Appendix E

Public Comments and Responses

Jordan Switzer <jswitzer@casitaswater.com>

Lake Casitas MND SCH# 2022060526

Castanon, Angela@Wildlife <Angela.Castanon@wildlife.ca.gov> Wed, Jul 20, 2022 at 11:52 AM
To: "jswitzer@casitaswater.com" <jswitzer@casitaswater.com>
Cc: "stephen@h2osci.com" <stephen@h2osci.com>

Hello Mr. Switzer,

My name is Angela Castanon and I am the CEQA/CESA reviewer for Ventura County at the California Department of Fish and Wildlife. I had a quick question for you regarding the treatment of Lake Casitas with algaecides/molluscicides. These treatments are proposed to be used on an as-needed basis, however they would not be used concurrently or within any point of their respective effective treatment range, would this be correct? Thank you in advance for your response.

Angela Castanon
Environmental Scientist
Habitat Conservation and Planning
4665 Lampson Ave. Suite C
Los Alamitos, CA 90720
Angela.castanon@wildlife.ca.gov
Mobile: 562-640-0443

Jordan Switzer <jswitzer@casitaswater.com>

Lake Casitas MND SCH# 2022060526

Jordan Switzer <jswitzer@casitaswater.com> Thu, Jul 21, 2022 at 11:08 AM
To: Angela.Castanon@wildlife.ca.gov
Cc: "stephen@h2osci.com" <stephen@h2osci.com>

Good Morning Angela,

Thank you for your questions, please see below for our response to how we interpreted the clarifying information you are looking for:

> However **1)** they would not be used concurrently or **2)** within any point of their respective effective treatment range, would this be correct?

Response to questions:

1. Correct, the algaecide and molluscicide treatments would not be made at the same time.
2. The California Department of Pesticide Regulation approved product labels include restrictions relative to the minimum time between retreatment and limits to the maximum total copper concentration applied. If, for example, an algaecide application were needed after an application of molluscicide, Casitas MWD would conduct water quality monitoring to determine what, if any, concentration of copper was present at the potential algaecide application area. The algaecide application would be made in at a concentration consistent with the label and take into account any residual copper present at the site to ensure that the maximum copper concentration (e.g., 1 PPM) is not exceeded, and the application would be timed to be consistent with the label's retreatment interval restrictions.

If our interpretation was incorrect or you would like any additional information, please do not hesitate to reach out.

Kind Regards,

Jordan L. Switzer
Water Quality Supervisor
Casitas Municipal Water District
Office: (805) 649-2251 EXT:120

[Quoted text hidden]

Jordan Switzer <jswitzer@casitaswater.com>

Lake Casitas MND SCH# 2022060526

Castanon, Angela@Wildlife <Angela.Castanon@wildlife.ca.gov> Fri, Jul 22, 2022 at 8:11 AM
To: Jordan Switzer <jswitzer@casitaswater.com>
Cc: "stephen@h2osci.com" <stephen@h2osci.com>

Jordan,

Thank you for your response! One last question- what are the names of the compounds that will be used?

Angela Castanon
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4665 Lampson Ave. Suite C
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Mobile: 562-640-0443

From: Jordan Switzer <jswitzer@casitaswater.com>
Sent: Thursday, July 21, 2022 11:08 AM
To: Castanon, Angela@Wildlife <Angela.Castanon@Wildlife.ca.gov>
Cc: stephen@h2osci.com <stephen@h2osci.com>
Subject: Re: Lake Casitas MND SCH# 2022060526

[Quoted text hidden]

Jordan Switzer <jswitzer@casitaswater.com>

Lake Casitas MND SCH# 2022060526

Jordan Switzer <jswitzer@casitaswater.com> Fri, Jul 22, 2022 at 11:06 AM
To: "Castanon, Angela@Wildlife" <Angela.Castanon@wildlife.ca.gov>
Cc: "stephen@h2osci.com" <stephen@h2osci.com>

Hi Angela,

Please see below for response to your question:

- What are the names of the compounds that will be used?

