



Canyon Lake Alum Treatment and Algae Toxin Update

Rick Whetsel, Senior Watershed Manager
LESJWA Board Meeting| February 15, 2024
Agenda Item 7.B.

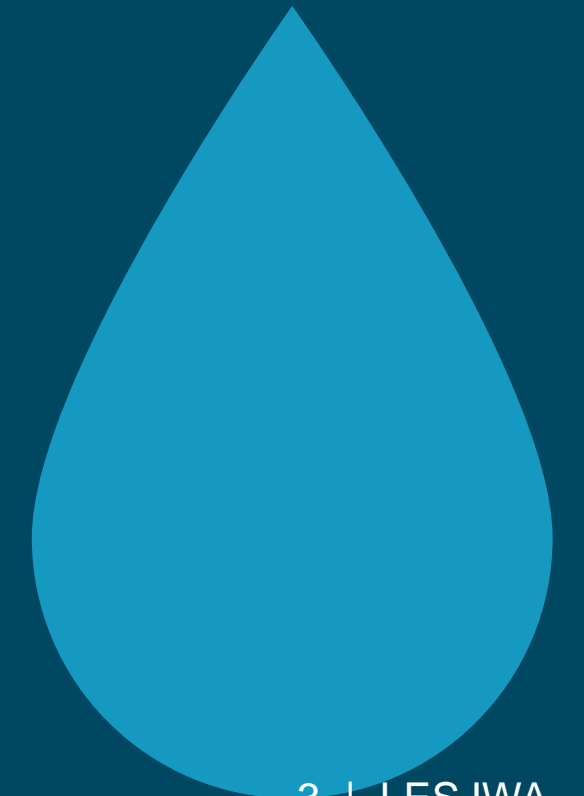


Recommendation

The Lake Elsinore & Canyon Lake Nutrient TMDL Task Force and LESJWA staff recommend that the Board of Directors:

- 1) Accept the role to serve as lead CEQA agency on the Canyon Lake Alum Application Project.
- 2) Approve an Agreement for Services and Task Order No. DODS160-02 with Tom Dodson and Associates for an amount not-to-exceed \$4,000 to prepare a second Addendum to the adopted Mitigated Negative Declaration (MND) and file new a Notice of Determination to continue the implementation of alum dosing in Canyon Lake in 2026.

Canyon Lake



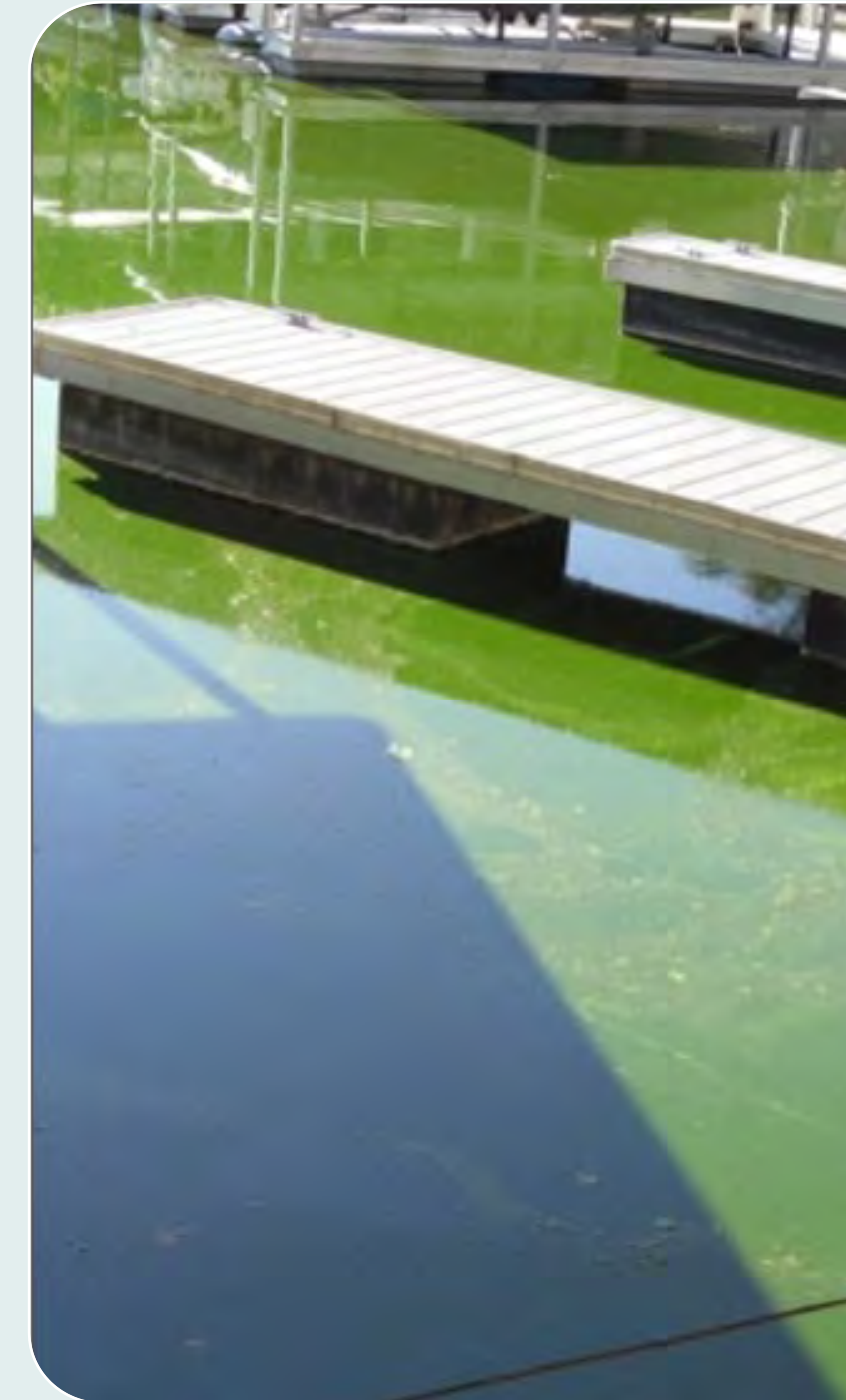


Canyon Lake

- 383 acres
- 13.8 miles of shoreline
- 3 main beaches
- Jump Lagoon water ski ramp
- 3-mile championship water ski course (wakeboard, sky ski)
- 2 marinas and 10 common dock areas
- Concrete dam 80 feet high, 510 feet wide (1929)
- Drinking Water Reservoir
- Owned by Elsinore Valley Municipal Water District

CANYON LAKE: Challenges

- Storm water runoff carries high levels of nutrients including nitrogen and phosphorus
- Nutrients impact water quality and threatens the fishery health



