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GOLDEN MUSSEL DETECTION IN THE CALIFORNIA DELTA

Dear Interested Party:

On October 17, 2024, California Department of Water Resources (DWR) staff reported finding mussels attached to a float in the Port of Stockton to the California Department of Fish and Wildlife (CDFW). No mussels had been observed on the float in the prior months' inspection. Samples of the unknown mussels were immediately sent to the UC Davis Genomic Variation Laboratory and the California Department of Food and Agriculture's (CDFA) laboratory for identification.

On October 23 and 24 UC Davis and CDFA independently returned genetic analysis results consistent with golden mussel (*Limnoperna fortunei*), a species not known to be present in North America. On October 25, 2024, State Parks staff reported mussels on an artificial substrate deployed for monitoring for the presence of quagga/zebra mussels in O'Neill Forebay. Specimens collected from O'Neill Forebay are currently in route for genetic analysis by UC Davis and CDFA labs.

Golden mussels are similar in appearance, biology, and impacts to quagga and zebra mussel, and pose a significant threat to water conveyance systems, infrastructure, and water quality. Existing literature on golden mussels indicates they can establish in waters with lower total calcium in the water than quagga and zebra mussels. Golden mussels were likely introduced to California by a ship traveling from an international port.

Golden mussels are native to rivers and creeks of China and Southeast Asia. They are known to be established outside of their native range in Hong Kong, Japan, Taiwan, Brazil, Uruguay, Paraguay, and Argentina. Within the invaded range significant impacts are documented resulting from the dense colonization of golden mussels on hard surfaces. Heavy encrustations have blocked municipal and industrial water intakes, necessitated ongoing biofouling removal, altered species assemblages, and diminished water quality.

Over the coming weeks and months CDFW will work to disseminate additional detection and response information as it becomes available. In the interim, CDFW requests your immediate assistance in reaching all water managers throughout California to inform them of this discovery.

For additional information please visit <https://wildlife.ca.gov/Conservation/Invasives>, for questions please contact invasives@wildlife.ca.gov.

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