Response:

- Appendix A of the IS/MND includes the example product labels and SDS for Earthtec QZ (Molluscicide) and Cutrine Plus (Algaecide). The IS/MND is available during the public review period on Casitas MWD's website www.casitaswater.org and is also available to view at the District office located at 1055 Ventura Ave, Oak View, CA 93022.
- These are intended to be representative of the type of copper that may be applied to Lake Casitas, but may change due to DPR registration changes, label changes and new products coming to market. For example, Earthtec QZ is the only currently registered copper-containing molluscicide labeled for the control of Quagga or Zebra mussels.

Kind Regards,

Jordan L. Switzer
Water Quality Supervisor
Casitas Municipal Water District
Office: (805) 649-2251 EXT:120

[Quoted text hidden]

Jordan Switzer <jswitzer@casitaswater.com>

CA Department of Fish and Wildlife Comments- Lake Casitas (SCH# 2022060526)

Castanon, Angela@Wildlife <Angela.Castanon@wildlife.ca.gov> Mon, Jul 25, 2022 at 2:33 PM
To: Jordan Switzer <jswitzer@casitaswater.com>
Cc: "Gibson, Steve@Wildlife" <Steve.Gibson@wildlife.ca.gov>, "Galli, Emily@Wildlife" <Emily.Galli@wildlife.ca.gov>, "Hailey, Cindy@Wildlife" <Cindy.Hailey@wildlife.ca.gov>

Hello Mr. Switzer,

Attached are the California Department of Fish and Wildlife's comments on the Copper to Control Algae and Invasive Species in Lake Casitas Project, (SCH No. 2022060526).

Please let me know if you have any questions.

Angela Castanon
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Mobile: 562-640-0443

2022060526_Casitas_Copper_MND.docx.pdf
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State of California – Natural Resources Agency
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GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

July 25, 2022

Mr. Jordan Switzer
Casitas Municipal Water District
1055 Ventura Avenue
Oak View, CA 93022
JSwitzer@casitaswater.com

Subject: Copper to Control Algae and Aquatic Animal Invasive Species in Lake Casitas, Mitigated Negative Declaration, SCH No. 2022060526; City of Oak View, Ventura County

Dear Mr. Switzer:

The California Department of Fish and Wildlife (CDFW) has reviewed the Casitas Municipal Water District's (District) Mitigated Negative Declaration (MND) for the Use of Copper to Control Algae and Aquatic Animal Invasive Species (Project). The District, as Lead Agency, prepared a MND pursuant to the California Environmental Quality Act (CEQA; Pub. Resources Code, § 21000 et. seq.) with the purpose of informing decision-makers and the public regarding potential environmental effects related to the Project. Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife or be subject to Fish and Game Code.

CDFW's Role

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust for the people of the state [Fish & Game Code, §§ 711.7, subdivision (a) & 1802; Pub. Resources Code, § 21070; California Environmental Quality Act (CEQA) Guidelines, [§ 15386, subdivision (a)]. CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Id., § 1802). CDFW is also directed to provide biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect state fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA (Public Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code, including lake and streambed alteration regulatory authority (Fish & Game Code, § 1600 *et seq*.). To the extent implementation of the Project as proposed may result in "take" of any species protected under the California Endangered Species Act (CESA; Fish & Game Code, § 2050 *et seq.*), or CESA-listed rare plant pursuant to the Native Plant Protection Act (NPPA; Fish & Game Code, §1900 *et seq.*), CDFW recommends the Project proponent obtain appropriate authorization under the Fish and Game Code.

Project Description and Summary

Objective: The District has proposed the use of algaecides (Cutrine Plus) and molluscicides (EarthTecQZ) within Lake Casitas. These compounds will be used on an as-needed basis and will not be used concurrently. Algaecide treatments will be applied at a 1mg/L and will not be applied again within 14 days of the initial treatment. Molluscicide treatments will be applied at 0.19 mg/L and will not be reapplied within 8 days of the initial treatment.

Location: Lake Casitas is a man-made freshwater reservoir located in an unincorporated portion of Ventura County. The reservoir is fed by Coyote Creek and water is also diverted from the Ventura River via the Robles Diversion (USBR 2022).

Comments and Recommendations

CDFW offers the comments and recommendations below to assist the District in adequately identifying, avoiding, and/or mitigating significant, or potentially significant, direct and indirect impacts on fish and wildlife biological resources based on the planned activities of this proposed Project. CDFW recommends the measures below be included in a science-based monitoring program with adaptive management strategies as part of the Project's CEQA mitigation, monitoring, and reporting program (Public Resources Code, § 21081.6 and CEQA Guidelines, § 15097). Additional comments or other suggestions may also be included to improve the document.

