps.
- Install flow measuring devices to fill data gaps. May require installation of Wi-Fi capabilities in under-represented communities.
- Conduct surveys, as applicable, to determine household population and other pertinent study factors regarding indoor residential water use.
- Analyze collected and existing water use data to determine end-uses and efficiencies of fixtures and appliances in measured households. This will require sophisticated algorithms to analyze billions of records.
- Provide data extrapolated for Statewide, regional, and/or local assessment of potential benefits, impacts, and water affordability.

  Estimated Cost: $2.75 million

Task 2) Consultants working with DWR will quantify the benefits and impacts of the 2030 indoor residential water use standard on water, wastewater, and recycled water systems, and evaluate the long-term effects of telework. New analysis of existing data will be needed to measure the potential effects of the legislation on indoor residential water use; indoor residential water use is not measured separately from total residential water use thus requiring complex analysis and data QA/QC to disaggregate indoor residential water use from total residential water use. Lessons learned and techniques developed for the original studies will be applied to leverage efficiencies in the data analysis.

- Acquire data from State Water Board used to inform their wastewater impacts analysis from the 2018 Legislation including, but not limited to, all wastewater system boundaries, wastewater system details, recycled water supplier locations and details.
- May require collecting additional boundaries through map digitization, stakeholder outreach, and other methods.
- Assess current indoor residential water use and quantify difference in wastewater loads and recycled water availability based on estimated of 2030 population and indoor residential water use that meets the standards.

  Estimated cost: $1.8 million

Task 3) Study the long-term effects of telework on indoor residential water use using two years of data reflecting implementation of the 2025 indoor residential water use standard.

- Using measuring device network used to accomplish the first directive, identify communities where telework has increased and quantify the benefits and impacts on related water systems.

  Estimated cost: $ 0.6 million

Task 4) Conduct studies and investigations to identify if variances to the urban water use objective are warranted to accommodate unique challenges related to indoor residential use including stranded assets, impacts on disadvantaged communities, environmental flows, wastewater or recycled water operations, water affordability and others.

Estimated cost: $ 0.75 million

Task 6) Collaboration with a broad group of stakeholders. These studies and collaborative efforts require external consultants for facilitation services to conduct several stakeholder and public meetings per legislative directive.

Estimated cost: $ 0.4 million

Task 7) Develop report to the legislature. Due to the tight turnaround time (two-years of 2025 IRWUS data reported to DWR by July 2027, followed by complex analysis for an October 1, 2028, report submittal) DWR may require consultant assistance in document formatting, copy editing, figures and displays, and accessibility compliance.

Estimated cost: $0.7 million

Total Cost = $7 million

Outcomes and Accountability

Approval of this budget request is critical for DWR implementation of the legislative requirements of SB 1157 and to achieve the following accomplishments and outcomes:

- The studies and investigations will include timely and inclusive collaboration with stakeholders including environmental groups, experts in indoor plumbing, water, wastewater, and recycled water agencies.
- By October 1, 2028, in coordination with the State Board, summarize the findings of the studies and may jointly recommend to the legislature an alternate date when the 2030 indoor residential use standard shall take effect.
- Inclusion of regional and statewide studies from organizations and agencies representing water, wastewater, and recycled water to gather used to quantify the impacts and long-term effects of telework and may jointly recommend alternate date for when the 2030 indoor residential use standard shall take effect.
- Based upon the studies and investigations results, DWR will consider recommending to the State Water Board variances to accommodate unique challenges related to the indoor residential water use standard including but not limited to impacts on DACs, environmental flows, or adverse impacts to wastewater or recycled water operations.
- By January 1, 2028, DWR in coordination with the State Water Board summarize to the Legislature, urban retail water suppliers' progress towards achieving their urban water use objective.

Projected Outcomes					
Workload Measure	**CY**	**BY**	**BY+1**	**BY+2**	**BY+3**
Outreach to water agencies and stakeholders	X	X	X	X	X
Collaboration with stakeholders	X	X	X	X	X
SB 1157 Legislative Report	N/A	N/A	N/A	N/A	X
Recommendations on variances for indoor residential water use to the State Water Board	N/A	N/A	N/a	N/A	X

E. Analysis of All Feasible Alternatives

Alternative 1: Approve the request for $7 million one-time, over four years from the General Fund for consulting.

Pros: The requested funding will enable DWR to complete the study as proposed without placing an additional workload on staff. Resources made available will be used to perform the saturation end-use study and quantify the benefits and impacts to the extent possible. The quantitative analysis will still be supplemented with regional and statewide studies to be provided by agencies involved in water, wastewater, recycled water, and instream flows to quantitatively evaluate the benefits and impacts.

