

## 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 is going to be using a state-funded grant to begin alum water treatment 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 as a first step 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 will the alum be applied?**

**A:** The alum will be injected directly into the lake off of boats in specific areas.

**8. Will my use and access of the lake be impacted by the water treatment?**

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

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

**9. Will boats be allowed on the lake during the application?**

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

**10. Will beaches be closed during the application? Will it be 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 immediately after the application process is complete.

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

**A:** Yes, but certain areas of the lake will be blocked off during the applications process which should last only a few hours. Fishermen will 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. Will there be any visual impacts with the water treatment?**

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

**13. When will the treatment begin? How long will it take?**

**A:** Application is expected to begin in September 2013, and continue with four additional treatments in Feb. 2014, Sept. 2014, Feb. 2015 and Sept. 2015. A more specific schedule will be provided to Canyon Lake residents as soon as the details are finalized.

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

**A:** Yes, post monitoring of the lake quality will occur after.

**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 will the water treatment cost?**

**A:** The water treatment is being largely funded by a \$500,000 grant awarded from the California Department of Water Resources. The remaining funding needed will come from agencies in the watershed responsible for meeting the lake water quality standards.

**17. How will I be notified of upcoming water treatment activities in the future?**

**A:** Regular updates will be posted to the Canyon Lake Property Owners Association and the Lake Elsinore and San Jacinto Watersheds Authority websites.

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

**A:** No. By the time Canyon Lake water would reach Lake Elsinore, it would 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.