Canyon Lake Alum Treatment Project Background

- **2011-2012** - Dr. Michael Anderson conducts studies showing the application of alum to be an effective strategy to address excess phosphorus in Canyon Lake.
- **July 2012** - LESJWA, on behalf of the Lake Elsinore and Canyon Lake TMDL Task Force submitted proposal to DWR through the Proposition 84 Integrated Regional Water Management (IRWM) grant Program for funding for a Canyon Lake Hybrid Treatment Project.
- **May 2013** - LE&CL TMDL Task Force completes alum toxicity testing of canyon Lake Water to demonstrate assimilative capacity.
- **June 2013** - City of Canyon Lake approved CEQA.
 - LESJWA serves as responsible agency to contract, coordinate and oversee the implementation of future alum applications.
 - EVWMD agreed to provide staff to conduct on-site application inspection.
- **June 2013** - LESJWA, on behalf of the Lake Elsinore and Canyon Lake TMDL Task Force contracts with Aquatechnex to conduct bi-annual alum applications to Canyon Lake.
 - **September 2013** - Aquatechnex successfully completes first Alum Application to Canyon Lake
- **October 2014** - LESJWA awarded \$500,000 in grant funding by DWR to implement the Canyon Lake Hybrid Treatment Project.
- **December 2015** - City of Canyon Lake City Council, approved CEQA amendment to allow, but not require, additional alum applications for the next 10 years.
- **2013-2023** - LESJWA, on behalf of the Lake Elsinore and Canyon Lake TMDL Task Force successfully completes a total of 20 alum Applications to Canyon Lake.



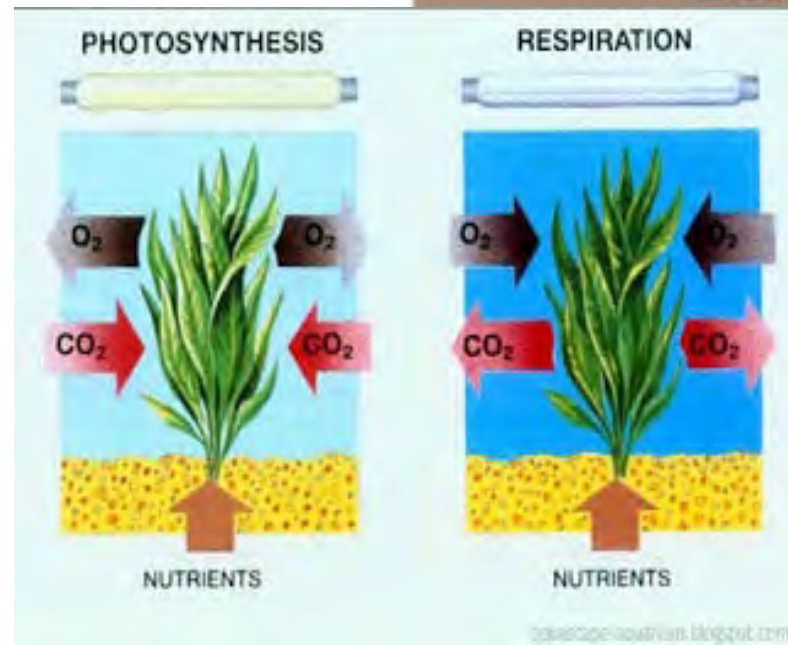
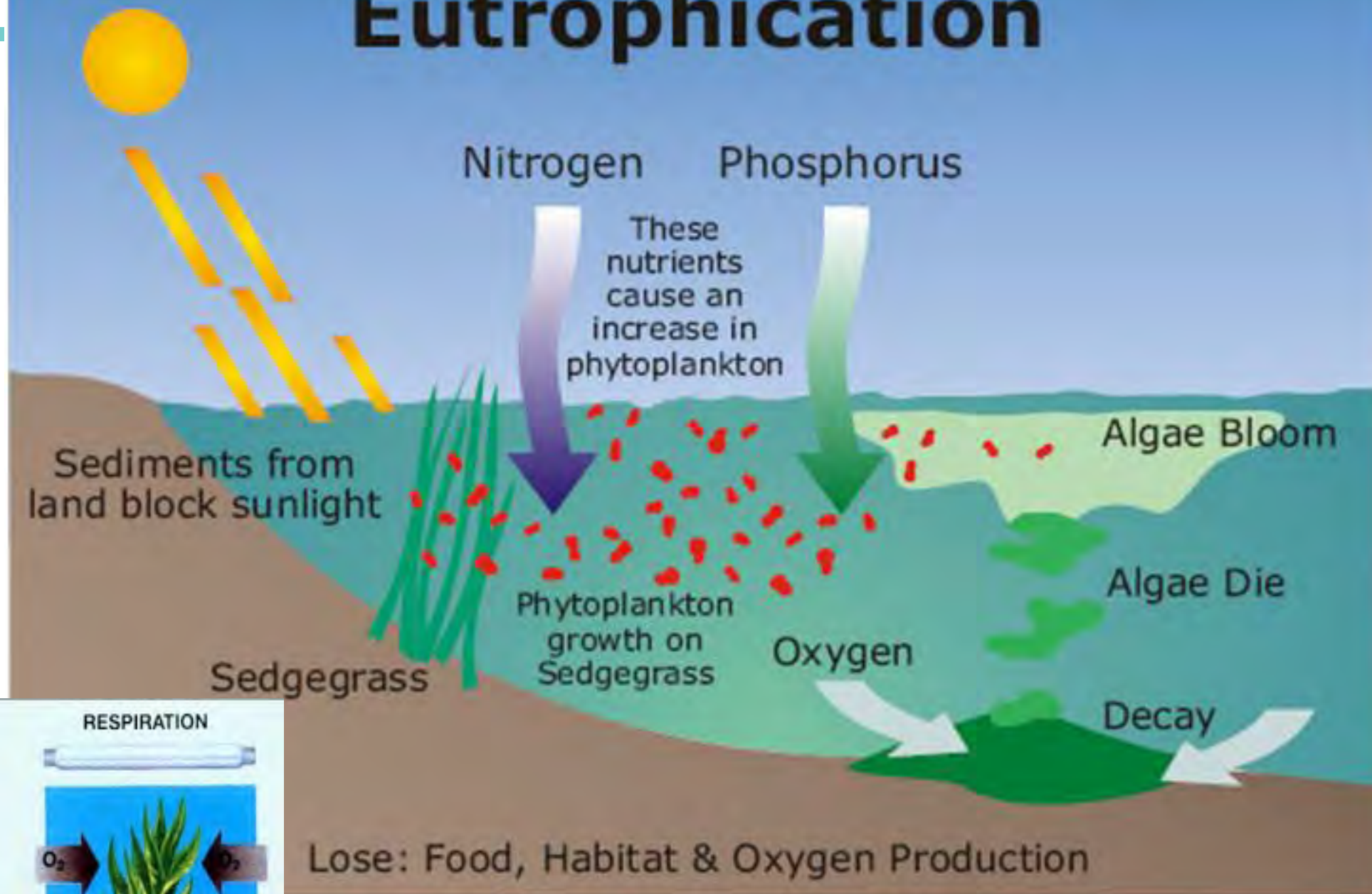
Canyon Lake Alum Treatment Project Process

