
SENATE COMMITTEE ON NATURAL RESOURCES AND WATER

Senator Josh Becker, Chair

2025 - 2026 Regular

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Author:	Ransom		
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Urgency:	Yes	Fiscal:	Yes
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Subject: Fish and wildlife: golden mussels

SUMMARY

This bill would exempt a public or private agency that operates a water supply system from certain California Department of Fish and Wildlife (CDFW) permitting requirements until an invasive mussel control plan is submitted, approved, or denied, as applicable; require at least quarterly updating of an online map of golden mussel observations by CDFW; and require the California Department of Food and Agriculture and the State Water Resources Control Board to quickly and efficiently respond to the threat of golden mussels, among other provisions, as provided.

BACKGROUND AND EXISTING LAW

Invasive mussels in California's waters

Since 2007, California has been working to control and eradicate two species of invasive, freshwater mussels in state waters: quagga and zebra (dreissenid) mussels¹. In response to dreissenid mussel infestation, the Legislature has passed a series of bills that established the dreissenid mussels as restricted species and granted CDFW with authorities to inspect, order treatment, and quarantine vessels, such as recreational motor boats. As a restricted species, a person is prohibited from possessing, importing, shipping, transporting, or introducing the dreissenid mussels in any water within the state, unless authorized by CDFW through a restricted species permit.²

Further, statute requires water managers to work with CDFW to develop measures to avoid infestation, as well as requires water managers to develop control plans to prevent the spread of the invasive mussels should the water system become infested with the mussels. The benefit of developing a control plan is that water managers enjoy liability protections from the unintentional transportation or introduction of dreissenid mussels to the water system once the control plan is approved by CDFW.

Until last year, statute and state programming was specific to quagga and zebra mussels. AB 149 (Committee on Budget, Chapter 106, Statutes of 2025) expanded the dreissenid mussel programs and authorities to include any invasive mussel, including the golden mussel.

¹ Quagga and zebra mussels were and are not the only invasive bivalve in state waters, but were of particular interest due to their ability to clog pipes, and cover and inhibit the operation of water supply infrastructure.

² Restricted species permitting is located in Title 14, California Code of Regulations, §§671 *et seq.*

Golden mussels

On October 17, 2024, Department of Water Resources (DWR) staff discovered golden mussels in the Port of Stockton. Soon after the initial discovery, the golden mussel was quickly found at additional sites within the Sacramento-San Joaquin Delta (Delta). The golden mussel is a freshwater bivalve native to the rivers and creeks of China and Southeast Asia, but it has established itself outside of its native range in several countries. The discovery in Stockton was the first detection of the species in the United States. The Fish and Game Commission quickly took emergency action to add "*Limnoperna fortunei* (golden mussel)" to the list of restricted species. Since then, the golden mussel has been detected throughout the Delta and the State Water Project. CDFW maintains an online map showing confirmed observations of golden mussels.

The presence of the species poses a significant and immediate threat to the ecological health of the Delta and all waters of the state, water conveyance systems, infrastructure, and water quality. Environmental impacts of the golden mussel include loss of native and game fish through competition for food sources as well as a contribution to harmful algal blooms. It is estimated that a single mussel can filter up to a liter of water a day, which would remove critical nutrients and microbes that support ecosystem health. Recreation impacts of this mussel include waterbody closures, mandatory inspections, increased launch and/or entry fees, and reduced numbers of fish and shellfish for consumption. Economic impacts include costly repairs and maintenance (e.g., boats, water infrastructure, hydroelectric facilities), reduced water flow affecting food production, water delivery to homes, and flood control.