Cons: There is a State cost.

Alternative 2: Deny this funding request and the analysis cannot be performed (SB 1157 not implemented).

Pros: There will be less of a State cost.

Cons: Not approving the request will prevent DWR from implementing new legislative mandates that would inform a recommendation for later implementation of the 2030 IRWUS and help identify opportunities for improved residential water use efficiency and benefits and impacts on related water systems. Denial of this funding request would prevent the implementation of SB 1157 mandates, thereby recommendations could not be made on extending the implementation deadline for the 2030 IRWUS, or variances associated with unique indoor residential water use. It would also prevent understanding the opportunities for cost-effective rebates to improve water use efficiency in residential settings.

F. Implementation Plan

DWR will coordinate with the State Water Board in implementing the SB 1157 mandates including the saturation end-use data collection and analysis, sharing of existing studies and data, and collecting additional data and regional and statewide studies to quantify the benefits and impacts of the 2030 IRWUS using two years of data reflecting implementation of the 2025 IRWUS. DWR will collaborate with urban retail water suppliers and associations representing potentially impacted water systems to collect additional data and studies used to inform the quantification of benefits and impacts.

DWR will employ consultants and experts in residential water use to assist with the study design, implementation, and data collection and analysis of the saturation end-use study. The study will quantify the benefits and impacts of the 2030 IRWUS using at least two years of data reflecting application of the 2025 IRWUS and jointly recommend if a later implementation date for the 2030 IRWUS is appropriate. This will include collaborating with urban retail water suppliers and leveraging existing local, regional, and statewide studies and investigations to supplement the quantification of benefits and impacts and understand the long-term effects of telework on the 2030 IRWUS and understand the reasons for differences in single-family indoor residential water use.

The law specifies that the studies include regional and statewide studies that quantify the impacts of water, wastewater, recycled water, and environmental instream flows. DWR will coordinate with stakeholders representing these water systems and include data as appropriate when making a recommendation on a later implementation date for the 2030 IRWUS.

Legislation specifies timely and inclusive stakeholder collaboration and engagement, which will help the state understand the needs at the local level as well as help the stakeholder representatives understand and be part of the decision-making at the state level. This

reciprocal engagement has proven to be effective in improving trust and leading to more successful governance. Engagement will be done during the study development, quantification of the benefits and impacts analysis, development of recommendations for a later implementation date of the 2030 IRWUS, and in the design of variances to accommodate unique indoor residential water uses.

G. Supplemental Information

N/A

H. Recommendation

Approve Alternative 1.

BCP Fiscal Detail Sheet

BCP Title: Urban Water Use Objectives (SB 1157)

BR Name: 3860-077-BCP-2023-GB

Budget Request Summary

Personal Services

Personal Services	FY23 Current Year	FY23 Budget Year	FY23 BY+1	FY23 BY+2	FY23 BY+3	FY23 BY+4
Positions - Permanent	0.0	2.0	2.0	2.0	2.0	2.0
Total Positions	**0.0**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**

Operating Expenses and Equipment

Operating Expenses and Equipment	FY23 Current Year	FY23 Budget Year	FY23 BY+1	FY23 BY+2	FY23 BY+3	FY23 BY+4
5340 - Consulting and Professional Services - External	0	2,000	2,000	1,500	1,500	0
Total Operating Expenses and Equipment	**$0**	**$2,000**	**$2,000**	**$1,500**	**$1,500**	**$0**

Total Budget Request

Total Budget Request	FY23 Current Year	FY23 Budget Year	FY23 BY+1	FY23 BY+2	FY23 BY+3	FY23 BY+4
Total Budget Request	**$0**	**$2,000**	**$2,000**	**$1,500**	**$1,500**	**$0**

Fund Summary

Fund Source

Fund Source	FY23 Current Year	FY23 Budget Year	FY23 BY+1	FY23 BY+2	FY23 BY+3	FY23 BY+4
State Operations - 0001 - General Fund	0	2,000	2,000	1,500	1,500	0
Total State Operations Expenditures	**$0**	**$2,000**	**$2,000**	**$1,500**	**$1,500**	**$0**
Total All Funds	**$0**	**$2,000**	**$2,000**	**$1,500**	**$1,500**	**$0**

Program Summary

Program Funding

Program Funding	FY23 Current Year	FY23 Budget Year	FY23 BY+1	FY23 BY+2	FY23 BY+3	FY23 BY+4
3230 - Continuing Formulation of the California Water Plan	0	2,000	2,000	1,500	1,500	0
Total All Programs	**$0**	**$2,000**	**$2,000**	**$1,500**	**$1,500**	**$0**