- Goal: Reduce Phosphorus in water column and on lake bottom preventing resuspension.
- Alum Applications Conducted bi-annually
- Spring Application (March – April)*
 - Alum applied 60,000 gal.
 - Total Phosphorus removed 980 kg
 - Cost \$ 100,000
- Fall Application (September – October)
 - Alum applied 90,000 gal.
 - Total Phosphorus removed 1,470 kg
 - Cost \$ 140,000

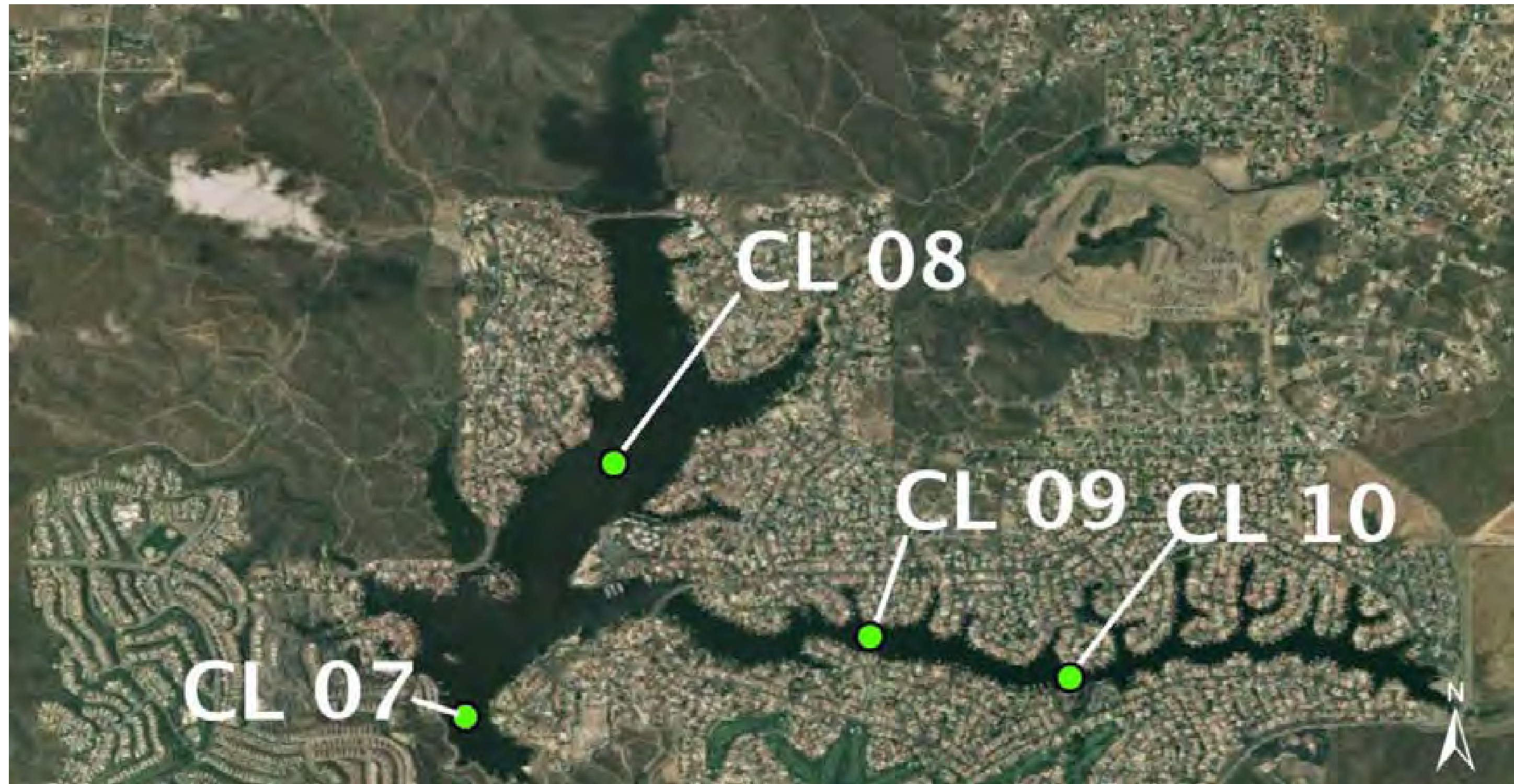


* Spring Alum application contingent on in-lake water quality

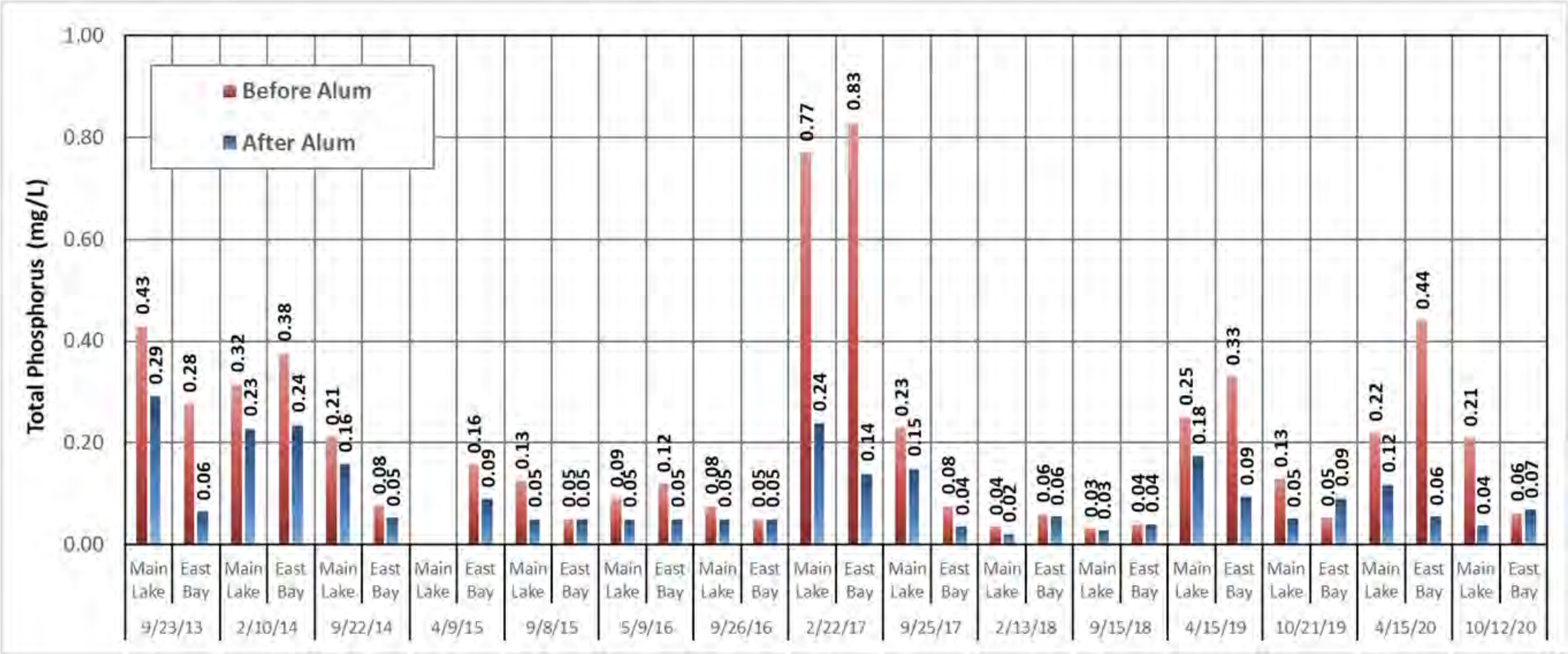
Eutrophication



Canyon Lake Alum Treatment Project Water Quality Monitoring



Depth-Integrated Total Phosphorus Concentrations in Canyon Lake Before and After Alum Applications



Canyon Lake Alum Treatment Project

CEQA

- The purpose of this program is to evaluate the efficacy of using alum to reduce phosphorus concentrations lake and thereby prevent the growth of excess algae in the lake.
- City of Canyon Lake has requested that LESJWA take over the role of lead CEQA agency on the Canyon Lake Alum Application Project.
- LESJWA, as lead CEQA agency, will be responsible to approve the CEQA findings document and file the new Notice of Determination, in addition to their current role of contracting, coordinating and implementing the project.
- All costs associated with this work will be the responsibility of the stakeholders of the Lake Elsinore and Canyon Lake TMDL Task Force.

Proposal – Tom Dodson & Associates

- 1. Prepare a second Addendum to the adopted Mitigated Negative Declaration (MND).
- 2. Assist in circulating the Addendum through the project stakeholders and responding to any comments received.
- 3. Prepare final Addendum package for adoption by LESJWA, and file a new Notice of Determination (NOD), and then file the NOD with the County and submit it to the State Clearinghouse.
- Cost: \$4,000 to be paid by the Lake Elsinore and Canyon Lake TMDL Task Force.

Recommendation

The Lake Elsinore & Canyon Lake Nutrient TMDL Task Force and LESJWA staff recommend that the Board of Directors:

- 1) Accept the role to serve as lead CEQA agency on the Canyon Lake Alum Application Project.
- 2) Approve an Agreement for Services and Task Order No. DODS160-02 with Tom Dodson and Associates for an amount not-to-exceed \$4,000 to prepare a second Addendum to the adopted Mitigated Negative Declaration (MND) and file new a Notice of Determination to continue the implementation of alum dosing in Canyon Lake in 2026.

Questions



Lake Elsinore & San Jacinto Watersheds Authority

Strategic Plan Process Overview

February 15, 2024

*Creating
a better
water future®*

Experienced Strategic Planning Partners

Meet Our Team

Amy Stevens, APR

Project Manager
& Facilitator



Haili Matsukawa, MPPA

Principle in Charge
& Facilitator

Nina Thoming

Graphic Designer



Michael Cruikshank

Technical Advisor



Strategic Planning Approach



**Meeting
People Where
They Are**

**Authentic
Engagement**

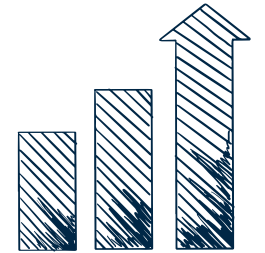
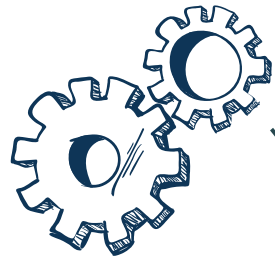


