

Senator Bob Wieckowski, Chair
Senator Brian Dahle
Senator Mike McGuire
Senator Henry I. Stern



Tuesday, May 17, 2022
9:00 a.m.
1021 O Street, Room 1200

Consultants: Anita Lee and Joanne Roy

AGENDA

Overview of the May Revision (2022)

I. Presentations by:

Sergio Aguilar, Assistant Program Budget Manager
Department of Finance

Rachel Ehlers, Deputy Legislative Analyst
Legislative Analyst's Office

II. Public Comment

Summary of May Revision Highlights

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Pursuant to the Americans with Disabilities Act, individuals who, because of a disability, need special assistance to attend or participate in a Senate Committee hearing, or in connection with other Senate services, may request assistance at the Senate Rules Committee, 1020 N Street, Suite 255 or by calling (916) 651-1505. Requests should be made one week in advance whenever possible.

NATURAL RESOURCES & ENVIRONMENTAL PROTECTION

VARIOUS DEPARTMENTS: Drought Resilience and Response.

- The 2021 Budget Act included a significant investment to advance water resilience and drought response. As part of the Governor’s Budget in January, the Administration proposed an additional \$500 million in specific investments and set aside an additional \$250 million contingency to be allocated as part of the spring budget process when additional water data would be available to

Drought Resilience and Response
(Dollars in Millions)

Investment Category	Department	Program	2021 Package Total	Accelerated Drought Resilience Package		Total
				Governor’s Budget	May Revision	
Immediate Drought Support	Department of Water Resources	Small Water Suppliers Drought Relief & Urban Water Management Grants	\$484	\$120	\$180	\$784
		Water Transfers Pilot Project	\$0	\$0	\$20	\$20
	State Water Resources Control Board	Water Rights Modernization and Drought Resilience	\$0	\$0	\$44	\$44
	Department of Social Services	Drought Food Assistance	\$0	\$0	\$23	\$23
		Data, Research, and Communications	\$127	\$0	\$116.8	\$244
	Various	Drought Technical Assistance and Emergency Drought Response	\$57	\$25	\$161	\$243
Drought Permitting, Compliance, Curtailments and Water Right Enforcement		\$43	\$0	\$8	\$51	
Drinking Water, Water Supply and Reliability, Flood	State Water Resources Control Board	Drinking Water/Wastewater Infrastructure and State Revolving Fund	\$1,300	\$0	\$400	\$1,700
		PFA’s Support	\$100	\$0	\$0	\$100
		Water Recycling/Groundwater Cleanup	\$400	\$0	\$100	\$500
	Department of Water Resources	Salton Sea	\$220	\$0	\$0	\$220
		Water Conveyance	\$200	\$0	\$0	\$200
		Flood	\$638	\$0	\$0	\$638
		Aqueduct Solar Panel Pilot Study	\$20	\$0	\$30	\$50
	Natural Resources Agency	Watershed Climate Studies	\$25	\$0	\$0	\$25
Clear Lake Rehabilitation		\$5.7	\$0	\$0	\$6	
Conservation/ Agriculture	Department of Water Resources	SGMA Implementation	\$300	\$30	\$26	\$356
		Agriculture and Delta Drought Response Programs	\$8	\$0	\$60	\$68
	Department of Food and Agriculture	Relief for Small Farmers	\$0	\$5	\$20	\$25
		On-farm Water Use and Agriculture Technical Assistance	\$5	\$0	\$15	\$20
	Department of Conservation	State Water Efficiency and Enhancement Program	\$100	\$20	\$40	\$160
		Multi-benefit Land Repurposing	\$50	\$40	\$0	\$90
	Various	Water Conservation Programs (Small and Urban), Turf Replacement, and State Water Conservation Projects	\$0	\$185	\$26	\$211
Habitat/ Nature-Based Solutions	Department of Fish and Wildlife/ Department of Water Resources	Fish and Wildlife Protection	\$0	\$75	\$100	\$175
		Improving Drought Resiliency on State-Owned Land and Migratory Bird Habitat	\$8	\$0	\$25	\$33
	Department of Water Resources	Studying Salmon and Tribal Co-Management Activities	\$0	\$0	\$7.3	\$7.3
		Climate Induced Hatchery Upgrades	\$33	\$0	\$17	\$50
	Department of Water Resources	Aquatic Habitat and Drought Resilience and Expediting Large Scale Habitat	\$0	\$0	\$130.6	\$130.6
		Various	Additional Nature-Based Solutions	\$1,033	\$0	\$0
Total			\$5,157	\$500	\$1,550	\$7,207

inform drought needs. The May Revision proposes the allocation of that \$250 million contingency and proposes an additional \$1.3 billion. Specific investments are summarized in the chart above.

- The chart below provides a further breakdown of specific investments proposed in the May Revision:

2022-23 Drought Resilience Package				
Investment Category	Department	Program	GB	May Revision
Immediate Drought Support	Office of Planning and Research	Save Our Water	\$0	\$100
	State Water Resources Control Board	Water Rights Modernization and Drought Resilience	\$0	\$44
		Drinking Water Emergencies	\$25	\$25
		Curtailments and Water Right Enforcement	\$0	\$8
	Various	Drought Contingency Control Section	\$0	\$71
		Urban Community Drought Relief	\$60	\$140
	Department of Water Resources	Small Community Drought Relief	\$60	\$40
		Drought Salinity Barrier	\$0	\$27
		Water Storage Tanks	\$0	\$21
		Water Transfers Pilot Project	\$0	\$20
		County Level Drought Planning Support	\$0	\$15
		Forecast Informed Reservoir Operations (FIRO)	\$0	\$10
		Improving Runoff Forecasting/Snow	\$0	\$7
	Department of Social Services	Central Valley Flood Protection Plan	\$0	\$2
		State Disaster Food Assistance Program	\$0	\$23
Drinking Water, Water Supply and Reliability, Flood	State Water Resources Control Board	State Revolving Fund	\$0	\$400
		Water Recycling	\$0	\$100
	Department of Water Resources	Aqueduct Solar Panel Pilot Study	\$0	\$30

Chart continued on next page

2022-23 Drought Resilience Package (Continued)				
Investment Category	Department	Program	GB	May Revision
Conservation/Ag	Department of Water Resources	Water Conservation Programs (Small and Urban)	\$105	\$0
		Turf Replacement Program	\$75	\$0
		Technical Assistance for Ag Water Use	\$5	\$0
		SGMA Implementation	\$30	\$26
		Agriculture Drought Response Program	\$0	\$50
		Delta Drought Response Pilot	\$0	\$10
	Department of Food and Agriculture	Drought Relief for Small Farmers	\$5	\$20
		Water Efficiency Technical Assistance	\$0	\$15
		State Water Efficiency and Enhancement Program	\$20	\$40
	Department of Conservation	Multi-benefit Land Repurposing	\$40	\$0
Department of General Services	Water Conservation Projects	\$0	\$26	
Protecting Habitat and Wildlife	Department of Fish and Wildlife	Protecting Salmon	\$0	\$100
		Fish and Wildlife Protection	\$75	\$0
		Climate Induced Hatchery Upgrades	\$0	\$17
		Improving Drought Resiliency on State-Owned Land (Birds)	\$0	\$15
		Tribal Co-Management Activities	\$0	\$3
	Department of Water Resources	Aquatic Habitat and Drought Resilience	\$0	\$122
		Migratory Bird Habitat	\$0	\$10
		Study Reintroduction of Salmon	\$0	\$4
		Various	Expediting Large Scale Habitat Restoration	\$0
Total			\$500	\$1,550

- The Budget Change Proposal for this package provides the following descriptions of the proposed investments to address drought:

California Department of Food and Agriculture (CDFA)

Drought Relief for Small Farmers (\$20 million). This funding will provide direct assistance to small farmers and ranchers who have experienced water cost increases of more than 50 percent. Grantees may include Resource Conservation Districts (RCDs), universities, nonprofits, and tribes who will administer the micro- grants as well as provide critical technical assistance. This technical assistance may include, but is not limited to, assistance with applications to federal and state drought relief programs, business plan and marketing support to help pivot businesses in response to the drought, and assistance identifying opportunities for water efficiency improvement.

Water Efficiency Technical Assistance Program (\$15 million). The Water Efficiency Technical Assistance (WETA) Program first received funding in the 2021 Budget Act and the first round of funding was awarded in April 2022.

WETA is designed to provide technical assistance to agricultural operations for on-farm water efficiency which, in addition to directly helping farmers and ranchers cope with drought, provides ancillary energy efficiency and nutrient management benefits. Grantees may include Resource Conservation Districts (RCDs), universities, non-profits and tribes with the requisite expertise to provide on-farm, one-on-one assistance to farmers. Technical assistance may include evaluation of irrigation system efficiency and provision of diagnostics, reports, and recommendations; pump efficiency testing; and training regarding water use efficiency and nutrient management practices or technology.