Golden mussels have proven to be much more difficult for the state and water managers to control. Golden mussels have high reproductive rates and form dense colonies. This mass colonization of surfaces (termed "biofouling") blocks, impairs, and, in many cases, inhibits the functionality of manmade surfaces including underwater intakes, structures, and mechanisms. A photo of an encrusted sampling plate is included on the next page to illustrate the impacts to water infrastructure in particular.³ Biofouling also coats the hulls and external components of watercraft and recreational facilities, and natural objects such as rocks, fallen trees, even other sedentary bivalves. In addition, mass colonies of golden mussels alter ecological processes of the natural environment resulting in detrimental impacts to native and game species and water quality. Nearly every fresh and brackish waterbody in California is suitable habitat for golden mussels.

There are no socially and environmentally benign methods currently available to eliminate invasive mussels once they are present. Efforts are underway to evaluate methods to eliminate the mussels in water supply systems. Adult mussels can survive days, even weeks, when removed from water. Larval mussels can survive a week or longer in small volumes of water. Eradication from large, interconnected bodies of water is likely impossible. Therefore, containing mussels within infested areas is the only means to minimize additional new, widespread impacts.

³ Image from "California scales back golden mussel safeguards at vital reservoir, alarming experts" by Rachel Becker in CalMatters, dates June 12, 2026.

Invasive mussels control plan.

Public and private agencies that operate a water supply system are required to cooperate with CDFW to implement measures to avoid infestation by invasive mussels and to control or eradicate any infestation that may occur in the system. If invasive mussels are detected, the operator of the water supply system is required to prepare a plan, subject to CDFW approval, to control or eradicate invasive mussels in the system and eliminate or minimize any potential downstream transport of an invasive mussel. The plans are required to include methods for delineation of infestation; methods for control or eradication of adult mussels and decontamination of water containing larval mussels; a system monitoring program; and a requirement that the operator of the water supply system allows CDFW inspections as well as cooperates with CDFW to update or revise control or eradication measures in the plan to address scientific advancements. “Tens of millions of dollars are being spent to stop the mussels.”⁴



A sampling plate covered with golden mussels that was removed from the Stockton Channel at the Port of Stockton on Oct. 23, 2025. Photo by Fred Greaves for CalMatters

Control plans, once approved, can provide the necessary permitting for water managers working within their mussel-infested water supply system to handle golden mussels so long as a description of the plans for handling the invasive mussels are included. For dreissenid mussels, a dreissenid mussel permit is available for the handling of dead mussels (14 CCR §672). Otherwise, a person wishing to collect golden mussels from the environment and euthanize them immediately needs a Scientific Collection Permit. Additionally, anyone who wishes to collect, transport, or maintain live golden mussels needs a Restricted Species Permit. To obtain a Scientific Collection Permit, applicants

⁴ From “California’s waterways could get clogged by a problem that didn’t exist two years ago” by Kurt Alexander in the San Francisco Chronicle, dated June 14, 2026.

must substantiate that they are undertaking bonafide scientific research, and both permits require that measures are in place to prevent accidental or malicious release.

Help!

A joint letter by numerous stakeholders in support of this bill includes the following statement:

“Current regulatory pathways were not designed for the speed required to respond to an invasive aquatic species spreading through interconnected water systems. As a result, agencies attempting to implement proven response measures face permitting delays across departments that reduces the effectiveness of early intervention. In one instance, a permit was received more than five months after the application was submitted; five months between detection and being able to implement control measures is a highly problematic delay for operations. With golden mussels multiplying prolifically, even a delay of a few months can be catastrophic. In another instance in Fall 2025, a field test of filter effectiveness was canceled because a regional biologist advised the applicant that they were not a qualifying entity for the scientific collecting permit. The pre-application discussion deterred the field test from proceeding as the entity does not want to operate out of compliance with State regulations. A current situation involves the examination of water samples by an out-of-state accredited laboratory for which multiple permits would be required for the collection, transport, and examination of the samples. In other instances, the permitting backlog was known to be eight months or more.”