**Listening to
Understand**

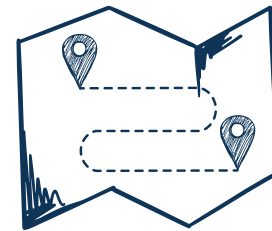


**Effective
Communications**

Integrated Planning



Smart Metrics

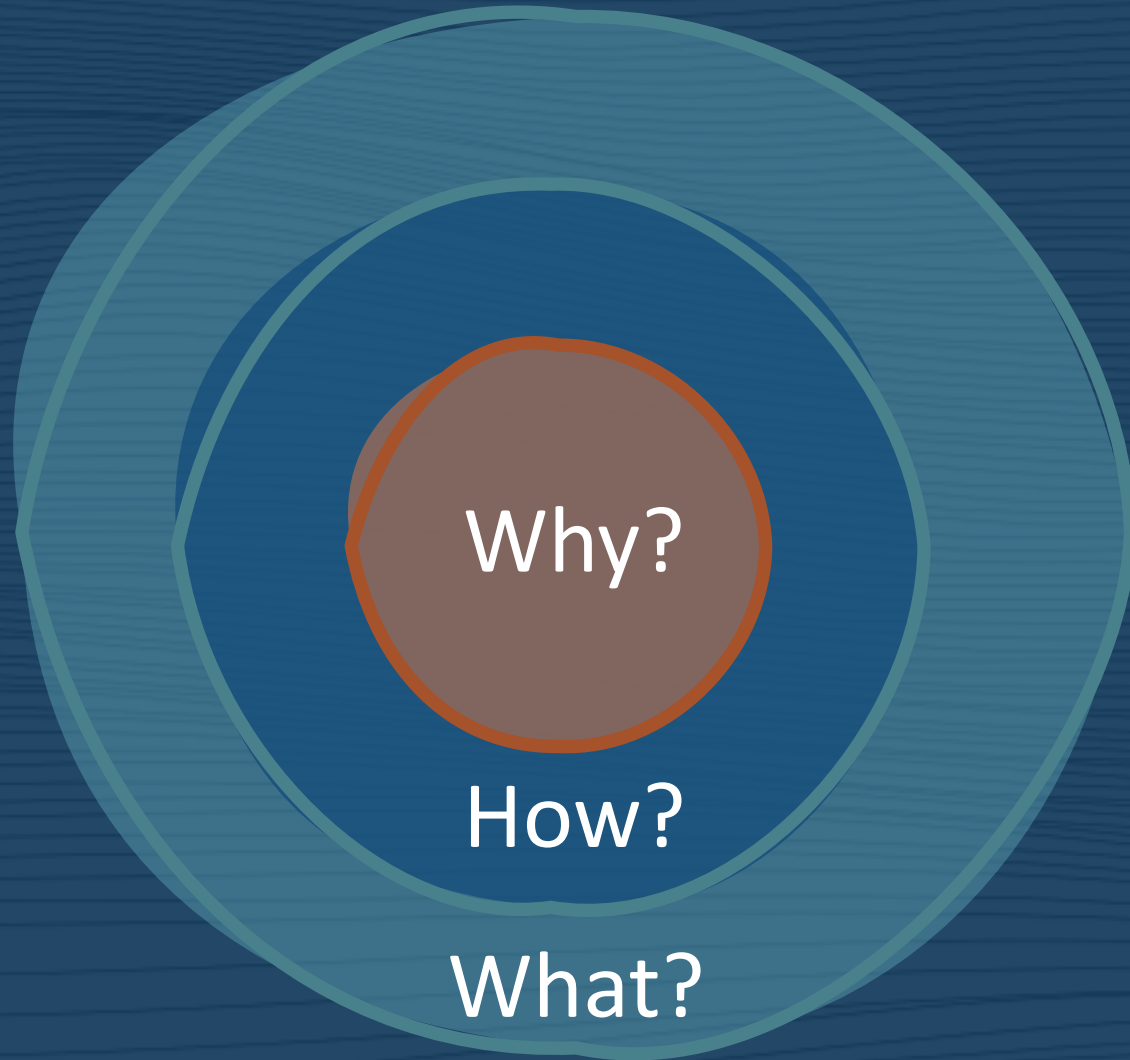


A Tailored Framework



Creating Unity

Strategic Plan Key Elements



WHY DO WE DO WHAT WE DO?
WHAT IS OUR PURPOSE?

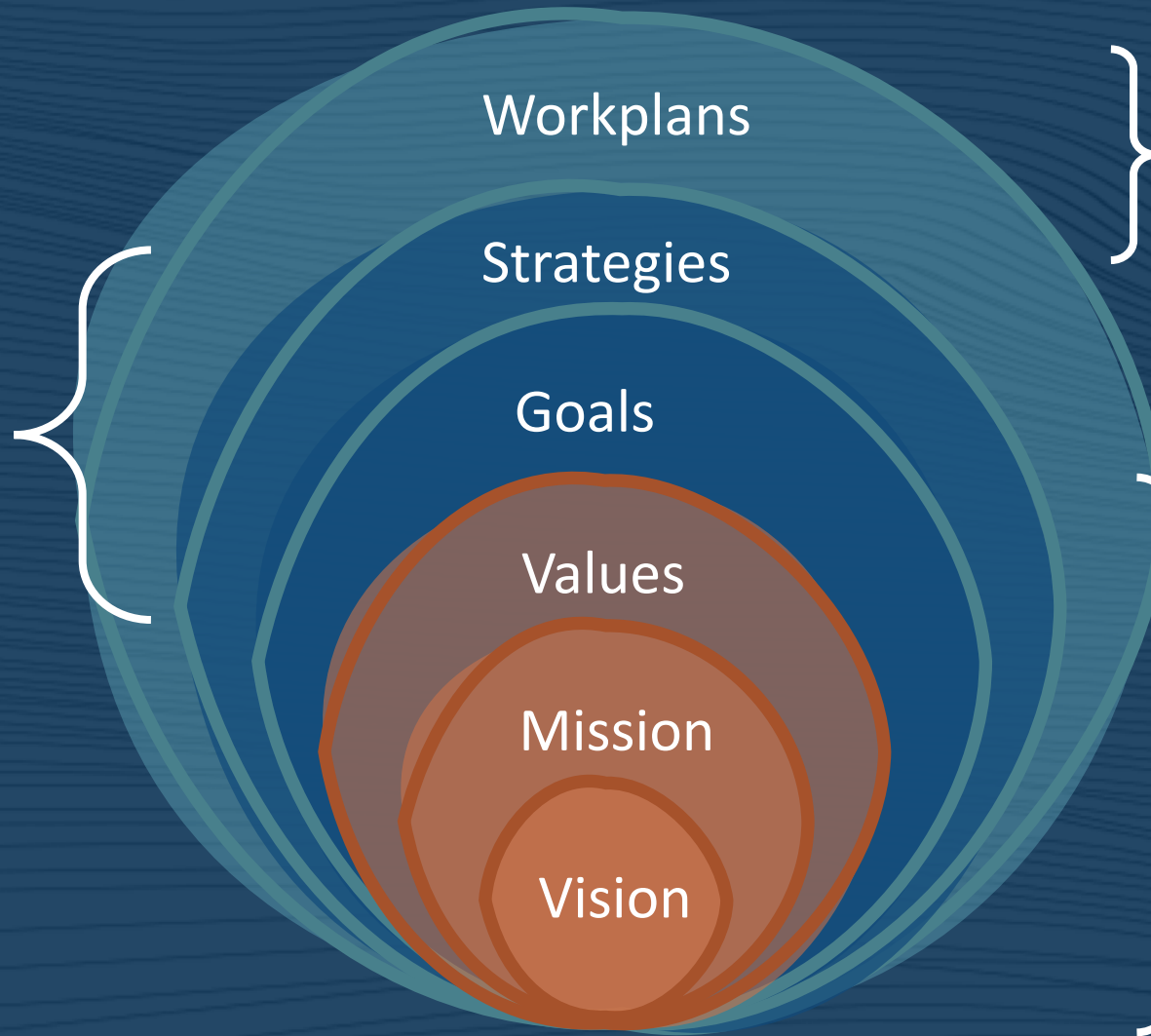
HOW DO WE DO THE WORK?

WHAT DO WE DO?

Strategic Plan Key Elements

How?

How do we achieve the mission?



What?

What do we do?

Why?

Why do we do what we do?
Why is the purpose important?

Project Scope

- Meet with LESJWA staff to develop issues for discussion and preliminary plan outline.
- Conduct workshops with member agencies key staff to evaluate areas of opportunity and need.