Specific Comments

Comment #1: Impacts from molluscicides to non-target species

Issue: Molluscicides will eradicate non-target mollusk species within Lake Casitas.

Specific Impact: Non-target freshwater-mollusk species exist in Lake Casitas. These species may serve as an important resource to aquatic life and self-sustaining fish populations within the reservoir. Although, fish species present support angling and recreational activities at Lake Casitas. Reduction of resources could result in impacts to sport fishing opportunities.

Why Impact Would Occur: Lake Casitas is a freshwater reservoir which provides angling and boating recreational opportunities. Fish species within the lake include: largemouth bass (*Micropterus salmoides*), channel catfish (*Ictalurus punctatus*), bluegill (*Lepomis macrochirus*), redear sunfish (*Lepomis microlophus*), common carp (*Cyprinus carpio*), white crappie (*Pomoxis annularis*), and black crappie (*Pomoxis nigromaculatus*). CDFW also stocks the lake with hatchery rainbow trout on an annual to semi-annual basis (CDFW 2022). Several of these species such as redear sunfish and catfish utilize nonnative Asian clams (*Corbicula fluminea*) as a food resource. Use of molluscicides may result in the die-off of Asian clams, a non-target species (NPIC 2012). Loss of food resources will have a detrimental effect on self-sustaining fish species within Lake Casitas thereby impacting recreational fishery. Because Lake Casitas has an extremely strict invasive dreissenids program, CDFW considers preventative use of molluscicides unnecessary.

Evidence Impact Would Be Significant: The Project may substantially adversely affect existing aquatic communities. Molluscicides could be hazardous or deleterious to aquatic life and non-target species and wildlife.

Recommended potentially feasible mitigation measure(s)

Mitigation Measure #1: To circumvent any unnecessary impacts to aquatic systems and recreational fishery in Lake Casitas CDFW recommends avoiding the use of molluscicides as a preventative measure. CDFW recommends only using these compounds if presence of invasive dreisennids is confirmed.

Mitigation Measure #2: If avoidance is not possible CDFW recommends increased stocking of hatchery fish to alleviate recreational impacts in Lake Casitas.

Additional Recommendations

Impacts to Birds. CDFW recommends the Applicant assess impacts to bird species due to ingestion and bioaccumulation. Several piscivorous species and birds of prey have potential to occur at Lake Casitas and may be impacted by the application algaecides and molluscicides.

Filing Fees

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the County and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required for the underlying Project approval to be operative, vested, and final (Cal. Code Regs., tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

Conclusion

We appreciate the opportunity to comment on the Project to assist the District in adequately analyzing and minimizing/mitigating impacts to biological resources. CDFW requests an opportunity to review and comment on any response that the District has to our comments and to receive notification of any forthcoming hearing date(s) for the Project [CEQA Guidelines, § 15073(e)]. If you have any questions or comments regarding this letter, please contact Angela Castanon, Environmental Scientist, at Angela.Castanon@wildlife.ca.gov.

Sincerely,

DocuSigned by:
B6E58CFE24724F5...

Erinn Wilson-Olgin
Environmental Program Manager I
South Coast Region

ec: CDFW
Steve Gibson, Los Alamitos – Steve.Gibson@wildlife.ca.gov
Emily Galli, Fillmore – Emily.Galli@wildlife.ca.gov
Cindy Hailey, San Diego – Cindy.Hailey@wildlife.ca.gov
CEQA Program Coordinator, Sacramento – CEQACommentLetters@wildlife.ca.gov

Office of Planning and Research
State Clearinghouse, Sacramento – State.Clearinghouse@opr.ca.gov

References:

[CDFW] California Department of Fish and Wildlife. 2022. Fish Planting Schedule. Available from: https://nrm.dfg.ca.gov/FishPlants/Default.aspx?county=Ventura&time=All

[NPIC] National Pesticide Information Center. 2012. Copper Sulfate Technical Fact Sheet. Available from: http://npic.orst.edu/factsheets/archive/cuso4tech.html

[USBR] U.S. Bureau of Reclamation. 2022. Casitas Dam. Available from: https://www.usbr.gov/projects/index.php?id=276

State of California – Natural Resources Agency
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www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

Attachment A: Draft Mitigation and Monitoring Reporting Plan

CDFW recommends the following language to be incorporated into a future environmental document for the Project. A final MMRP should reflect results following additional plant and wildlife surveys and the Project's final on and/or off-site mitigation plans.