State Water Efficiency and Enhancement Program (\$40 million). The State Water Efficiency and Enhancement Program (SWEEP) was established in 2014 to help address the drought in California. The purpose of SWEEP is to provide financial incentives to agricultural operations to invest in water irrigation treatment and distribution systems that will reduce greenhouse gas emissions, as well as reduce water and energy use, augment water supply, and increase water and energy efficiency in agricultural applications. Eligible technologies include: soil moisture monitoring, drip irrigation systems, low pressure irrigation systems, pump retrofits, variable frequency drives, and installation of renewable energy to reduce on-farm water use and energy. SWEEP also addresses other high priority environmental issues, such as groundwater sustainability and water quality protection, and prioritizes funding to socially disadvantaged farmers and ranchers and farms in priority populations. Since 2014, SWEEP has funded 828 projects with \$80.5 million, which has allowed efficient irrigation systems and water distribution technologies to be implemented on almost 134,000 agriculture acres. These projects have an estimated water savings of 1.15 million acre-feet and greenhouse gas emission reductions of 800,773 MTCO_{2e} over 10 years. The program is oversubscribed on average by 279 percent, which means that many eligible farmers do not receive funding due to a lack of funds available for the program. As part of the 2021-22 Water Resilience Package, SWEEP received \$50 million in 2021-22 and \$50 million in 2022-23.

Special Assistant for Drought Response (\$223,000). Under the direction of the Secretary and Undersecretary, the Special Assistant for Drought Response will work directly with department management and senior CDFA staff and the Governor's Office on assigned issues and statewide program implementation projects related to the current drought and ongoing water programs to mitigate impacts of future droughts. The position will also assist with policy development or legislation analysis, as well as programmatic and legislative strategy as needed. This position will also coordinate with sister agencies in current and future drought responses to ensure a cohesive state-wide approach is applied. Additional responsibilities include coordinating stakeholder outreach, community engagement and drought communications. This position will report directly to the Undersecretary and will be required to coordinate with the Deputy Secretary for Climate and Working Lands.

California Department of Fish and Wildlife (CDFW)

Protecting Salmon (\$100 million). This proposal will allow the Department to fund planning, implementation, and monitoring projects that enhance resiliency to drought and climate change through restoration, protection, or enhancement of riparian and aquatic habitat and river channels, reconnection of historical flood plains, or improvements to ecological functions. Salmon are particularly vulnerable to the impacts of drought and its effect on water temperatures and availability. This funding will support habitat restoration for the protection or enhancement of riparian and aquatic habitat and river channels, reconnection of historical flood plains, and

improvements to ecological functions. It will also allow the Department to better collaborate with stakeholders and federal, local, and tribal governments on restoration priorities and opportunities.

This request does not affect the current Service Based Budget (SBB) gap; however, these resources are for mission critical projects for the management of species, the habitat, as well as mitigating drought impacts across the landscape which will assist in preventing the current SBB gap in the Species and Habitat Conservation Service Area from growing further.

Fish Passage Actions and Co-management Efforts with Tribes (\$3.3 million). A third year of severe impacts to salmon and other native fish and wildlife will push certain species closer to extinction. This risk is particularly acute in specific salmon watersheds such as the Sacramento and Klamath rivers and waters along the Northern California coast. These are also locations where CDFW is actively engaged in a variety of partnerships and co-management efforts with different California Tribes. There is a need to actively lead efforts to support fish passage into historical salmon habitat above large dams because survival and recovery of these fish requires consistent access to cold, clean water as a way to adapt to climate change. In many of these efforts, CDFW must engage with sovereign Native American Tribes to benefit from traditional ecological knowledge. The most immediate example of the use of these funds is in pursuing reintroduction of winter run chinook salmon into their historical habitat above Shasta Dam into the McCloud River, which are the ancestral lands and waters. CDFW seeks to take immediate emergency actions this summer to test components of the long-term reintroduction. In order to successfully reintroduce fish, CDFW will embrace a planning and co-management effort with the Tribes. These funds will support coordination with other state, federal and local agencies, capacity for key Tribes for co-management, and the development of passage technical feasibility studies and reintroduction permitting, design, construction, operations, and maintenance.

This request does not affect the current SBB gap; however, these resources are for mission critical projects for the management of species, the habitat, as well as mitigating drought impacts across the landscape which will assist in preventing the current SBB gap in the Species and Habitat Conservation Service Area from growing further.

Climate Induced Hatchery Upgrades (\$17 million). The funding will allow CDFW to develop an assessment of existing hatcheries that identifies the planning and investment needed to build long-term climate resilience for the State's hatchery systems. CDFW's hatchery systems will face significant challenges over the next 10 to 20 years due to climate change. The specific challenges vary based on location and species of fish grown, but all rely on a dwindling supply of cold water to grow fish. In the last 8 years CDFW has had to cancel fish releases, stock fish out earlier in the season, and evacuate hatcheries due to elevated water temperatures and lack of sufficient flow. As California's climate continues to get warmer and water becomes more scarce, state hatcheries, particularly those located in warmer areas such as the Central Valley and Southern California, will need to move away from traditional outdoor, flow through, concrete raceways for fish rearing to a model of indoor, recirculating aquaculture systems where the fish rearing climate can be fully controlled. These funds will be used in a two-step process to contract for hatchery design and construction to first provide a hatchery infrastructure and climate change resilience assessment. This assessment will identify long-term improvements and investments needed for all 21 state or federal hatcheries owned and/or operated by CDFW. The second step will then be to design plans for up to five hatcheries identified as the most likely to have significant water challenges over the next 20 years as identified in the infrastructure and climate change resilience assessment.

This request does not affect the current SBB gap; however, these resources are for mission critical projects for the management of species, the habitat, as well as mitigating drought impacts across the landscape which will assist in preventing the current SBB gap in the Species and Habitat Conservation Service Area from growing further.

Improving Drought Resiliency on State-owned and Partnership Lands (\$15 million). Utilizing 2021 funding, DWR and CDFW made significant investments in the BirdReturns programs (including the California Rice Commission's partner program - Bid4Birds). These funds demonstrated how quickly the program can be deployed at an unprecedented scale. As of January 2022, the collective programs have provided over 50,000 acres of habitat to mitigate the impact of drought. A key remaining challenge is how to scale BirdReturns and make it a more durable program that can deliver dynamic migratory bird habitat with multiple benefits on agricultural lands across California. The funding will support CDFW to work with partners on a network approach that is comprised of regional "hubs" capable of implementing dynamic habitat rental markets tailored to their communities. Establishing this network of dynamic conservation programs will support the habitat migratory waterbirds need in California that can be tailored to the key conservation challenges and opportunities of different regions.

This request does not affect the current SBB gap; however, these resources are for mission critical projects for the management of species, the habitat, as well as mitigating drought impacts across the landscape which will assist in preventing the current SBB gap in the Species and Habitat Conservation Service Area from growing further.

Expediting Large Scale Habitat Restoration (\$2.8 million). The CDFW requests a total of 6 positions and additional funding for 4 existing positions and \$2.8 million General Fund in 2022-23 and ongoing to support: 1) assessment of habitat conditions across the Central Valley and in the Delta; 2) finalization of Voluntary Agreements (VAs), including development and review of environmental documents, analyses, modeling, and participation in meetings and public workshops for large-scale habitat restoration; and 3) implementation of large-scale habitat restoration projects, including participation in the governance structure and tributary specific efforts.

This request does not affect the current SBB gap; however, these resources are for mission critical projects for the management of species, the habitat, as well as mitigating drought impacts across the landscape which will assist in preventing the current SBB gap in the Species and Habitat Conservation Service Area from growing further.

20 Permanent Positions to Provide Statewide Administrative Support. Critical to the internal workings of the CDFW, is its ability to provide the administrative support needed to manage its day-to-day work. 15 new permanent Associate Governmental Program Analysts will serve the additional statewide administration benefit and support CDFW's fiscal, contracting/granting, procurement, human resources, and general administrative needs. Five new permanent Senior Environmental Scientist (Specialists) will provide statewide oversight of grants and contracts management from development through closeout, perform field activities and site assessments, project planning and document review, and develop various types of reports. Service Based Budgeting (SBB) findings identified that administrative support in CDFW is also insufficient, at a 28 percent gap to mission levels, to support the current level of Department staffing, which is at 35 percent of the mission level. 20 permanent positions will serve the additional administration benefit of decreasing the SBB gap and preventing the gap from growing. As CDFW increases

capacity on the programmatic efforts, additional administrative resources are required to prevent the gap from growing.