- Conduct listening sessions with Board of Directors Members
- Conduct Board of Directors workshops.
- Meet with other key LESJWA partners.
- Working with staff to draft findings and formulate strategic plan contents.
- Conduct Board of Directors workshop to review draft.
- Finalize the Strategic Plan.

Approach

Member Agency Workshop & Advising

In-Person, then Ongoing

01

Board Member Listening Sessions

Virtual

02

Partners Listening Sessions

Virtual

03

04

Board Workshop

In-Person

05

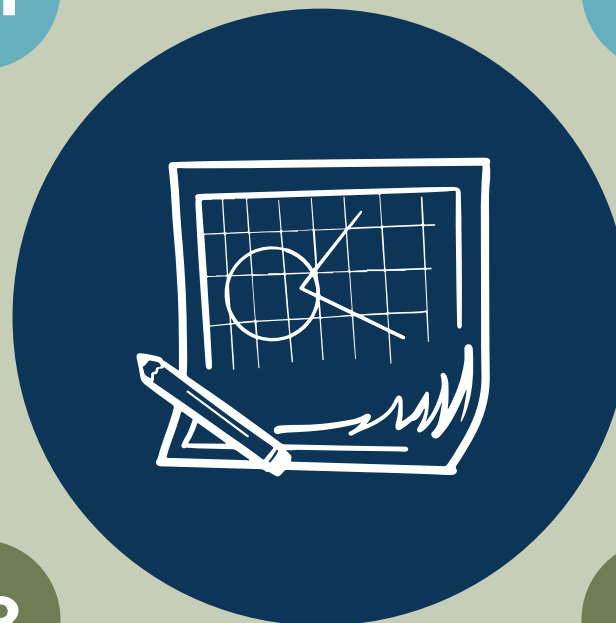
Ongoing Feedback

Virtual

06

Board Draft Review Workshop

In-Person



Our collaborative approach engages your key stakeholders in a way that encourages them to participate and results in a Strategic Plan that partners are proud to implement.