Biological Resources (BIO)			
Mitigation Measure (MM) or Recommendation (REC)		**Timing**	**Responsible Party**
MM-BIO-1-Molluscicides	To circumvent any unnecessary impacts to aquatic systems and recreational fishery in Lake Casitas CDFW recommends avoiding the use of molluscicides as a preventative measure. CDFW recommends only using these compounds if presence of invasive dreisennids is confirmed.	Prior to Project activities	Casitas Municipal Water District/ Applicant
MM-BIO-2-Molluscicides	If avoidance is not possible CDFW recommends increased stocking of hatchery to alleviate recreational impacts in Lake Casitas.	Prior to/During/ After Project activities	Casitas Municipal Water District/ Applicant
REC-1-Impacts to Birds	CDFW recommends the Applicant assess impacts to bird species due to ingestion and bioaccumulation. Several piscivorous species and birds of prey have potential to occur at Lake Casitas.	Prior to construction and activities	Casitas Municipal Water District/ Applicant

Jordan Switzer <jswitzer@casitaswater.com>

CA Department of Fish and Wildlife Comments- Lake Casitas (SCH# 2022060526)

Jordan Switzer <jswitzer@casitaswater.com> Mon, Jul 25, 2022 at 3:00 PM
To: "Castanon, Angela@Wildlife" <Angela.Castanon@wildlife.ca.gov>
Cc: "Gibson, Steve@Wildlife" <Steve.Gibson@wildlife.ca.gov>, "Galli, Emily@Wildlife" <Emily.Galli@wildlife.ca.gov>, "Hailey, Cindy@Wildlife" <Cindy.Hailey@wildlife.ca.gov>

Received, thank you Ms. Castanon
[Quoted text hidden]

Jordan Switzer <jswitzer@casitaswater.com>

CA Department of Fish and Wildlife Comments- Lake Casitas (SCH# 2022060526)

Castanon, Angela@Wildlife <Angela.Castanon@wildlife.ca.gov> Mon, Jul 25, 2022 at 3:01 PM
To: Jordan Switzer <jswitzer@casitaswater.com>

Great, thank you!

Angela Castanon
Environmental Scientist
Habitat Conservation and Planning
4665 Lampson Ave. Suite C
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Angela.castanon@wildlife.ca.gov
Mobile: 562-640-0443

From: Jordan Switzer <jswitzer@casitaswater.com>
Sent: Monday, July 25, 2022 3:00 PM
To: Castanon, Angela@Wildlife <Angela.Castanon@Wildlife.ca.gov>
Cc: Gibson, Steve@Wildlife <Steve.Gibson@wildlife.ca.gov>; Galli, Emily@Wildlife <Emily.Galli@Wildlife.ca.gov>; Hailey, Cindy@Wildlife <Cindy.Hailey@wildlife.ca.gov>
Subject: Re: CA Department of Fish and Wildlife Comments- Lake Casitas (SCH# 2022060526)

[Quoted text hidden]

Angela Castanon
Environmental Scientist
Habitat Conservation and Planning
4665 Lampson Ave., Suite C
Los Alamos, CA 90720

Via Email: Angela.Castanon@wildlife.org July 29, 2022

Subject: Casitas Municipal Water District IS/MND SCH No. 2022060526; CA Department of Fish and Wildlife Comments and Responses

Dear Ms. Castanon,

Attached please find our responses to CDFW's comments regarding the *Use of Copper to Control Algae and Aquatic Animal Invasive Species in Lake Casitas, California Environmental Quality Act Initial Study and Mitigated Negative Declaration (IS/MND)* submitted by Casitas Municipal Water District (CMWD).

After you review the attached responses to your comments, please contact me or Stephen Burkholder of Blankinship & Associates (stephen@h2osci.com, 530-757-0941) to discuss any questions you may have.