Existing law:

- 1) Until January 1, 2030, prohibits a person from possessing, importing, shipping, or transporting in the state, or placing, planting, or causing to be placed or planted in any water within the state, invasive mussels (Fish and Game Code (FGC) §2301(a)).
- 2) Requires a public or private agency that operates a water supply system to cooperate with CDFW to implement measures to avoid infestation by invasive mussels and to control or eradicate any infestation that may occur in a water supply system. Requires the operator of the water supply system, if invasive mussels are detected, and in cooperation with CDFW, to prepare and implement a plan to control or eradicate invasive mussels within the system, and eliminate or minimize any potential downstream transport of an invasive mussel (FGC §2301(d)).
 - a) Requires all plans that do not specifically address invasive mussel species that are known to be present in bodies of water in the state as of January 1, 2026, to be updated or revised on or before September 30, 2027.
- 3) Requires any entity that discovers invasive mussels within the state to immediately report the discovery to CDFW (FGC §2301(e)).
- 4) Makes any person who violates the above provisions, violates any verbal or written order or regulation adopted pursuant to these provisions, or who resists, delays,

obstructs, or interferes with the implementation of these provisions subject to an administrative penalty (FGC §2301(f)).

- 5) Defines “invasive mussel” as any nonnative detrimental mussel species that is capable of spreading in freshwater and is listed in specific regulations adopted by the Fish and Game Commission (FGC §2303).

PROPOSED LAW

This bill would:

- 1) State legislative intent to align permitting processes to better support the necessary rapid response to prevent serious impacts of golden mussels on water infrastructure, water supply systems and waterbodies and to support public and private agencies that operate those systems, as provided.
- 2) Exempt a public or private agency that operates a water supply system and has submitted an invasive mussel control plan to CDFW from any permit requirement for golden mussels for maintenance and operational activities in the water supply system, as provided. Sunset this exemption when CDFW either approves or denies a submitted invasive mussel control plan.
- 3) Require CDFW’s Invasive Species Program to develop by April 1, 2027, guidance for public and private agencies that operate water supply systems to develop effective invasive mussel control plans. Require the guidance to include relevant protocols, example standards, and statutory requirements. Provide that compliance with the guidance is voluntary except as specified.
- 4) Require CDFW’s Invasive Species Program to develop and publish on CDFW’s internet website by April 1, 2027, guidance for scientific research conducted by or for public and private agencies that operate water supply systems to control the spread of golden mussels, as provided. Require the guidance to include mussel handling standards to minimize any potential negative impacts, as specified.
- 5) Authorize a public or private agency that operates a water supply system and does not have an approved invasive mussel control plan to submit a streamlined project proposal for scientific research to CDFW, as provided. Require the project proposal to comply with the guidance in 4). Compliance with the guidance in 4) is voluntary for those not submitting a project proposal.
 - a) Exempt the proposed scientific research from the need to obtain scientific collecting permits or restricted species permits, as provided. Sunset the permit exemption upon the agency’s submission of an invasive species control plan to CDFW.
- 6) Require CDFW to update the golden mussel spatial distribution maps of infested water bodies posted on its internet website no less than quarterly based on monitoring and reported detections. Require the maps to distinguish between reported and confirmed detection of golden mussels and include the date of the most recent map update, as provided.

- 7) Require the California Department of Food and Agriculture (CDFA) to work with state and local agencies in order to quickly and efficiently respond to the threat of golden mussels. Require CDFA to identify any tools available to assist a state or local agency response including an integrated pest management strategy or registered pesticide, as provided. Require CDFA to help identify any existing processes that allow for the rapid use of any tool to address the invasive species threat, as provided.
- 8) Require the State Water Resources Control Board (SWRCB) and the regional water quality control boards to work with state and local agencies to quickly and efficiently respond to the threat of golden mussels. Require the SWRCB to identify any tools available to assist in rapidly responding to the invasive species threat, as provided. Require the SWRCB to help identify any existing processes that allow for the rapid use of any tool that could be used to address the invasive species threat and enables a streamlined or faster process, as provided. Require the SWRCB to help coordinate efforts between the regional water quality control boards in response to the threat of an invasive species.
- 9) Make this act an urgency statute and justify the urgency due to the serious threat golden mussels pose to water infrastructure, water systems, water bodies and ecosystem health, as provided. Make numerous relevant legislative findings and declarations.