Member Agency Workshop & Advising

- Gain insights into the members' perspectives and priorities.
- Forum for member agencies to come together, exchange insights, and collectively define the future direction.
- Serve as initial content reviewers.
- Review workshop and listening session materials.



Board Member Listening Sessions

- Virtual sessions with individual Board Members.
- Build on feedback from May 2023, listening sessions.
- Foundational step that will inform all subsequent activities.
- Gain insights on vision and mission.
- Discuss success metrics and barriers to success.

City of Canyon Lake	City of Lake Elsinore	County of Riverside	EVMWD	SAWPA
Board Chair Dale Welty	Board Member Robert Magee	Board Member Karen Spiegel	Board Member Andy Morris	Board Member Brenda Dennstedt
City Manager Nicole Dailey	Alternate Board Member Steve Manos	Chief of Staff Philip Paule	Alternate Board Member Darcy Burke	Alternate Board Member Mike Gardner

03

Partners Listening Sessions

- Virtual sessions with key representatives from partner agencies.
- Insights of staff members managing day-to-day work of LESJWA partners.
- Explore their challenges and success measurements.
- Focus on goals and objectives.



Board of Directors Workshop

- In-person workshop with full Board of Directors.
- Review input from Board Members and staff.
- Address conflicting feedback.
- Conduct interactive feedback sessions focusing on vision, mission, and values.
- Start drafting content.

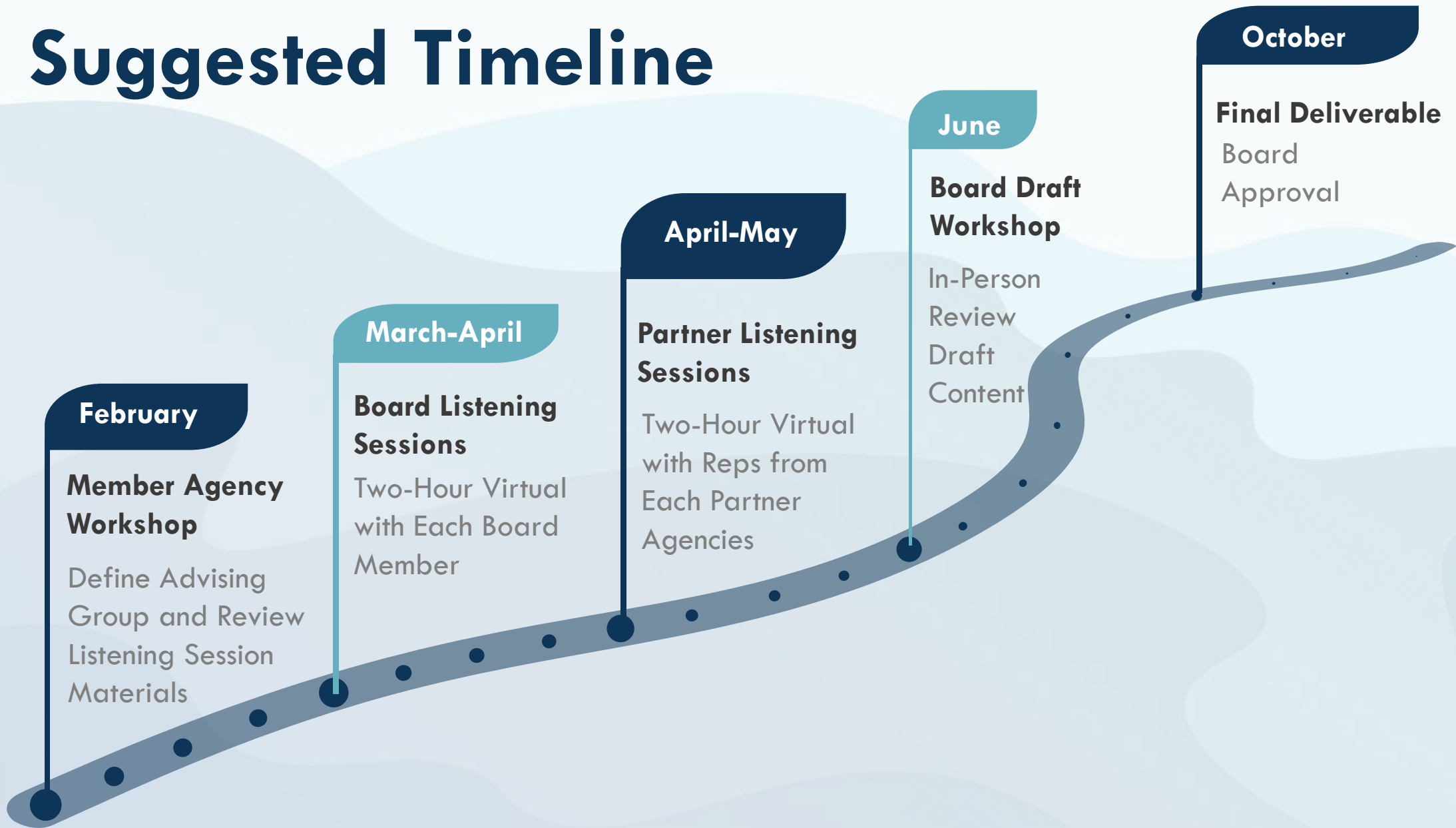
Ongoing Communication and Feedback

- Conduct follow-up meeting, if necessary.
- Solicit additional information and feedback.
- Review drafts and make edits with Advising Team.
- Consider online survey to reach more people.

Board of Directors Draft Review Workshop

- In-person workshop with Board of Directors and Advising Team.
- Review draft of plan.
- Facilitate interactive discussions for feedback, edits, suggestions, and follow-ups.

Suggested Timeline



Questions?





Public Education and Outreach Support Services

February 15, 2024

Agenda Item 8.C.



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

Presented By

DEGRAVE
COMMUNICATIONS

· PUBLIC RELATIONS ·

Communications Update



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

Task 1 – Community Outreach



Task 2 – Media and Social Media



ANNOUNCEMENT OF PUBLIC NOTICE TO CANYON LAKE COMMUNITY Canyon Lake Alum Application, October 2-6, 2023

Lake Elsinore & San Jacinto Watersheds Authority (LESJWA) is informing the Canyon Lake community that doses of alum will be applied to the lake in the main body, east bay, and the area north of the causeway from October 2-6, 2023. Alum binds with phosphorus in the lake water, drops the nutrient to the lake bottom and thereby reduces algae growth in the lake. Canyon Lake water mostly comes from stormwater runoff from the upper watershed each year that has high levels of nutrients that hurt water quality and threaten aquatic life.