State Water Resources Control Board (State Water Board)

Drinking Water Emergencies (\$25 million). The State Water Board requests an additional \$25 million for Drinking Water Emergency funds that would be used to expand regional and county-based drought emergency programs to support interim and permanent solutions for drinking water drought and water outage emergencies. Funded programs could support community water systems, small water systems, and domestic well communities. Services provided to drought-impacted households include interim bottled water, hauled water and storage tanks, vending machines, permanent connection to adjacent water systems where feasible, or well and equipment repairs/replacements, and point-of-use or point-of-entry treatment where necessary. To be able to provide similar services statewide, the State Water Board has been working in coordination with DWR to reach counties and encourage applications for new county-wide or regional drought emergency programs. Applications can be submitted by counties or non-governmental organizations on their behalf. Regional approaches addressing multiple counties are encouraged where feasible. A handful of new county programs have been funded during FY 2021-22, but broader geographical coverage is needed to proactively respond to drought emergency needs on a statewide basis, as drinking water outages have been reported in many counties outside the San Joaquin Valley. These funds would support additional county or regional programs to help fill the gaps.

Curtailments and Water Right Enforcement (\$8 million). The State Water Board is requesting 17.0 permanent positions, and \$100,000 in one-time equipment funds to 1) support the effort for diverters to understand how to comply with curtailment regulations, 2) inspect water diversions for compliance with curtailments and enforce against those that do not, 3) investigate drought-related and unauthorized diversion complaints, 4) conduct water right hearings to resolve enforcement cases, and 5) respond to curtailment exemption requests.

The Board's Division of Water Rights issued over 18,000 drought curtailment orders statewide in 2021 and with historic drought conditions continuing, the Division anticipates the need for earlier and broader curtailments in 2022 and beyond. Curtailments are fundamental to the stability of the water rights priority system because they protect the environment and legal users of water and ensure water is available for critical human health and safety needs. Without a credible enforcement presence, curtailments are not effective. The Board must act now to expand our enforcement capacity as soon as possible because the Board cannot build an effective presence without permanent staff who understand the enforcement process and can be activated quickly. The \$100,000 in one-time equipment funds will be used for additional enforcement and inspections equipment.

Water Rights Modernization and Drought Resilience (\$44 million). The State Water Board is requesting 26.0 permanent positions and \$38 million in one-time contract funds to enhance water rights drought planning efforts and develop the technical and regulatory tools needed for administering an efficient and effective water rights system. California must build a sound foundation for how water use is managed in response to the extreme wet and dry conditions we are experiencing under a changed climate. The Board's existing approaches, established more than 100 years ago, have not kept pace with changes throughout the entire water sector, and are now challenged to provide timely, useful, and meaningful information needed to guide state and local water use decisions, which are especially vital during periods of drought.

With these positions and funds, the Board will 1) develop telemetry projects in two or three watersheds to collect real-time diversion data, integrate the data into the Board's new water rights data system, and create data governance best practices; (6.0 positions and \$15 million in contract funds for equipment purchase, installation, operations and maintenance, and oversight); 2) modernize existing regulations, methodologies, and procedures in formal rulemaking processes with public input for more flexible curtailments (7.0 positions and \$3 million in contract funds for CEQA required for regulations); 3) develop supply/demand models and allocation tools for implementing the priority system in 15+ watersheds (10.0 positions and \$15 million in contract funds to develop precipitation-runoff models in north coast and coastal California watersheds); and 4) update Central Valley water unavailability methodology to incorporate return flows and geography so the methodology is more refined for curtailments (3.0 positions and \$5 million in contract funds for necessary streamflow gage data).

Water Recycling (\$100 million). Recycled water is a critical water supply for California and an important resource for diversifying local supplies and improving water resilience. The California Legislature has declared that a substantial portion of the future water requirements of the state may be economically met by beneficial use of recycled water. (Wat. Code, § 13511.) The Legislature also expressed its intent that the state undertakes all possible steps to encourage development of water recycling facilities so that recycled water may be made available to help meet the growing water requirements of the state. (Wat. Code, § 13512.) The State Water Board provides funding for water recycling projects that offset, or augment state or local fresh water supplies through its Water Recycling Funding Program. This proposal provides \$100 million for recycled water projects.

The existing Water Recycling Funding Program promotes the beneficial use of treated municipal wastewater (water recycling) through grants and loans in order to augment fresh water supplies in California by providing technical and financial assistance to agencies and stakeholders in support of water recycling projects and research. Projects will be awarded through a competitive selection process and leveraged with voter approved Proposition 1 and Proposition 68 funds and the Clean Water State Revolving Fund program.

State Revolving Funds (\$400 million). The federal Clean Water State Revolving Fund (CWSRF) and Drinking Water State Revolving Fund (DWSRF) programs provide each state the opportunity to establish infrastructure funding programs capitalized by federal and State funds to provide financial assistance to a wide variety of local water and wastewater infrastructure projects. Since 1989, the State Water Board has made over 875 CWSRF loans totaling over \$12 billion, and since 1997, the State of California (acting since July 2014 through the State Water Board) has made over 540 DWSRF loans totaling over \$3.6 billion. Approximately half of the funds committed by the programs have been financed over the last seven years alone.

Under H.R. 3684 (Infrastructure Investment and Jobs Act or "IIJA", also known as the Bipartisan Infrastructure Law or "BIL"), both the CWSRF and DWSRF are expected to see their annual federal capitalization grant levels increase approximately 500 percent of their current average amount. California receives between 7 and 9 percent of the national allotments annually for both CWSRF and DWSRF, respectively. In addition, IIJA includes appropriations that are specifically earmarked for "emerging contaminants" and replacement of "lead service lines." Additional demand is expected from local agencies to fund infrastructure upgrades and improvements to address the impacts of climate change on water and wastewater facilities so that they can continue to meet regulatory requirements and provide the vital services for which they are designed.

Additional demand is also expected to target the use of funds specifically appropriated to address emerging contaminants and lead service line replacements.

To effectively administer the significant increase of annual federal grant funds, address emerging contaminants, lead service lines, Water Resilience funds approved in the 2021-2022 Budget, and climate change, the State Water Board requests 29 permanent positions. With these positions, the State Water Board will develop and implement public-facing communications strategies that foster awareness, understanding, and appreciation of the state's financial and technical support for local drinking water, wastewater, and recycled water projects; provide additional outreach and solicitation efforts to identify specific, eligible projects; review and manage additional applications, development of agreements, project management activities, and loan servicing; support activities related to encumbrance and disbursement of funds, compliance reporting, and cashflow management; and information technology support services. The requested staffing will position the State to timely and effectively commit and distribute the federal SRF capitalization funds and Water Resilience funds, addressing a long-standing need to construct infrastructure more resilient to climate change, replace aging infrastructure, finance projects to bring water systems into compliance, address water reliability, and meet the Human Right to Water policy goals.

In addition, the State Water Resources Control Board also requests \$400 million to provide state matching funds that are required as a condition of receiving the increased federal CWSRF and DWSRF capitalization grants. If matching funds are not provided, then future federal grants will not be awarded to California's CWSRF and DWSRF and those funds will be reallocated to other states by EPA. California's SRF programs have met past matching requirements with a combination of intermittent State bond fund contributions and the "local match" loan option. There are no current general obligation bond funds measures being proposed for voter consideration that would provide SRF match. The local match option is a way for SRF loan recipients to contribute the state match and receive an additional discount on their loans. It was successful in the past when interest rates were higher, but with historically low interest rates, the local match option is more expensive for SRF loan applicants and is, therefore, not a viable option at present. The SRF programs can sell match bonds, as allowed by US EPA. The downsides of this option are that it only repurposes existing SRF funds (past and future loan interest) to repay the match bonds, making the repayment stream (annual bond principal and interest payments) unavailable for future SRF loans.

Furthermore, the State Water Board requests that trailer bill language be added to amend Water Code Section 13480 to eliminate the limitation that CWSRF non-repayable funds be disbursed directly from federal funds. The State Water Board is unable to fully comply with federal policy on unliquidated obligations (ULO policy) as a result of this restriction on the CWSRF program, placing California at risk of reduced or withdrawn federal CWSRF grants. This problem is occurring because state law currently requires CWSRF principal forgiveness to be provided solely from federal CWSRF capitalization grants. This proposal would remove restrictions on how principal forgiveness from the CWSRF is administered, to allow the State Water Board to more immediately disburse undrawn federal capitalization grant funds from the CWSRF and to comply with federal policy and guidance.

Expediting Large Scale Habitat Restoration (\$2 million). The State Water Board requests 8 PYs and \$2.0 million in spending authority to: 1) complete technical analyses required to bring voluntary agreements for consideration of adoption by the State Water Board; and 2) implement the voluntary agreements, once adopted.