Sincerely,

Jordan L. Switzer
Water Quality Supervisor
Casitas Municipal Water District
jswitzer@casitaswater.com
805-649-2251, Ext. 120

Casitas Municipal Water District IS/MND SCH No. 2022060526

CDFW Comments and Responses

Project Description and Summary

Statement #1: *Algaecide treatments will be applied at a 1mg/L and will not be applied again within 14 days of the initial treatment.*

Clarification of Statement #1:

Algaecides *may* be applied at a rate *up to* 1 mg/L, but lower rates may be used to control cyanobacteria blooms. For example, during a 2019 algae application, Cutrine Plus was used effectively at a rate of 0.61 mg/L to control a cyanobacteria bloom.

Statement #2: *Molluscicide treatments will be applied at 0.19 mg/L and will not be reapplied within 8 days of the initial treatment.*

Clarification of Statement #2:

Based on benchtop testing for dreissenid mussel control in Lake Piru, maintaining a copper-based molluscicide concentration of 0.19 mg/L for 8 days resulted in 100% mortality; therefore, there may be a need to make additional applications during the 8-day window to maintain a 0.19 mg/L concentration in the water column.

Specific Comments

Comment #1, Issue & Specific Impact: *Molluscicides will eradicate non-target mollusk species within Lake Casitas. Non-target freshwater-mollusk species exist in Lake Casitas. These species may serve as an important resource to aquatic life and self-sustaining fish populations within the reservoir. Although, fish species present support angling and recreational activities at Lake Casitas. Reduction of resources could result in impacts to sport fishing opportunities.*

Response to Comment #1, Issue & Specific Impact:

Invasive dreissenid species such as zebra and quagga mussels have been shown to reduce the microzooplankton and phytoplankton populations by up to 80% (Cary Institute, 2022) and have been correlated with a decline in dissolved oxygen levels (Caraco et al., 2000) which can be detrimental to the overall health of aquatic systems. With their relatively fast reproductive cycle (USNPS, 2022), if left unchecked, these invasive mussel species could quickly overwhelm a water system by outcompeting native mollusk and fish species for both food and space. This could cause a significant disruption to the food chain and negatively impact sport fishing opportunities. Their tendency to attach to surfaces such as docks, boat hulls, anchors, pipe, and screens is also likely to impact recreational use of the lake as well as CMWD's ability to transport water to municipal, industrial, and agricultural water users.

Comment #1, Why Impact Would Occur: *Use of molluscicides may result in the die-off of Asian clams, a non-target species (NPIC 2012). Loss of food resources will have a detrimental effect on self-sustaining fish species within Lake Casitas thereby impacting recreational fishery.*

Response to Comment #1.1, Why Impact Would Occur:

Taking no action in response to detection of dreissenid mussels is likely to result in significant adverse effects to existing aquatic communities, as stated above in **Response to Comment #1, Issue & Specific Impact.** Furthermore, other freshwater mussel species including the Asian clam are infaunal and unlikely to only inhabit the shoreline areas which would be treated with molluscicides. As stated in the IS/MND, this shoreline application is intended to target the substrates where dreissenid mussels are most likely encountered. Per the Missouri Department of Conservation (2022), Asian clams are able to reproduce rapidly, with a single adult clam producing up to 100,000 juveniles per year and capable of creating a large population where none had existed before. Because the center of the lake will not be treated for invasive mussel control, the eradication of Asian clams in Lake Casitas and associated impacts to recreational fishing are unlikely.

Comment #1, Why Impact Would Occur: *Because Lake Casitas has an extremely strict invasive dreissenids program, CDFW considers preventative use of molluscicides unnecessary.*

Response to Comment #1, Why Impact Would Occur:

This project does not call for a preventative use of molluscicides. As outlined in the CDFW-reviewed and approved CMWD 2016 Lake Casitas Prevention, Control, and Management Plan for Invasive Mussels, and the 2019 Lake Casitas Invasive Mussel Rapid Response Plan (attached to response email), application of a molluscicide is reactionary and would be made only in response to the confirmed detection of the mussels in Lake Casitas after all other control measures have been considered. As quagga mussels are already detected in Lake Piru, the overall benefit to the water body with the use of molluscicides is that invasive mussel species will not disrupt the food chain in Lake Casitas. Please also see **Response to Comment #1, Issue & Specific Impact.**

Evidence Impact Would Be Significant: *The Project may substantially adversely affect existing aquatic communities. Molluscicides could be hazardous or deleterious to aquatic life and non-target species and wildlife.*

Response to Evidence Impact Would Be Significant: As stated previously, no action in response to detection of dreissenid mussels will result in significant adverse effects to existing aquatic communities. Please refer to **Response to Comment #1, Issue & Specific Impact** for more information.