Alum, the method selected to provide the best results for Canyon Lake, has a proven track record of success and is safe to both humans and aquatic life. Drinking water quality will not be affected by the application of alum to the lake. Canyon Lake will remain open during the entire treatment process. Recreational users will experience little disruption during treatment application and implementation.

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, a coalition of cities, the county, and several other organizations led by LESJWA, provides funding to continue alum water treatments in Canyon Lake. The TMDL Task Force evaluated several options during the CEQA process and determined that alum application provides the best option as a step to effectively treat the entire lake in a timely manner with minimal impact to Canyon Lake residents.

Alum Schedule (subject to change)

- | | | |
|----------------------|--|-----------------------|
| Monday, October 2 | Main Body | 7:00 a.m. - 4:00 p.m. |
| Tuesday, October 3 | Main Body | 7:00 a.m. - 4:00 p.m. |
| Wednesday, October 4 | Main Boat Ramp to West end of East Bay | 7:00 a.m. - 4:00 p.m. |
| Thursday, October 5 | East Bay | 7:00 a.m. - 4:00 p.m. |
| Friday, October 6 | North Ski Area/Clean-up | 7:00 a.m. - 4:00 p.m. |

Canyon Lake Alum Application video - <https://youtu.be/D0UKtV6Gc>

For daily operational updates visit - <http://www.canyonlakealum.wordpress.com/>

ADDITIONAL INFORMATION:

Rachel Gray, Lake Elsinore & San Jacinto Watershed Authority
951-354-4242 rgray@swapa.org

THE FRIDAY FLYER

HOME CLASSIFIEDS PLACE AN AD BUY A PRINT AD * SUBMIT NEWS/PHOTOS ARCHIVES * CONTACT US SUBSCRIBE LOGIN

Home - September 29, 2023 Edition - Alum treatment scheduled next week



The lake will receive its bi-annual alum treatment next week to help prevent algae blooms. The treatment is routine and will not disrupt lake activity. Friday Flyer File Photo

Alum treatment scheduled next week

Doses of alum will be applied to Canyon Lake's Main Lake, East Bay and North Ski Area beginning Monday and will continue every day until finishing on Friday by the Lake Elsinore & San Jacinto Watersheds Authority (LESJWA).

Alum binds with phosphorus in the lake water, drops the nutrient to the lake bottom and thereby reduces algae growth in the lake.

The water authority will be spraying the treatment from its boat as it covers the predetermined areas of the lake, which will remain open during the entire treatment process. Recreational users will experience little disruption during treatment application and implementation.

The authority last applied the alum in May. This will be the 20th time over the years that it has overseen the alum application in Canyon Lake.

The spraying schedule is subject to change, but it is anticipated the Main Lake will be treated on Monday and Tuesday, the Main Boat Ramp area and the west end of East Bay on Wednesday, the rest of East Bay on Thursday and the North Ski Area on Friday. The boats will be out each day applying alum from 7:00 a.m. to 4:00 p.m.

A-8

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Alum, the method selected to provide the best results for Canyon Lake, has a proven track record of success and is safe to both humans and aquatic life, LESJWA's Rachel Gray said. Drinking



The lake will receive its bi-annual alum treatment next week to help prevent algae blooms. The treatment is routine and will not disrupt lake activity.

water quality will not be affected by any of the treatment options.

Canyon Lake water mostly comes from stormwater runoff from the upper watershed each year that has high levels of nutrients that hurt water quality and threaten aquatic 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, a coalition of cities, the county, and several other organizations led by LESJWA, provides funding to continue alum water treatments in Canyon Lake.

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



Canyon Lake to receive alum treatment

September 26, 2023

Lake Elsinore & San Jacinto Watersheds Authority (LESJWA) announced that Canyon Lake will receive an alum treatment from October 2 through October 6. Alum will be applied to the lake in the main body, East Bay, and the area north of the causeway.

The lake will remain open during the entire treatment process. Recreational users will experience little disruption during treatment application and implementation.

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The treatment schedule is as follows (subject to change):

- Monday, October 2: Main body from 7 a.m. to 4 p.m. p.m.
- Tuesday, October 3: Main body from 7 a.m. to 4 p.m.
- Wednesday, October 4: Main boat ramp to the west end of East Bay from 7 a.m. to 4 p.m.
- Thursday, October 5: East Bay from 7 a.m. to 4 p.m.
- Friday, October 6: North ski area and clean up from 7 a.m. to 4 p.m.

For more information, contact Rachel Gray at Lake Elsinore & San Jacinto Watershed Authority at 951-354-4242 or rgray@swapa.org. For daily operation updates, visit: canyonlakealum.wordpress.com.



Aquatic life thrives near the lake with alum to regulate phosphorus and meet water quality standards set for the lake. Photo provided by DCGaw Communications.

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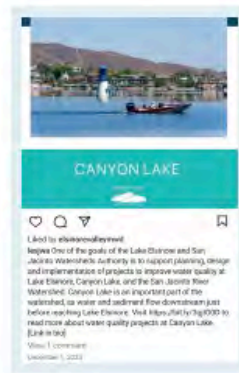
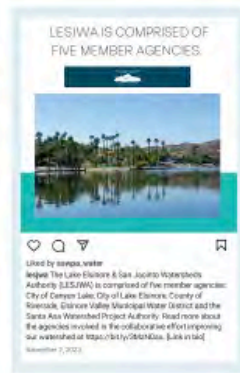
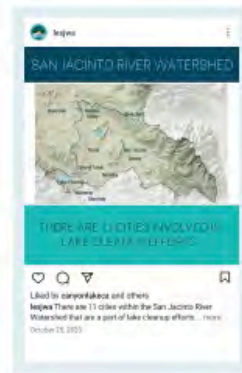
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Task 2 – Media and Social Media



Task 3 – LESJWA Water Summit



The Lake Elsinore & San Jacinto Watersheds Authority (LESJWA) looks forward to hosting the 2024 LESJWA Water Summit, an event for regional decision makers, elected officials and government organization leaders to learn about watershed successes, future projects impacting the San Jacinto River Watershed, Lake Elsinore and Canyon Lake and new regulations, which will affect future water quality compliance.

As one of LESJWA's valued partners in enhancing watershed conditions, we invite your organization to participate as a sponsor. The event will take place on Tuesday, April 30, 2024 from 8:30 a.m. to 12:30 p.m. at Launch Points Community Hall in Lake Elsinore. To register as a sponsor please fill out the enclosed sponsor application. In order for logos to be included on collateral materials, sponsorship payments must be made by March 31. For questions regarding sponsorships, contact Liselle DeGrave at Liselle@DeGravePR.com or 951-764-0865.