Office of Planning and Research – Office of Community Partnerships and Strategic Communications

Save Our Water Campaign (\$100 million). The requested funding will allow for an expanded statewide public awareness and outreach campaign to support additional advertising, community partnerships, social media influencers, and content encouraging people to reduce their water usage. The campaign will connect with households in zip codes with high water usage with urgency about how and why to conserve water, along with the biggest water saving actions they can take. The campaign will also begin to build a strategy that aims to achieve a longer term culture shift. These efforts will empower Californians with the information and tools they need to adapt to a hotter and drier climate to make saving water a way of life. Community outreach will focus on highly interactive tactics and harder to reach communities across the state, and increase private and public partnership opportunities. Funding for public awareness and outreach targeting hard-to-reach communities will be managed by the Office of Community Partnerships and Strategic Communications. This work would be done in coordination with the California Natural Resources Agency, Department of Water Resources and other state subject matter experts to help inform the campaign. This Office was created to manage the state's highest priority public awareness and community outreach campaigns, and will leverage valuable lessons learned from prior statewide campaigns during implementation of the Save Our Water campaign.

Department of Water Resources (DWR)

Forecast Informed Reservoir Operations (FIRO) Improved Runoff Forecasting/Snow Data (\$16.75 million ongoing). The funding for the FIRO partnership will allow DWR to partner with federal agencies, local water agencies, and the University of California (UC) in multiple projects to determine how weather forecasts generated through research and weather modeling by UC can be used to allow changes in United States Army Corps of Engineers (USACE) water control manual regulatory requirements for dam operations at selected sites. Allowing flexibility in existing regulatory requirements could permit increased storage in dry years during the winter flood control season, providing a greater water supply buffer during droughts. Forecasts also enable improved flood response and management by allowing more time to release water at lower flows that enable more flood storage at the reservoir. Advancing observations, forecasts, and associated decision support are critical to the successful adaptation of real-time water management to a warming world.

In response to WY 2021 forecast problems and climate change impacts, funds will also provide funding for the collection of Airborne Snow Observatory (ASO) data in the Sacramento River Basin for the purpose of improving snow data collection in this region. The snowpack data from ASO has historically been as high as 97% accurate compared to the larger errors that result from gaps in data due to the spatial limitations of having only point-source data. In order to facilitate the forecast improvements using climate informed and physically based models, the use of remote data such as ASO is essential. The combination of this model and ASO data will significantly improve the accuracy of the runoff forecast.

Urban Community and Multi-benefit Drought Relief (\$140 million). There has been extremely high demand for funding under DWR's 2021 Urban and Multi-benefit Drought Relief Program. Grant applications received in the first two months of the program totaled \$1.1 billion in requests (for the \$300 million available from the FY 21-22 Budget appropriation) for over 200 projects. To date the program has awarded \$250 million for 85 projects. This proposed \$140 million will augment the existing local assistance grant program, providing competitive and directed action

grants to applicants. Priority will be given to applications that address emergencies and Human Right to Water related needs. Eligible projects will improve overall local and regional water management efficiency and resilience and help meet urban community and broader multi-benefit water use objectives. Example projects include infrastructure rehabilitation, interties, intake structures, leak detection, water loss audits, recycled water systems, advanced/smart metering systems, stormwater capture/retention, groundwater recharge, recovery, conveyance, and treatment, groundwater supply and wells, drinking water system consolidation, agricultural system improvements, drought resilience planning, and water supply forecasting. This is in addition to the \$60 million requested in the Governor's Budget in January.

Small Community Drought Relief (\$40 million). As conditions continue to worsen in various parts of the state, including the Sacramento Valley, due to a record-setting dry January and February the need for funding to address urgent drought needs in small communities remains critical. The current Small Communities Drought Relief Program has received requests that far exceed the FY 21-22 Budget appropriation. The program was allocated \$200 million in July 2021 and has received nearly 120 applications for more than \$310 million. As of late December, DWR has funded 65 of those applications for a total of \$142 million, the majority in direct support of underrepresented communities. DWR continues to evaluate existing applications and assist tribes with their unique drought-related needs. Funded projects have included support for emergency water supplies, new wells and well rehabilitation, leaky water line replacement, system interties, enhancements, and consolidations, water treatment and new water source development. With this request, DWR will continue the program and address many urgent drought needs that otherwise would go unmet. This is in addition to the \$60 million requested in the Governor's Budget in January.

Emergency Drought Barriers (\$27 million). The funding will support Delta salinity through planning for installation of Drought Salinity Barriers at locations within the Sacramento-San Joaquin Delta Estuary for 2022-23. Installation of the Drought Salinity Barrier is an extra ordinary measure to avoid an emergency that would result in an unacceptable hazard to life and economic hardship. The Drought Salinity Barrier repels the intrusion of ocean salinity into the Delta that would cause water quality to degrade to levels that render it an unacceptable raw water source for drinking water, commercial, and industrial uses, thus creating risks to human health and causing economic hardship. It is designed to conserve water for use later in the year to meet the State and Federal Endangered Species Act requirements, and to meet, to the greatest extent possible, water quality objectives in the Delta for beneficial uses, and retain water supply for human health and safety uses. The location of the additional barriers are:

- West False River barrier installation/removal including mitigation (assume no notching): \$21 million
- 2023 Steamboat and Miner Slough barrier planning/installation/removal including mitigation: \$6 million.

Water Storage Tanks for Emergency Water Supply (\$21 million). Funding will be used to purchase up to 1,000 water storage tanks, pre-position tanks, set-up and remove when longer-term solutions are put in place. Funding also supports temporary positions to procure and manage state purchased supplies which will be made available to counties or communities that need immediate assistance for domestic wells that have gone dry. This effort would be in addition to existing grant programs managed by State Water Board, Department of Water Resources and California Office of Emergency Management. Storage tanks would be provided to communities outside of county jurisdiction, to counties not currently engaged in state grant programs (and may not be able to engage quickly enough as emergency conditions arise) and could also include

Tribes requiring emergency assistance. DWR, State Water Board, CAL OES, Department of General Services and California Department of Food and Agriculture have coordinated on identifying the need for this action and estimated resources. DGS will provide support by developing a master contract for purchasing tanks and associated supplies.

Water Transfers Pilot Project (\$20 million). As Water Years 2021 and 2022 have shown, California's hydrology is becoming increasingly extreme and unpredictable. New water management approaches are needed as the state is transitioning to a warmer and drier climate in which the traditional timing for many water management decisions is changing. California's water transfers market has been driven by short-term annual transfers that rely on availability of water from a relatively limited number of senior water rights holders. These supplies are becoming less reliable as dry conditions result in cuts or threatened cuts to water rights settlement contractors, creating less certainty for urban buyers needing to bolster not only current year supplies but also to plan for the potential of continued multi-year dry conditions. The purpose of the pilot project is to develop experience with contracting approaches for multi-year transfers and to test sellers' willingness to enter into these agreements. DWR would acquire water from willing sellers and sell it to buyers with critical needs or provide some of the purchased water for targeted critical environmental purposes that could vary with specific hydrologic conditions or species' needs. The State Water Project and Central Valley Project are in new circumstances with managing project supplies to meet minimum health and safety needs of their contractors, and the pilot project would additionally provide a safety net for addressing unexpected contingencies arising from this situation.

Support New County-level Drought Planning Requirements (\$15 million). The funding would be used for a pilot project to develop an inventory of active water wells in the counties at highest-drought risk of domestic well impacts in the state. The existing state well information makes drought response difficult since it includes wells that are no longer in use and could be missing wells in certain areas. This funding would be used to contract with a direct technical assistance provider to work with counties and community organizations to canvas areas and identify where active water wells are located, as a fundamental step for counties to inform the development of water shortage plans, consistent with SB 552 requirements.

Central Valley Flood Protection Plan (\$2.1 million). The funding would be used to begin development of the legislatively mandated, (Water Code section 9612 (e)) 2027 Central Valley Flood Protection Plan and Conservation Strategy and advances high priority multi-benefits. Coordinating flood management with water supply will support drought preparedness in two key ways: improving reservoir operations and using floodwaters for managed aquifer recharge (also known as Flood-MAR). California's large water supply reservoirs have requirements to maintain storage capacity to capture runoff during floods. When long-term forecasts indicate a storm could overwhelm the flood storage capacity of a reservoir, operators are forced to begin releasing water long before the storm hits. However, sometimes storms do not deliver the amount of runoff predicted, and reservoirs release more water than necessary, thereby losing water that could have been used later. By improving flood conveyance capacity of rivers downstream, reservoir operators can safely wait longer for more accurate forecasts and avoid releasing water unnecessarily. Improving the flood system to promote Flood-MAR allows water managers to direct flood flows onto floodplain areas, either natural or farmed lands, where the water can percolate into groundwater basins to be stored for later use. Resilient drought preparedness in California will not be possible without improvements to and coordination among flood management, reservoir operations, and groundwater management.

Solar Demonstration Projects Associated with Water Infrastructure (\$30 million). The funding will support climate-friendly solar demonstration projects associated with water infrastructure in California. In recent years the concept of solar over canals and floating solar have emerged as a climate-friendly potential solution to develop renewable energy resources where open land is scarce or too valuable for a change of use. Solar over canals refers to solar photovoltaic (PV) panels that are mounted on infrastructure that spans a canal. This differs from floating solar, or floating PV, for which panels float directly on the surface of the water body. The opportunity and market for solar energy is rapidly expanding due to increased interest in renewable energy. Installation of solar PV panels over canals or floating solar may potentially have benefits over conventional ground-mounted solar.