<u>Recommended potentially feasible mitigation measure(s).</u>

Mitigation Measure #1: *To circumvent any unnecessary impacts to aquatic systems and recreational fishery in Lake Casitas CDFW recommends avoiding the use of molluscicides as a*

preventative measure. CDFW recommends only using these compounds if presence of invasive dreissenids is confirmed.

Response to Mitigation Measure #1: Please refer to **Response to Comment #1, Why Impact Would Occur** for more information. The application of copper-based molluscicides would only be made in response to confirmed detection of mussels in Lake Casitas, not prior to their confirmed detection.

Mitigation Measure #2: *If avoidance is not possible CDFW recommends increased stocking of hatchery fish to alleviate recreational impacts in Lake Casitas.*

Response to Mitigation Measure #2:

CMWD will consider stocking the lake with hatchery fish if molluscicide applications appear to have reduced the abundance of fish in Lake Casitas.

Additional Recommendations

Impacts to Birds: *CDFW recommends the Applicant assess impacts to bird species due to ingestion and bioaccumulation. Several piscivorous species and birds of prey have potential to occur at Lake Casitas and may be impacted by the application algaecides and molluscicides.*

Response to Impacts to Birds: Copper is categorized as moderately toxic to birds through the oral pathway. As described in Appendix C of the IS/MND, the most sensitive acute endpoint identified for birds was an median lethal dose (LD50) of 91.1 mg Cu/kg-bw with an associated No Observable Effect Level (NOEL) of 30.5 mg Cu/kg-bw. Using the methodology described in Appendix C of the IS/MND, including consideration of bioaccumulation, acute and chronic risk to birds of prey was assessed. The osprey was selected as a surrogate species for birds and was assumed to eat fish and drink solely from copper-treated water in Lake Casitas. Daily acute exposure to copper was estimated to be approximately 2.32 mg/kg-day, corresponding to a Risk Quotient (RQ) of 0.025, less than the acute level of concern (LOC) of 0.5. Daily chronic exposure to copper was estimated to be approximately 1.35 mg/kg-day, corresponding to an RQ of 0.044. Because neither the LOC of 0.5 for acute risk to birds nor the LOC of 1.0 for chronic risk to birds was exceeded, copper applied to Lake Casitas for algae or invasive mussel control does not appear to pose acute or chronic risk to piscivorous birds.

References

Caraco, N.F., J. Cole, D. Fischer, and G. Lampman. 2000. Dissolved Oxygen Declines in the Hudson River Associated with the Invasion of the Zebra Mussel (Dreissena polymorpha). Environmental Science and Technology, 34, 1204 – 1210.

Cary Institute of Ecosystem Studies. 2022. Zebra Mussel Fact Sheet. Retrieved from: https://www.caryinstitute.org/news-insights/2-minute-science/zebra-mussel-fact-sheet (Accessed: July 28, 2022).

Missouri Department of Conservation. 2022. Asian Clam. Retrieved from: https://mdc.mo.gov/discover-nature/field-guide/asian-clam (Accessed: July 28, 2022).

United States National Park Services (USNPS). 2022. Invasive Zebra Mussels. Retrieved from: https://www.nps.gov/articles/zebra-mussels.htm (Accessed: July 27, 2022).

Jordan Switzer <jswitzer@casitaswater.com>

Ventura County Agency Comments

3 messages

Ciuffetelli, Anthony <Anthony.Ciuffetelli@ventura.org> Fri, Jul 22, 2022 at 4:00 PM
To: jswitzer <jswitzer@casitaswater.com>

Good Afternoon,

Attached to this e-mail are the following comments regarding the algae control project:

- VC Public Works (Groundwater)

Please feel free to contact me with any questions regarding this submission. Responses to these comments should be sent directly to the commenter with a copy to me.

Regards,

-Tony C.