Thank you in advance for your support,
Rachel Gray
LESJWA Administrator
Santa Ana Watershed Project Authority
MyWaterSheds.com

LESJWA WATER SUMMIT
SPONSORSHIP FORM

TING SPONSOR

- 20th space
- opening ppt
- 70 on event signage and collateral
- put collateral material on all event tables
- closets with preferred seating

ING SPONSOR

title space for collateral on event signage and collateral lists with preferred seating on Name:	_____
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INTRODUCTION

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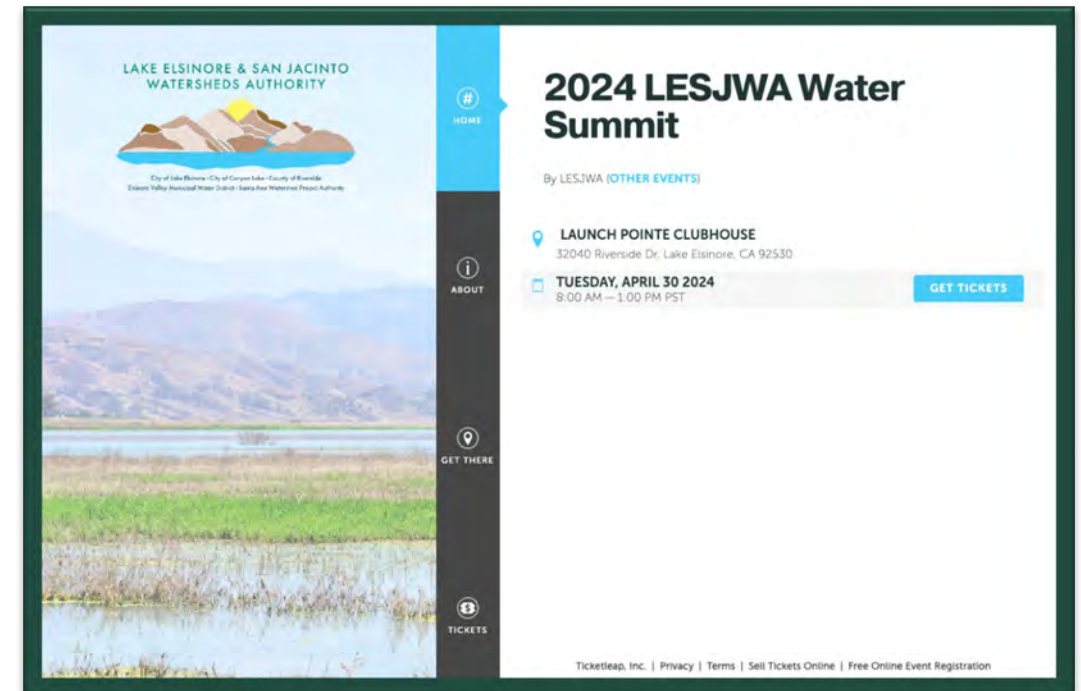
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Task 4 – Outreach and Admin

LAKE ELSINORE & SAN JACINTO
WATERSHEDS AUTHORITY



By Order of the Board of Directors
The Lake Elsinore & San Jacinto Watersheds Authority

EDUCATION AND OUTREACH COMMITTEE

Monday, September 25, 2023, 1:30 p.m.

- ☐ **Call to Order**
- ☐ **Additional Corrections to Agenda**
- ☐ **Approval of Meeting Notes**
- ☐ **Lake Levels**
 - o Current Lake Levels:
 - o Lake Elsinore – 1242.73 (September 18)
 - o Canyon Lake – 1381.53 (September 18)
 - o Lake Levels at Last Meeting:
 - o Lake Elsinore – 1243.80 (June 19)
 - o Canyon Lake – 1381.74 (June 19)
- ☐ **Lake Elsinore Update**
 - o Prop 1 Project
- ☐ **Canyon Lake Update**
 - o Fall alum application
 - o Dudsheat update
- ☐ **COMMUNICATIONS**
 - o Communication plan update
 - o LESWJA Summit logistics
- ☐ **Discuss Item for Next Agenda**
- ☐ **Next Meeting Date**
Date/Time: _____
Location: _____

LAKE ELSINORE & SAN JACINTO
WATERSHEDS AUTHORITY


By Order of the Board of Directors
The Lake Elsinore & San Jacinto Watersheds Authority

EDUCATION AND OUTREACH COMMITTEE

Tuesday, December 14, 2023, 1:30 p.m.

- ☐ **Call to Order**
- ☐ **Additional Corrections to Agenda**
- ☐ **Approval of Meeting Notes**
- ☐ **Lake Levels**
 - o Current Lake Levels:
 - o Lake Elsinore – 1242.13 (December 8)
 - o Canyon Lake – 1380.64 (December 8)
 - o Lake Levels at Last Meeting:
 - o Lake Elsinore – 1242.73 (September 18)
 - o Canyon Lake – 1381.53 (September 18)
- ☐ **Lake Elsinore Update**
 - o Prop 1 Project
- ☐ **Canyon Lake Update**
- ☐ **COMMUNICATIONS**
 - o LESWJA Summit logistics
- ☐ **Discuss Item for Next Agenda**
- ☐ **Next Meeting Date**
Date/Time: _____
Location: _____

Task 5 – Issue Management

THE FRIDAY FLYER

Home • September 15, 2023 Edition • North Ski Area was green with duckweed, not algae



This photo of the North Ski Area that was printed in The Friday Flyer two weeks ago is not of an algae bloom as was reported, but somewhat innocent duckweed. It is all but cleared up now. Photo by Dave Guthery

North Ski Area was green with duckweed, not algae

Two weeks ago, the North Ski Area was covered with a layer of bright green duckweed, not algae as was reported in The Friday Flyer. Duckweed is not dangerous at all to humans or animals, according to the Lake Elsinore & San Jacinto Watersheds Authority which oversees the monitoring of water quality in the area.

"Duckweed happens up there every few years and it doesn't last long," Canyon Lake POA General Manager Eric Kazakoff said. "It's almost completely gone now."

The Canyon Lake POA plays a different role than the watershed authority, as mentioned in the article two weeks ago. The POA is more hands-on and is responsible for managing recreational aspects of the lake, overseeing lake warnings and closures, if necessary, and prioritizing public safety.

Because those at the Canyon Lake POA were aware that the green layer was Duckweed and not algae, there were no warning signs posted or other action taken.

"We have standard yellow caution signs up year round," Eric said. "There have only been two occasions in the last couple of years at limited locations where we escalated to the warning level. A few times we have had to post orange signs. We test before every big weekend and post notices if we are above the yellow level."

The duckweed in the North Ski Area occurred because of high nitrogen concentrations.

"Duckweed can multiply quickly due to high nitrogen concentrations in the water column," Rachel M. Gray, LESJWA Administrator, said. "Recent tropical summer storms likely increased nitrogen levels in the lake."

Questions?

LISELLE DEGRAVE, APR

951-764-0865 | LISELLE@DEGRAVEPR.COM

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