SGMA Implementation (\$26 million). The \$26 million will support Sustainable Groundwater Management Act (SGMA) implementation. Of this request, \$20 million will be for grant funding to local public agencies to support planning, engineering, and construction of projects that further implement SGMA. SGMA requires groundwater sustainability agencies (GSAs) to prepare groundwater sustainability Plans (GSPs) that meet their groundwater basin sustainability goals within 20 years of GSP adoption. All GSPs must identify projects and management actions that will support plan implementation. Preliminary cost estimates for implementing these project and management actions total billions of dollars. These funds would be awarded through the Department's existing Sustainable Groundwater Management Grant Program.

Funding will also support efforts to provide tools, technical services, and datasets. Expansion will include the support of groundwater trading throughout the State as identified in the California Water Commission's Groundwater Trading White Paper. This White Paper was developed in response to Action 3.6 of the Governor's Water Resilience Portfolio. The Groundwater Trading White Paper recommended actions the State could take to support groundwater trading. These funds would initiate implementation of those recommendations.

Agricultural Drought Response Program (\$50 million). Several consecutive dry years and low combined storage in State and federal Project reservoirs have significantly tightened water supplies throughout the Central Valley. This funding will support agricultural water conservation practices, such as temporary land fallowing, delaying the replanting of orchards until the drought subsides, offsetting the cost of importing feed instead of using groundwater for local production in order to reduce crop consumptive water. The reduction of consumptive water use will help protect water quality, improve aquatic ecological conditions and protect water supply in underrepresented communities. It is anticipated this amount of funding will conserve up to 360,000 acre-feet of water through October 2022. This program mirrors a similar program in the Sacramento River watershed supported by federal funding.

Delta Drought Response Pilot Program (\$10 million). Several years of drought have further tightened water supplies and contributed to declines in water quality in the Sacramento-San Joaquin Delta (Delta). Coupled with increasing climate change impacts, these drought-related threats to the Delta's long-term sustainability highlight the need to expand datasets and improve mutual understanding of regional water budgets in the unique Delta landscape. Building upon and informed by the successful Delta Drought Response Pilot Program initiated in 2021, this funding will support the implementation and monitoring of additional agricultural conservation practices in a variety of Delta regions and is anticipated to conserve 10,000 – 30,000 acre-feet of water. The information obtained through an additional year of this program will help inform what actions may best contribute to consumptive use reductions and improve understanding in how those actions differ regionally throughout the Delta.

Aquatic Habitat and Drought Resilience (\$122 million). Funding shall be for programs and projects that improve environmental conditions to promote recovery of native fish species in the Sacramento-San Joaquin watershed, including habitat restoration projects, multi-benefit projects that promote native species improvements while increasing climate resiliency, and projects that enable water users to make additional flows available for environmental purposes; and for programs and projects that improve the capacity of water suppliers to adapt to changing precipitation patterns and better endure drought and flood.

Expediting Large Scale Habitat Restoration (\$1.8 million). Funding will support 7 new positions to implement the Voluntary Agreements, once adopted. These positions would support the coordination, implementation, tracking, and accounting for the tributary and exporter flow contributions to the VAs. The positions would also support synthesizing science and monitoring information derived from the implementation of VA flow and habitat assets.

Sacramento Valley Migratory Bird Habitat Program (\$10 million). Drought conditions and specifically the unavailability of surface water for flooding working landscapes severely impact the millions of Pacific Flyway waterbirds that depend on the Sacramento Valley for rest and food each winter. A \$5 million investment of FY 21-22 drought relief funds into existing landowner incentive programs resulted in the enhancement of ~53,000 acres of wetlands and agricultural fields, significantly offsetting the drought's impacts on these important species. The requested FY 22-23 funds would support these successful programs through another year.

Reintroduction of Salmon Study (\$4 million). Ongoing impacts related to habitat loss, disease, and warm water temperatures which have become more prevalent under the current drought and rapidly changing climatic conditions threaten the very existence of Spring-run Chinook Salmon in the Central Valley. Working with state, tribal, and federal partners the DWR Riverine Stewardship Program will investigate the value of and the potential for the reintroduction of spring-run salmon in the high elevation habitat of the North Fork Feather River above Lake Almanor. This effort will provide support for 2 existing PY's and would also explore technology and approaches that will inform the potential for reintroduction above rim dams in this watershed and other watersheds currently being contemplated. This work will be done in close partnership with California Department of Fish and Wildlife, federal fish agencies, tribes, and various stakeholder groups. This effort aligns and supports Water Resiliency Portfolio goal 10 to reconnect aquatic habitat to help fish and wildlife endure drought and adapt to climate change.

20 positions for ongoing support, coordination, and planning for drought related activities. The funding would support 20 new permanent positions to address the on-going drought and climate change work of the Department. The positions would support the following:

- 2.0 positions (Supervising Engineers, Water Resources (WR)) to provide ongoing support, coordination, and planning for drought related activities.

During drought emergencies these positions will support department drought response activities including coordinating activities across multiple programs or agencies, preparing reports and status updates, documenting drought response actions, supporting external drought communications, administering contracts, and monitoring funding needs/expenditures. During non-emergency times, these positions will lead in modernizing DWR operational practices to transition to a warmer and drier climate, advance new technologies to support drought response/preparedness, coordinate ongoing drought preparedness activities, and track/evaluate effectiveness of state grant-funded

local/tribal projects to respond to drought emergencies or improve water supply reliability/drought resilience.

- 3.0 positions (Attorneys) to provide legal support on drought-related priorities projects and programs:
 - Attorney III to provide legal support for high-priority habitat restoration and multi-benefit projects that will provide and promote native aquatic species resiliency during drought conditions.
 - Attorney III to provide legal support related to the oversight, evaluation, and management of projects related to State Water Project operations, including habitat restoration projects, water transfers, and water conservation under drought conditions.
 - Attorney III to provide legal support for expedited grant administration related to local emergency drought assistance and grants to local water agencies facing loss of water supplies including for infrastructure needs, such as developing guidelines, drafting funding agreements and regulations to fit specific funding programs and advising on appropriate uses or particular sources of funding.

- 4.0 positions (1 Sr. Engineer, Water Resources (WR); 2 Engineer, WR, 1 Senior Environmental Scientist) for Drought Relief programs (Financial Assistance Branch/Regional Offices for Urban/Smalls/Tanks/ag grant administration):
 - Senior Engineer, WR to develop and administer statewide tank programs as part of the Small Community Drought Relief Program (SCDRP). This includes application process development, community outreach, tank deployment and decommissioning. This position will also work with tribes and small communities on the SCDRP to implement and develop their project grants as well as provide oversight to drought staff in the Northern and North Central Regional Offices.
 - 2.0, WR to implement the statewide drought and tank programs. This includes assisting communities with the development of tank programs, community outreach, tank deployment and decommissioning. The position will also work with tribes and small communities on the SCDRP to implement and develop their project grants.
 - Senior Environmental Scientist to lead Tribal and Disadvantaged Communities (DAC) (Equity) inclusion efforts for small community and urban drought relief programs.

- 2.0 positions (1 Engineer, WR; 1 Environmental Scientist) for Water Efficiency & Conservation Support for SB 552, county-level assistance, MWELO:
 - Engineer, WR to provide technical assistance to localsto implement SB 552. This includes coordinating with other state agency personnel to align goals and objectives of drought and water shortage resilience to support the building of local capacity to proactively mitigate shortages and improve in responding to water shortages; and managing direct technical assistance to county planning.
 - Environmental Scientist to support Model Water Efficient Landscape Ordinance (MWELO) implementation. MWELO is a critical component toward achieving new urban water use efficiency standards and facilitating urban retail water suppliers' compliance with the new urban water use objective requirement. This position will provide technical assistance to all cities and counties in California; including gathering feedback from landscapers, researchers, and land use authorities on effectiveness of implementation; and developing partnerships with

outreach organizations to increase public and land use authority understanding of MWELo's benefits and requirements (e.g., improve outdoor water use efficiency in response to drought).