Anthony Ciuffetelli

Ventura County Planning Division

Planning Programs

(805)654-2443

RMA 22-017_Groundwater.pdf
85K

Jordan Switzer <jswitzer@casitaswater.com> Fri, Jul 22, 2022 at 4:08 PM
To: "Ciuffetelli, Anthony" <Anthony.Ciuffetelli@ventura.org>

PUBLIC VENTURA COUNTY WORKS

WATERSHED PROTECTION

MEMORANDUM

DATE: July 19, 2022

TO: Anthony Ciuffetelli, Planner, Planning Division

FROM: James Maxwell, Groundwater Specialist

SUBJECT: RMA 22-017 – Casitas Municipal Water District

The Ventura County Public Works Agency, Water Resources Division, Groundwater Resources Section (VCWRD-GRS) reviewed the *Use of Copper to Control Algae and Aquatic Animal Invasive Species in Lake Casitas, California Environmental Quality Act Initial Study and Mitigated Negative Declaration* (IS/MND) submitted by Casitas Municipal Water District (CMWD).

PROJECT DESCRIPTION

The proposed project by CMWD will use copper-based products in Lake Casitas to control algae and aquatic animal invasive species. This includes the application of copper-based algaecides and molluscicides to be applied preferentially during the summer months at higher water temperatures for higher efficacy levels and shorter contact time requirements. The products will be applied according to water use restrictions recommended by the products. Monitoring and reporting to the State Water Resources Control Board (SWRCB) and the Regional Water Control Board (RWQCB) will be conducted.

GROUNDWATER QUALITY

Lake Casitas does not overlie any Department of Water Resources (DWR) -designated groundwater basins. However, the Lake is adjacent to the west of the Upper Ventura River Valley – Upper Ventura River Basin, a medium priority basin designated by the DWR as Basin No. 4-003.01. Discharges from the lake occur through a valve at the base of Casitas Dam or over the Dam spillway, both of which drain to Coyote Creek, which joins the Ventura River approximately 2 miles downstream of the Dam.

Section 3.4.10 of the IS/MND outlines potentially significant impacts related to hydrology and water quality and proposed mitigations. Item a) addresses the potential degradation to groundwater quality which was deemed "Less Than Significant with Mitigation Incorporated". The discussion of Item a) focuses specifically on the effects of the proposed project to surface water quality but does not evaluate potential effects to the groundwater quality of the water-bearing units surrounding Lake Casitas or its discharge point and receiving waters at and downstream of Casitas Dam.

Received, thank you Anthony

Jordan L. Switzer
Water Quality Supervisor
Casitas Municipal Water District
Office: (805) 649-2251 EXT:120

[Quoted text hidden]

Jordan Switzer <jswitzer@casitaswater.com> Fri, Jul 22, 2022 at 4:08 PM
Draft

Jordan L. Switzer
Water Quality Supervisor
Casitas Municipal Water District
Office: (805) 649-2251 EXT:120

[Quoted text hidden]

RMA 22-017_Groundwater.pdf
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James Maxwell
Groundwater Specialist
Ventura County Public Works Agency, Water Resources Division
800 S. Victoria Ave.
Ventura, Ca. 93009

Via Email: James Maxwell, James.Maxwell@ventura.org July 29, 2022

CC: Anthony Ciuffetelli, Anthony.ciuffetelli@ventura.org

Subject: Casitas Municipal Water District IS/MND SCH No. 2022060526; Ventura County WRD-GRS Comments and Responses

Dear Mr. Maxwell,

Attached please find our responses to your comments regarding the *Use of Copper to Control Algae and Aquatic Animal Invasive Species in Lake Casitas, California Environmental Quality Act Initial Study and Mitigated Negative Declaration (IS/MND)* submitted by Casitas Municipal Water District (CMWD).

After you review the attached responses to your comments, please contact me or Stephen Burkholder of Blankinship & Associates (stephen@h2osci.com, 530-757-0941) to discuss any questions you may have.