ARGUMENTS IN SUPPORT

According to the author, “Golden mussels are an invasive species that threaten California’s waterways, ports, and agriculture. First detected in the San Joaquin Delta in October 2024, golden mussels have spread rapidly throughout the state, now reaching as far south as San Diego, causing significant harm to water infrastructure, water quality, and aquatic ecosystems. These costly damages have a direct impact on water affordability and access to our farms and our families. Current law requires a multitude of permits across state agencies, creating barriers for local water agencies to respond quickly and effectively. This ongoing crisis must be addressed with urgency. AB 2032 would expedite onerous and lengthy permitting processes across state agencies to ensure local water agencies can effectively respond to prevent, mitigate, control, and eradicate golden mussels from California’s waterways.”

ARGUMENTS IN OPPOSITION

None received

COMMENTS

This bill is double-referred. This bill has been referred to both this Committee and the Senate Environmental Quality Committee. This Committee is the committee of first referral. Elements of this bill with the Senate Environmental Quality Committee’s jurisdiction are included here for completeness and context and will be discussed before that Committee.

Permitting exemptions are temporary. The exemptions from CDFW permits provided by this bill are temporary and expire upon the submission, approval or denial, as applicable, of an invasive species control plan. State agency response to the golden mussel infestation has been rapid, given the date that golden mussels were detected in

the state, and at least part of the statutory framework for golden mussel prevention has been established. However, it is also a fair point that operators of water supply infrastructure need to take immediate steps yesterday to address the rapid spread of golden mussels, not least in an effort to minimize the eventual cost to ratepayers of any potential infestation. This need has moved faster than the state's response. The regulatory framework for golden mussel prevention – which may well address permitting as the existing dresenid mussel regulations do – has not yet been released or the regulations finalized.

The author may wish to consider sunsetting the exemption from scientific collection and restricted species permits upon approval or denial of the agency's submitted invasive mussels control plan to align the termination of both permitting exemptions.

Negotiations are underway. Recent amendments reflect agreement between the author and CDFW on one provision and discussions continue on others.

In view of this, the Committee may wish to direct the author to continue to seek agreement and direct Committee staff to participate in the negotiations, as appropriate. The Committee may wish to re-hear the bill should it be subsequently substantially amended in areas within the Committee's jurisdiction.

Confirmation of golden mussel observations. CDFW asks the public to report observations of invasive species. The online directions suggest that submitting a sample for confirmation is optional. However, as photographs of the golden mussel in some instances resemble other mussels, it may be necessary for CDFW personnel to confirm observations in the field. This may result in delays in confirmation resulting in a time lag between submittal of observations and those confirmed observations being added to CDFW's online map. In June 2026, confirmed golden mussel observations from April and May 2026 were shown on the online map, but it is unknown how many submittals from those months were pending confirmation and thus not shown. CDFW reports that observations are confirmed as soon as possible subject to staff availability and normal business hours.

Underfunded and overmandated. CDFW has longstanding budget concerns which have persisted despite repeated efforts over multiple decades to address them. When the state has significant fiscal concerns – as it does now – ensuring consistent and sustained funding for the department is particularly challenging. Recently, at legislative direction, CDFW undertook a “service-based” budgeting effort to identify the personnel needed to perform the services required by its mandates. CDFW's services were separated into eight general programs for analysis. In 2021, the initial results of this effort were released that revealed that CDFW's funding was inadequate to meet its “mission” service level. Generally only about 1/3 of the necessary resources were available. The Newsom Administration proposed, and the Legislature approved, significant one-time General Fund moneys to support the department's activities in the near-term. Some progress in addressing the gaps in service were subsequently made, although this was offset, at least in part, by new duties.