- 4.0 positions (3 Engineer, WR and 1 IT Specialist II) to improve snowpack and runoff forecasting:
- 3.0 Engineer, WRs to implement the new physically based watershed models and develop products that result in water supply forecasting improvements. The positions will analyze the model results to track water year conditions and precipitation impacts to watershed recovery and runoff generation. During continuing dry years, the modeling team will explain how and where drought conditions will worsen. This will enhance understanding and communications of the variability in drought evolution/recovery due to the topography, geology, and vegetation conditions in the different regions.
- Information Technology (IT) Specialist II to provide IT, programming, application development, and database services vital for the success of several key drought response activities that improve hydrologic data collection and runoff forecasting. The position will provide IT and database support and development to enable the ingest of Airborne Snow Observatory (ASO) climate, weather, and other remote sensing data and modeling products into the California Data Exchange Center for use by water supply forecasting models. This data is vital to improving water supply forecasts.
- 5.0 positions (2 Sr Engineer WRs, 2 Program Manager 1's, and 1 Environmental Program Manager 1) to support critical habitat restoration implementation and assist with habitat enhancements that support species resilience during drought:
 - Two Sr Engineer WRs and Two Program Manager I Positions to design, manage, implement, and coordinate high-priority habitat restoration and multi-benefit projects throughout the Central Valley that will provide and promote native aquatic species resiliency, particularly during drought conditions.
 - One Environmental Program Manager I to serve as a liaison between DWR and the State and federal resource agencies (e.g., California Department of Fish and Wildlife, National Marine Fisheries Service, and US Fish and Wildlife Service) to collaborate on and address climate change and drought impacts on real-time flood facility operations. Position will assist DWR in implementing key new projects, and modifications and maintenance to existing DWR flood facilities to improve habitat conditions and aquatic species resilience during drought conditions, while also preserving flood protection features of the facilities. The position will also develop long term management strategies to address drought impacts on habitat and aquatic species in floodways and flood systems/structures.

California Natural Resources Agency (CRNA)

Expediting Large Scale Habitat Restoration (\$216,000). CNRA requests 1 PY and \$216,000 General Fund in 2022-23 and ongoing to assist with large-scale habitat restoration projects. These projects are complex and require consultation with a wide variety of permitting agencies and stakeholders. Agency level oversight is needed to provide effective coordination and consultation among project proponents, non-governmental organizations, other stakeholders, tribes, and numerous agencies, including departments within CNRA (including the Department of Water Resources and California Department of Fish and Wildlife), the State and Regional Water Boards, CalEPA, the U.S. Bureau of Reclamation, the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service. This position will

ensure that timely coordination and consultation occurs, that habitat restoration is consistent with CNRA policies, and that issues are promptly elevated and resolved.

State Department of Social Services

State Disaster Food Assistance Program (\$23 million). During California's previous drought, food banks distributed an average of 51,000 Drought Food Assistance food boxes per month. The current drought is expected to be more severe and may increase the level of food insecurity. Inflation is hitting an all-time high, pushing food and gas prices up, likely leading to increased costs for this response. The new Drought Food Assistance funding will allow the distribution of 58,000 food boxes per month to drought-affected areas that suffer high levels of unemployment.

Department of General Services

Water Conservation Projects (\$26 million). During this time of severe drought, every industry is being challenged to identify where they can maximize water savings and respond to build climate resilience. The state is no exception. In leading by example, DGS has been working across state agencies and departments to identify where the state can attain further permanent water savings across state-owned facilities. DGS's Office of Sustainability will facilitate a \$26 million Water Conservation Grant Program that will provide critical funding and technical assistance for much needed water conservation projects identified at state facilities. This grant program builds off the first State Water Conservation Grant Program of \$10 million that DGS created and administered from 2015-2018 that produced an estimated savings of 300 million gallons of water annually.

- In addition, the May Revision includes:
 - \$1.2 million General Fund ongoing for the Judicial Council to address climate, environmental, and water-related legal disputes.
 - \$75 million General Fund one-time to support the Small Agricultural Business Drought Relief Grant Program to provide direct assistance to eligible agriculture-related businesses that have been impacted by severe drought conditions.
 - \$500 million General Fund in 2025-26 to serve as a multi-year commitment to promote strategic water storage projects in the state that benefit water supply reliability and the environment. These resources are intended to build upon the \$2.7 billion provided in Proposition 1 under the Water Storage Investment Program to accelerate critical projects as part of a comprehensive and coordinated approach to water resiliency as outlined in the California Water Resilience Portfolio.

Background. For reference, the chart below is the Water Resilience Package approved in the 2021 Budget Act:

Water Resilience Package
(In millions)

Investment Category	Department	Program	2021-22	2022-23	2023-24	Total
Drinking Water, Water Supply and Reliability, Flood	State Water Resources Control Board	Drinking Water/Wastewater Infrastructure	\$1,300	\$0	\$0	\$1,300
		PFA's Support	\$30	\$50	\$20	\$100
		Water Recycling/Groundwater cleanup	\$200	\$100	\$100	\$400
	Department of Water Resources	Salton Sea	\$40	\$100	\$80	\$220
		SGMA Implementation	\$180	\$60	\$60	\$300
		Water Conveyance	\$100	\$100	\$0	\$200
		Flood	\$313	\$237	\$88	\$638
		Watershed Climate Studies	\$25	\$0	\$0	\$25
	Department of Food and Agriculture	Aqueduct Solar Panel Pilot Study	\$20	\$0	\$0	\$20
		State Water Efficiency and Enhancement Program	\$50	\$50	\$0	\$100
Natural Resources Agency	Clear Lake Rehabilitation	\$5.7	\$0.0	\$0.0	\$6	
Immediate Drought Support	Various	Data, Research, and Communications	\$127	\$0	\$0	\$127
	Various	Drought Technical Assistance, Emergency Water Supplies, & Control Section	\$52	\$0	\$0	\$52
	Department of Conservation	Multi-benefit Land Repurposing	\$50	\$0	\$0	\$50
	Department of Water Resources	Small Water Suppliers Drought Relief & Urban Water Management Grants	\$500	\$0	\$0	\$500
	Various	Drought Permitting, Compliance, and Enforcement	\$36	\$3.5	\$3.5	\$43
	Department of Fish and Wildlife	Drought Fisheries and Wildlife Support	\$43	\$0	\$0	\$43
Nature Based Solutions	Natural Resources Agency	Water Resilience Projects	\$165	\$100	\$180	\$445
	Wildlife Conservation Board	Wildlife Corridors/Fish Passage	\$65	\$40	\$0	\$105
		Stream Flow Enhancement Program	\$100	\$150	\$0	\$250
	State Water Resources Control Board	Border Rivers	\$20	\$0	\$0	\$20
	Various	Restoration of Natural Areas and Ecosystems	\$130.1	\$24.4	\$8.9	\$163
	Various	Urban Streams	\$30	\$20	\$0	\$50
Total			\$3,582	\$1,035	\$541	\$5,157

VARIOUS DEPARTMENTS: Extreme Heat.

(Discussed at the Subcommittee 2 hearing on May 12, 2022)

- The May Revision proposes \$300 million spread over two years (\$150 million annually) to address extreme heat, as shown in the chart below:

Extreme Heat
(Dollars in Millions)

Plan or Framework Category	Department	Program	2022-23	2023-24	Total
Cool Communities	Strategic Growth Council	Resilience Centers	\$85	\$85	\$170
	CAL FIRE	Green Schoolyards (Urban Forestry)	\$25	\$25	\$50
Protecting Vulnerable Populations and Ecosystems	Department of Public Health		\$3	\$0	\$3
	Department of Industrial Relations	Enhanced Protections for Vulnerable Populations	\$12.25	\$12.25	\$24.5
	Department of Social Services		\$2.75	\$5.75	\$8.5
	Department of Food and Agriculture	Animal Mortality Management Program	\$0.6	\$0.6	\$1.2
		Origin Inspection Program	\$0.25	\$0.25	\$0.5
	Department of Pesticide Regulation	Integrated Pest Management Technical Assistance	\$1.075	\$1.575	\$2.7
Increasing Public Awareness	Office of Planning and Research	Community-Based Public Awareness Campaign	\$6	\$14	\$20
Build a Climate Smart Workforce	Workforce Development Board	Extreme Heat High Road Training, Partnerships, and Apprenticeships Programs	\$13	\$4	\$17
Total			\$150	\$150	\$300

- Among the proposed investments, include:
 - \$170 million over two years to support cooling of communities at schools and through resilience centers.
 - \$50 million over two years for Green Schoolyards (urban forestry) through CalFire.
 - \$43 million to protect vulnerable populations and ecosystems from extreme heat impacts through enhanced enforcement of codes, standards, and regulations.
 - \$20 million for a community-based public awareness campaign to increase understanding of the risks posed by, and types of resources to protect against, extreme heat.
 - \$17 million to invest in High Road workforce development and training in jobs and careers that address extreme heat.

VARIOUS DEPARTMENTS: Nature-Based Solutions.