Sincerely,

Jordan L. Switzer
Water Quality Supervisor
Casitas Municipal Water District
jswitzer@casitaswater.com
805-649-2251, Ext. 120

Casitas Municipal Water District IS/MND SCH No. 2022060526

Ventura County WRD-GRS Comments and Responses

Comment #1: *Lake Casitas does not overlie any Department of Water Resources (DWR) - designated groundwater basins. However, the Lake is adjacent to the west of the Upper Ventura River Valley - Upper Ventura River Basin, a medium priority basin designated by the DWR as Basin No. 4-003.01. Discharges from the lake occur through a valve at the base of Casitas Dam or over the Dam spillway, both of which drain to Coyote Creek, which joins the Ventura River approximately 2 miles downstream of the Dam.*

Section 3.4.10 of the lS/MND outlines potentially significant impacts related to hydrology and water quality and proposed mitigations. Item a) addresses the potential degradation to groundwater quality which was deemed "Less Than Significant with Mitigation Incorporated". The discussion of Item a) focuses specifically on the effects of the proposed project to surface water quality but does not evaluate potential effects to the groundwater quality of the water-bearing units surrounding Lake Casitas or its discharge point and receiving waters at and downstream of casitas Dam.

Response to Comment #1:
Between Coyote Creek and the Ventura River, there may be up to an estimated 0.5 miles of channel, with approximately 0.1 miles of that being Ventura River and 0.4 mi being Coyote Creek. This is a very small fraction of the basin, which extends approximately 10 miles upriver from the confluence of Coyote Creek and the Ventura River (DWR, 2022).

Copper is unlikely to adversely impact groundwater quality because treated water is not anticipated to be discharged over the spillway or from the valve at the base of the dam at a concentration that would exceed the estimated freshwater receiving water limitation (RWL) of 18.8 ug/L (refer to IS/MND Section 3.4.10 Hydrology and Water Quality) or the copper action level of 1,300 ug/L (22 CCR § 64678, 2003). As described in Appendix C of the IS/MND, the concentration of copper in the Ventura River following a spill from Lake Casitas 24 hours after a molluscicide or algaecide application was estimated to be up to 4.0 ug/L and 5.3 ug/L, respectively. These concentrations are both below the RWL and drinking water standards defined in the California Lead and Copper Rule. Furthermore, copper is unlikely to move through the soil profile to groundwater due to its high affinity for organic matter and clay minerals found in soil particles (McLaren, 1981; MPCA, 1999; Rashad, 2014) as well as its insolubility in water (NIOSH, 2019).

References

California Department of Water Resources (DWR). 2022. California Groundwater Basin Map. Retrieved from: https://sgma.water.ca.gov/webgis/?appid=160718113212&subbasinid=4-003.01 (Accessed: July 28, 2022).

Determination of Exceedances of Lead and Copper Action Levels. 22 CCR § 64678 (2003).

McLaren, R.G. 1981. *The adsorption of copper by soil materials at low equilibrium solution concentrations.* The European Journal of Soil Science, 32: 247 – 256.

Minnesota Pollution Control Agency (MPCA). 1999. *Copper, Chromium, Nickel and Zinc in Minnesota's Ground Water.*

National Institute for Occupational Safety and Health (NIOSH). 2019. *Copper (dusts and mists, as Cu).* Centers for Disease Control and Prevention. Retrieved from: https://www.cdc.gov/niosh/npg/npgd0150.html (Accessed: July 28, 2022).

Rashad, M. 2014. *Readily dispersible clay and its role in the mobility of transition metals Cd^{2+}, Cu^{2+} and Zn^{2+} in an alkaline alluvial soil.* Environmental Earth Science, 71, 3855 – 3864.

From: Maxwell, James <James.Maxwell@ventura.org>
Sent: Monday, August 1, 2022 11:34 AM
To: Stephen Burkholder <stephen@h2osci.com>
Cc: Ciuffetelli, Anthony <Anthony.Ciuffetelli@ventura.org>; jswitzer <jswitzer@casitaswater.com>
Subject: RE: Response to VCPW Comment on Casitas Municipal Water District IS/MND SCH No. 2022060526

Hi Stephen,

Thank you and Jordan for the quick response. I was speculating pretty much along the same lines as your explanation. I just wanted to make sure I didn't miss any details in the IS/MND. I don't have any other questions or comments.

Thanks,

James Maxwell, PG, CEG
Groundwater Specialist
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From: Stephen Burkholder
Sent: Monday, August 1, 2022 3:49 PM
To: Maxwell, James
Cc: Ciuffetelli, Anthony; jswitzer
Subject: RE: Response to VCPW Comment on Casitas Municipal Water District IS/MND SCH No. 2022060526

Hi James,

Understood. We appreciate your query and follow-up.

Take care,

Stephen

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Senior Biologist

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