A recent update (for fiscal year 2024/2025) shows that overall CDFW receives about 38% of the resources needed to meet its mission. While addressing golden mussels is a priority for CDFW and Proposition 4 has allocated \$20 million to CDFW, it is unclear

how the resource challenges at CDFW impact their ability to respond to golden mussels and what the source of ongoing sustainable funding for golden mussel response will come from.

Related legislation

AB 2787 (Assembly Water, Parks, and Wildlife Committee, 2026) among other things, provides that a person who operates a Nevada-registered vessel on the waters of Lake Tahoe or Topaz Lake shall not be cited for operation of a vessel without a valid state-issued invasive mussel sticker, provided that Nevada has a program in effect for the management of aquatic invasive species. *(This bill is pending before this Committee.)*

AB 1894 (B. Rubio, 2026) would prevent a public agency from prohibiting imported water deliveries for groundwater replenishment due to invasive mussels unless there is substantial, documented evidence of a proven health and safety risk as a result of the invasive mussels. *(This bill is pending before the Senate Appropriations Committee.)*

AB 1772 (Papan, 2026) would authorize CDFW to decontaminate or order the decontamination of a conveyance found or reasonably believed to harbor aquatic invasive species after conducting a specified inspection, among other provisions. *(This bill is pending before this Committee.)*

AB 149 (Assembly Budget Committee, Chapter 106, Statutes of 2025), among other things, expanded statute and programs from “dreissenid mussels” to “invasive mussels,” establishes a requirement for CDFW to review and approve updated invasive mussel control plans, and increased the invasive mussel fee.

AB 1150 (Assembly Water, Parks, and Wildlife Committee, Chapter 831, Statutes of 2023), among other things, distinguished that the issuance and collection of the quagga and zebra mussel infestation and prevention fee from the biennial registration renewal.

AB 2443 (Williams, Chapter 485, Statutes of 2012), establishes the quagga and zebra mussel infestation prevention program, which required payment of the invasive mussel fee on vessels and permitted the use of the funds for, among other things, a grant program.

AB 1929 (Hall, Chapter 152, Statutes of 2010) determines that a water operator is indemnified from the penalty of possessing and transporting a restricted species, if the water operator is in compliance with an approved control plan.

AB 2065 (Hancock), Chapter 667, Statutes of 2008, requires reservoir managers to undertake certain measures to prevent invasive mussel infestation in reservoirs in which invasives mussels have not been detected.

AB 1683 (Wolk), Chapter 419, Statutes of 2007, prohibits a person to possess, import, ship, or transport in the state, or place, plant, or cause to be placed or planted in any water within the state, dreissenid mussels, unless authorized by CDFW. Additionally, authorizes the Director of CDFW, or the Director’s designee, to conduct inspections of conveyances (e.g., vehicles and boats), order that the conveyance be drained, dried, or decontaminated, impound or quarantine conveyances, and conduct inspections of waters of the state and facilities that may contain invasive mussels. Further, requires

water operators to implement measures to avoid dreissenid mussel infestation and develop a control plan upon infestation, among other things.

SUGGESTED AMENDMENTS: none

SUPPORT

Contra Costa Water District (co-sponsor)
San Luis Delta Mendota Water Authority (co-sponsor)
Association of California Water Agencies
California Central Valley Flood Control Association
California Chamber of Commerce
California Farm Bureau
California Municipal Utilities Association
California State Association of Counties
City of Sacramento
CleanEarth4Kids.org
County of Los Angeles
County of San Joaquin
County of Shasta
El Dorado Irrigation District
Grassland Water District
National Marine Manufacturers Association
Northern California Water Association
Regional Water Authority
SePRO Corporation
Western Growers Association

OPPOSITION

None received

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