(Discussed at the Subcommittee 2 hearing on May 12, 2022)

- The May Revision allocates \$768 million, which was set aside in the 2021 Budget Act for nature-based solutions spread over two years, as shown in the chart below:

Nature-Based Solutions
(Dollars in Millions)

Investment Category	Department	Program	2022-23	2023-24	Total
Nature-Based Solutions Programs	Wildlife Conservation Board	Forest Conservation Program			
		Oak Woodlands Conservation Program			
		California Desert Conservation Program			
		Rangeland, Grazing Land and Grassland Protection Program	\$200	\$45	\$245
		California Riparian Habitat Conservation Program			
		Natural and Working Lands Climate Adaptation and Resiliency Program			
	Department of Fish & Wildlife	Nature-Based Solutions Wetlands Restoration Program	\$54	\$0	\$54
	Delta Conservancy		\$36	\$0	\$36
Department of Conservation	Multi-benefit Land Repurposing Program	\$0	\$20	\$20	
Department of Food & Agriculture	Healthy Soils Program	\$0	\$10	\$10	
CAL FIRE	Wildland Grazing (Fire Prevention Grant Program)	\$5	\$5	\$10	
Supporting Regional Action	State Conservancies	Support for Nature-Based Solutions	\$60	\$60	\$120
	Department of Fish and Wildlife & Santa Monica Mountains Conservancy	Wildlife Corridors (including Liberty Canyon)	\$50	\$0	\$50
	Department of Fish and Wildlife	Natural Community Conservation Program Planning and Land Acquisition	\$36	\$0	\$36
	Department of Conservation	Climate Smart Land Management Program	\$14	\$6	\$20
	Wildlife Conservation Board	Resource Conservation Investments Strategies	\$2	\$3	\$5
Expanding Educational and Economic Opportunities for Youth Climate Leaders	Conservation Corps	Local and Tribal Nature-Based Solutions Corps	\$35	\$17	\$52
Partnering with California Native American Tribes	Natural Resources Agency	Tribal Nature-Based Solutions Program	\$100	\$0	\$100
Additional Strategic Investments	CalRecycle	Compost Permitting Pilot Program	\$0.5	\$7	\$7.5
	Natural Resources Agency	Nature-Based Solutions Partnerships and Improvements	\$0.25	\$1.75	\$2
	Natural Resources Agency	CA Nature Support	\$0.25	\$0.25	\$0.5
Total			\$593	\$175	\$768

- Among the proposed investments, include:
 - \$245 million spread over two years to the Wildlife Conservation Board for various conservation programs.
 - \$90 million spread over two years for wetlands restoration.
 - \$120 million to State Conservancies over two years to support nature-based solutions.
 - \$50 million in 2022-23 for wildfire corridors.
 - \$52 million over two years for Local and Tribal Nature-based solutions corps.
 - \$100 million in 2022-23 for the Tribal Nature-Based Solutions Program to advance tribal initiatives that advance shared climate and biodiversity goals and accelerate the use of nature-based solutions to address climate change. The Administration also proposes to establish a Tribal Natural Resources Council for the purpose of fostering inclusive partnerships with tribes in addressing biodiversity issues. The Council is intended to support the California Natural Resources Agency's efforts to develop and implement the Tribal Nature-Based Solutions program and other tribal affairs programs and policies.

- Other adjustments related to Nature-Based Solutions in the May Revision include:
 - \$50 million General Fund one-time to the State Coastal Conservancy for acquisition of real property, such as shoreline properties to protect natural resources, provide for public access, and implement the state's nature-based solutions agenda.
 - \$18.3 million General Fund one-time for a climate information system to integrate and analyze the most current climate monitoring data. This funding is intended to support the initial planning and development of the system and ultimately comprise a central hub for climate data from local, state, and federal sources.

3540 DEPARTMENT OF FORESTRY AND FIRE PROTECTION (CalFire): Fire Protection.

- The May Revision includes various proposals to increase wildfire protection efforts including:
 - ***July through December Fire Protection Augmentation.*** \$83.1 million General Fund one-time to augment CalFire’s fire protection resources through December 2022 given current drought conditions, increasing fire severity and size, and declining inmate camp populations. This funding will support the continuation of 16 firefighter I fire crews, chainsaw operators to support California Military Department (CMD) force package fire crews, expanding training center capacity to accommodate these crews, additional vehicle repair/maintenance funding, and associated administrative costs. It is also requested that budget bill language be added to exempt CalFire from specified contracting requirements to facilitate quickly implementing these resources.
 - \$150.2 million (\$141.7 million General Fund) and 465 positions to enhance CalFire’s capabilities to meet the demands of wildland firefighting.
 - ***CalFire Staffing to Support California Conservation Corps (CCC) and California Military Department (CMD) Fire Crews.*** \$104.4 million General Fund (\$49.9 million ongoing) and 270 positions, phased in over four years, to provide for the CalFire staffing component of two Governor’s Budget fire crew proposals. Combined, these proposals will add eight new year-round California Conservation Corps (CCC) and CMD fire crews (four crews each) and convert 16 existing seasonal CCC and CMD crews to year-round crews (6 CCC and 10 CMD). This proposal also includes one-time funding for facility improvements necessary to support these crews. This proposal will increase the overall number of permanent hand crews intended to be available to: (1) respond to wildfires throughout the year, (2) implement high-priority fuel reduction projects, and (3) participate in prescribed fire and other fuels treatment projects.
 - ***Direct Mission Support — Total Force.*** \$37.8 million (\$29.3 million General Fund) in 2022-23, \$35.6 million (\$27.5 million General Fund) ongoing and 190 positions intended to enhance staffing, improve operational effectiveness, and provide administrative and program support necessary to support CalFire’s direct mission functions.
 - ***May Revision Update: Emergency Surge Capacity and Response Enhancements.*** \$8.8 million (\$8.4 million General Fund) and 34 positions in 2022-23, \$8.4 million (\$8 million General Fund) in 2023-24 and 2024-25, and \$1.7 million (\$1.3 million General Fund) and five positions ongoing to reflect the staffing components of two Governor’s Budget surge capacity proposals as well as incremental increases to various other Governor’s Budget proposals to reflect Bargaining Unit 8 pay scales. The General Fund portion of the staffing costs for these two Governor’s Budget surge capacity proposals are offset by a reduction of the same amount from the \$400 million ongoing General Fund set-aside included in the Governor’s Budget.

3790 DEPARTMENT OF PARKS AND RECREATION

- ***Equitable Access Program: New State Park, Reappropriation.*** The May Revision proposes to reappropriate \$5 million for the Equitable Access Program: New State Park for acquisition and development of the 1,600 acre Dos Rios property at the confluence of the San Joaquin and Tuolumne Rivers currently owned by the non-profit, River Partners. Provisional language is requested for encumbrance until June 30, 2025, and for the funds to be available for acquisition, study, preliminary plans, working drawings, and construction.
- ***Cannabis Watershed Protection Program Positions.*** The May Revision proposes 61 positions ongoing. These positions will support the Cannabis Watershed Protection Program implementation addressing needs, including statewide efforts to prevent illegal cannabis cultivation in state parks, remediation of environmental impacts, and restoration of natural habitats and lands impacted by cannabis cultivation. This request will be supported by the Department's Cannabis Tax Fund allocation designated for these purposes.
- ***India Basin.*** The May Revision includes \$25 million General Fund one-time for the India Basin Project in San Francisco.

VARIOUS DEPARTMENTS: Cap-and-Trade Expenditure Plan.

- The May Revision includes an additional \$120 million to the Cap-and-Trade Expenditure Plan, as follows:
 - \$100 million Greenhouse Gas Reduction Fund (GGRF) one-time for methane satellites. The purpose is to expand the number of satellites launched for methane observations, which would provide weekly measurement of large methane emissions in the state and enhance enforcement capabilities. This data is intended to allow the state to identify the source of these emissions, work with programs to hold emitters accountable for violations, and further reduce the amount of short-lived climate pollutants in the atmosphere.
 - \$20 million GGRF one-time for AB 617 Community Air Protection Program. The Governor's Budget included \$240 million to support AB 617; this additional allocation would bring the total proposed investment to \$260 million.

3960 DEPARTMENT OF TOXIC SUBSTANCES CONTROL: Greenville Lead Cleanup Project.

- The May Revision proposes \$47 million General Fund one-time to remove soil with elevated lead concentrations in Greenville, which were discovered during debris cleanup following the Dixie Fire of 2021. The resources will be used for contracting the services needed to remove contaminated soil, which will allow property owners to rebuild and residents to return with significantly reduced risk of exposure to contamination.

