

## Lake Elsinore & San Jacinto Watersheds Authority



City of Lake Elsinore • City of Canyon Lake • County of Riverside  
Elsinore Valley Municipal Water District • Santa Ana Watershed Project Authority

### Canyon Lake Alum Treatment FAQs

**1. Why is water treatment being conducted in Canyon Lake?**

**A:** Stormwater runoff carries with it high levels of nutrients including nitrogen and phosphorus that hurt water quality and threaten marine life. In order to comply with water quality regulations enforced by the State through the local Santa Ana Regional Water Quality Control Board, the Lake Elsinore & Canyon Lake Nutrient Total Maximum Daily Load (TMDL) Task Force has been responsible for the organizing alum applications in Canyon Lake.

**2. What is being used to treat the water in Canyon Lake?**

**A:** The TMDL Task Force evaluated several options during the CEQA process and determined that alum application provided the best option to effectively treat the entire lake in a timely manner with minimal impact to Canyon Lake residents.

**3. What is Alum?**

**A:** Alum (aluminum sulfate) is one of the most common minerals found on earth and has been used since Roman times for water purification. Alum is a common ingredient in cosmetics, antiperspirants, toothpaste, bath salts and antacids. It is sold as a spice in most grocery stores.

**4. How does alum reduce phosphorous?**

**A:** Once alum has been added to the lake, it binds immediately with the phosphorous and effectively removes the opportunity for algae to grow. With less algae in the water, light can penetrate deeper into the lake - allowing plants to grow at the bottom while improving the overall health and water quality of the lake.

**5. Is alum safe for humans? Marine life?**

**A:** Alum is a safe and effective method that has been used in many lakes across the country to mitigate excess phosphorus in lakes and reservoirs according to the North American Lake Management Society. Alum is a common ingredient in cosmetics, antiperspirants, toothpaste, bath salts and antacids. The alum application will be well within safe levels as determined by the U.S. Environmental Protection Agency, the California Office of Environmental Health Hazard Assessment, and the Center for Disease Control and will not impact humans or marine life.

**6. Will alum affect the drinking water quality of Canyon Lake?**

**A:** No. Aluminum concentrations in the lake itself will meet the PHG for aluminum in finished drinking water within 24 hours following the alum application.

**7. How is the alum be applied?**

**A:** The alum is injected directly into the lake off of boats in specific areas. Current alum applications have focused on the main body, East Bay coves, as well as north of the causeway.

**8. Is my use and access of the lake impacted by the alum applications?**

**A:** Recreational users experience minimal disruption during treatment application and implementation.

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### **Canyon Lake Alum Treatment FAQs (cont.)**

**9. Are boats allowed on the lake during the application?**

**A:** Yes, but certain areas of the lake are blocked off during the applications process, which last only a few hours. Boats have full lake access immediately after the application process is completed.

**10. Are beaches closed during the application? Is it safe to swim?**

**A:** Some areas might be briefly closed off during the alum application, but access will be open immediately once the application process is completed. Swimmers will be able to safely enjoy the lake after the application process is complete.

**11. Are fishermen allowed to fish during the application? Are the fish safe to eat?**

**A:** Yes, but certain areas of the lake are blocked off during the applications process, which should last only a few hours. Fishermen have full lake access immediately after the application process is completed. There is no negative affect on marine life as a result of the alum application.

**12. Are there be any visual impacts with the alum applications?**

**A:** No. In fact, Canyon Lake's water clarity should improve immediately once the alum is applied.

**13. How often do the alum applications take place?**

**A:** Alum applications take place twice a year, usually in the fall and spring. The entire application process takes approximately 5 days.

**14. Is the lake be tested after the application?**

**A:** Yes, post monitoring of the lake water quality does occur.

**15. Can the material at the bottom of the lake become active again?**

**A:** No, once the alum binds with the lake sediment it becomes inert and very stable

**16. How much do the alum applications cost?**

**A:** Alum applications are funded through over 20 stakeholder organizations in the region.

**17. How is the community notified of upcoming water treatment activities in the future?**

**A:** Regular updates are shared through the Canyon Lake Property Owners Association, the Lake Elsinore & San Jacinto Watersheds Authority website and Facebook page, **as well as local media.**

**18. Is there a threat to Lake Elsinore when Canyon Lake overflows during high water levels?**

**A:** No. By the time Canyon Lake water reaches Lake Elsinore, it does not contain alum since it would have been bound to the lake sediment of Canyon Lake. Even under severe stormwater runoff events, if Canyon Lake sediment were to be carried downstream in an overflow event, the alum applied in Canyon Lake would remain inert and would have no effect on the downstream lake water quality or habitat.