ENERGY

3360 CALIFORNIA ENERGY COMMISSION

3860 DEPARTMENT OF WATER RESOURCES

4700 DEPARTMENT OF COMMUNITY SERVICES DEVELOPMENT

8660 CALIFORNIA PUBLIC UTILITIES COMMISSION

0509 GOVERNOR'S OFFICE OF BUSINESS AND ECONOMIC DEVELOPMENT

Energy Reliability, Relief and Clean Energy Investments

The Governor's January Budget included \$2 billion for a Clean Energy Investment Plan to support innovation and deployment of clean energy technologies in the energy system. The May Revision includes an additional \$8 billion investment to further increase the state's energy system's resilience, increase reliability and affordability, and accelerate the deployment of the resources needed to achieve California's clean energy transition, and provide debt relief to California households impacted by the COVID-19 Pandemic. This brings total proposed investments in energy to \$10.05 billion over five years. The May Revision investments are as follows:

Energy Reliability, Relief and Clean Energy Investments

(Dollars in Millions)

Investment Category	Program	Agency	2021-22	2022-23	Multiyear Total
Ratepayer Relief	California Arrearage Payment Program	CSD	\$0	\$1,200	\$1,200
	Capacity Building Grants	CPUC	\$0	\$30	\$30
Reliability	Investments in Strategic Reliability Assets	DWR	\$1,500	\$445	\$4,250
	Distributed Electricity Backup Assets	CEC	\$550	\$0	\$950
	Residential Solar & Storage	CPUC	\$0	\$70	\$970
	Transmission & Energy Financing	IBank	\$0	\$250	\$250
	Demand Side Grid Support	CEC	\$200	\$0	\$295
Clean Energy	Carbon Removal Innovation	CEC	\$0	\$50	\$100
	Energy Data Infrastructure & Analysis	CEC	\$0	\$5	\$5
Total Package			\$2,250	\$2,050	\$8,050

- **Arrearage Payment Program.** The May Revision proposes \$1.2 billion to address residential electric utility arrearages through the Department of Community Services and Development to mitigate the outstanding debt leading to increased utility rates. The 2021 Budget established the California Arrearage Payment Program (CAPP) and directed \$1 billion in federal American Rescue Plan Act funding towards financial assistance to reduce or eliminate past due energy bill balances accrued by customers economically impacted by the COVID-19 Pandemic.

The May Revision also includes \$200 million to address residential water and waste water arrearages.

- **Strategic Electricity Reliability Reserve.** The May Revision proposes \$5.2 billion to invest in a Strategic Electricity Reliability Reserve, this includes \$4.25 billion at the Department of Water

Resources (DWR) for investments in strategic reliability assets, and \$950 million at California Energy Commission (CEC) for distributed energy backup assets.

The resources from which the Reserve will be developed may include existing generation capacity that was scheduled to retire, new generation, new storage projects, clean backup generation projects, diesel and natural gas backup generation projects with emission controls and all required permits, and customer side load reduction capacity that is visible to and dispatchable by the California Independent System Operator (CAISO) during grid emergencies.

- **Residential Solar and Storage.** The May Revision proposes \$970 million to the California Public Utilities Commission (CPUC) to provide residential solar and storage system incentives, including for low-income households. This consists of \$670 million for solar and storage systems for low-income households and \$300 million for additional storage installations paired with existing residential solar systems.
- **Transmission and Energy Financing.** The May Revision proposes \$250 million to leverage additional state financing tools dedicated to supporting the development of strategic clean energy projects that will assist the state in meeting its reliability, affordability and climate goals. Projects will be identified in coordination with the CPUC and the CEC and in consultation with the CAISO, as appropriate. To the extent possible, the program will look to maximize the involvement of third-party capital, including from the federal Department of Energy and the private sector, in order to increase the impact of the state-provided funds. The initial priority of this new financing will be to support the development of new transmission to deliver to the CAISO system, clean, firm electricity from new resources located in the Salton Sea region. This investment will support the state's goals for development of Lithium Valley in Imperial County.
- **Demand Side Grid Support.** The May Revision proposes \$295 million over multiple years to support the CEC in developing demand-side grid support initiatives. These efforts will help reduce energy demand on the grid during peak energy times.
- **Carbon Removal and Innovation.** The May Revision proposes \$100 million to support carbon removal projects at the CEC by providing match funding to supplement grants that projects receive from the federal government and non-profit foundations. This funding will be critical to providing in-state projects a competitive advantage when applying for funds, especially the federal funding available from the U.S. Department of Energy through the Infrastructure Investment and Jobs Act.
- **Capacity Building Grants.** The May Revision proposes \$30 million to provide capacity grants to community-based organizations that conduct outreach and technical assistance to foster participation in CPUC decision making processes, support ongoing equity initiatives, and provide clean energy access opportunities.
- **Energy Data Infrastructure and Analysis.** The May Revision proposes \$5 million in 2022-23 to provide resources to support the data warehousing and analysis of customer-level energy data CEC has acquired from investor-owned and publicly-owned utilities, which aid in the Commission's modeling of the clean energy transition.

The May Revision also proposes various investments and changes, as follows:

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- **Rate Reform.** The May Revision proposes statutory revisions to allow the CPUC to adjust electricity rates to predetermined fixed charges with considerations of low- income customers. This rate reform effort will reduce charges attached to volumes of electricity consumed, help control rate volatility, and enable creation of better price signals that will enhance widespread electrification efforts.

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- **Climate Innovation Grant Program.** The May Revision converts two green tax credits proposed in the Governor’s Budget, the Innovation Headquarters Credit and the Credit for Green Energy Technologies, into a single grant program administered by the CEC and equal to the same amount proposed at the Governor’s Budget (\$1.05 billion over four fiscal years - \$100 million in 2022-23, \$325 million in 2023-24 and 2024-25, and \$300 million in 2025-26).

The program would provide grants to companies headquartered in the state with a focus on research activities into technologies to help California reach its climate goals. The grant will fund applied research and proto-type development (\$275 million), technology demonstration grants (\$350 million), and technology scale up grants (\$320 million).

Recipients would provide a return to the state if a company has either an Initial Public Offering or a change in ownership even that results in a greater than 50 percent change in the company’s capitalization table. The amount of return to the state if the company has demonstrated success will be reduced if certain contractually specified performance metrics are met, in awarding grants, the CEC shall consider whether the companies’ investments are moving from a state that has enacted anti-LGBTQ+ or reproductive rights laws.

- **Lithium Valley Development.** The May Revision proposes to spur the growth of infrastructure to support the development of geothermal and lithium extraction facilities in the Salton Sea region. The May Revision proposes to:
 1. Accelerate development by streamlining geothermal permitting, including strong environmental protections, in coordination with California Native American tribes;
 2. Provide \$5 million to support the development of geothermal energy and lithium recovery in the Salton Sea region through evaluation, community planning and engagement;
 3. Incentivize projects that manufacture, process, or recover lithium through a sales and use tax exclusion, making \$45 million available over three years for these incentives;
 4. Provide for local governments and residents to benefit from the development and extraction of lithium by establishing a tax per ton of lithium extraction, placing reporting and fee requirements on lithium extraction activities, and providing funds to contribute to the maintenance, operations, and restoration of Salton Sea, and grants to support disadvantaged communities in the region; and,

5. Create pathways for local residents to benefit from jobs created by the new industries. The May Revision proposes \$80 million to expand training at the San Diego State University, Brawley Center in the Imperial Valley.

- **CEC Permitting.** The May Revision proposes statutory changes be added to support a new permitting option at the CEC that prioritizes the development of projects needed to enhance energy reliability while also providing opportunities for public, tribal, and local government engagement and environmental review.
- **CEC Planning.** The May Revision proposes statutory changes support CEC updating its energy planning standards to further promote electricity reliability by overseeing that all load serving entities that are members of the CAISO adequately incorporate the impacts of climate change and extreme weather into their planning reserve margins.
- **Offshore Wind Resource.** The Governor's January Budget proposed \$45 million to advance the state's offshore wind resource. The May Revision proposes statutory changes for a new program at the CEC for offshore wind developers to voluntarily partner with the state to help engage communities and stakeholders. It also looks to further build capacity in communities to encourage engagement in the CPUC processes that shape the state's energy future. The new program will support state activities that complement and are in furtherance of federal offshore wind laws, including offshore wind lease conditions of the Bureau of Ocean Energy Management. The program shall award moneys to public and private entities through various mechanisms, including, but not limited to, grants

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Zero-Emission Vehicles. The Governor's January Budget proposed \$6 billion over four years for zero-emissions vehicles (ZEV) and charging infrastructure. In the Spring, the Governor announced accelerating \$1.75 billion of the January ZEV package (\$1.5 billion) and the 2021 Budget act ZEV package (\$250 million) in the 2021-22 fiscal year. These adjustments were related to passenger vehicles and community-based options. The May Revision proposes to accelerate the following items from the January ZEV package:

- \$160 million for ZEV Drayage Trucks and Infrastructure Grants to deploy approximately 330 trucks with supporting infrastructure.
- \$100 million for ZEV Transit Buses and Infrastructure Grants to deploy approximately 370 buses with supporting infrastructure.
- \$150 million for ZEV School Buses to deploy approximately 340 school buses with supporting infrastructure.
- \$100 million for ZEV Clean Trucks, Buses and Off-Road Equipment infrastructure to support approximately 1,000 vehicles.
- \$20 million for emerging opportunities focused on transformational and innovative demonstration and pilot project(s) focused on hard-to-decarbonize sectors including zero-emission aviation, marine, and locomotive and vehicle-to-grid solutions.