

THE TIDINGS



LAKE MERRITT INSTITUTE

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A community based, non-profit corporation, established 1995; IRS Code 501(c)(3); EIN 94-3214160

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MONITORING REVEALS WATER QUALITY CONDITIONS TO WORRY ABOUT!



City-leased monitoring buoy (left) and volunteer water testers (right) from CA Climate Action Corps in the Glen Echo arm of Lake Merritt on March 11th. The volunteers measured only **0.6 parts-per-million** of dissolved oxygen at the bottom at the mouth of the GE arm (EPA standard is 5 ppm). City buoy data will be released soon.

THE LAKE MERRITT INSTITUTE leased a water quality monitoring buoy from LakeTech.com early this year to track the vital signs of lake health in Lake Merritt. It is hoped that early warnings provided by the buoy sensors, combined with improved response infrastructure, could avert another tragic fish kill as was caused by zero dissolved oxygen last August. Lake Merritt has been declared an impaired body of water by the EPA since 1998 as a result of recurring low DO (and trash). Dissolved oxygen should be no lower than 5 parts-per-million according to the EPA. On page 5, Dr. Richard Bailey, founder of The Lake Merritt Institute, discusses what we have learned so far from the buoy data.

The monitoring and infrastructure needed to protect Lake Merritt is expensive! City Watershed Manager Terri Fashing, the Environmental Services Division of Oakland Public Works, and The Measure DD Community Coalition are applying for grant funding to meet the need.



<= You can check the lake's water quality 24/7 on LMI's public portal!
PW = revivelakemerritt

YOU CAN HELP by making a donation to The Lake Merritt Institute's **GOFUNDME** campaign at <https://www.gofundme.com/f/help-save-lake-merritt-and-lake-merritt-institute>? Support the Lake Merritt Institute's plan to provide adequate 24/7 water-quality monitoring and oxygen support infrastructure as needed in Lake Merritt – at the same time maintaining and expanding our vital Clean Lake Program to remove trash (See Nets on page 2).

LMI in MARCH 2023: 5,790 gallons of trash were removed from the lake by staff and volunteers in February. 13,950 gallons have been removed to date in 2023.

LMI Executive Director James Robinson hosted 137 volunteers, attended 4 meetings, and gave 1 presentation. 17 used syringes were removed.

2.14 inches of rain were recorded by the LMI rain gauge in February

THANK YOU TO ALL OF OUR FEBRUARY VOLUNTEERS! We wish to thank St. Paul's Episcopal Middle School students and teacher Tony Bald for weekly cleaning of the Glen Echo inlet, Rotary Nature Center Friends, The Achieve High School volunteers, Skyline High School AND New Voices Are Rising (conducted a trash audit), MetWest High School and Cleveland Elementary School who participated in trash removal and other. We thank members of the Measure DD Community Coalition and Weed Warriors, CA Climate Action Corps Fellows, MetWest High School and Rotary Nature Center Friends for helping to remove trash from Peralta Part on the Lake Merritt Channel. Thank you all for your stewardship.



Left: **St. Paul's Middle School** students remove trash from the Glen Echo outfall at Grand and Harrison every week!

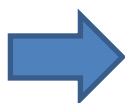


Right: **Skyline High School** students with the **Rose Foundation's New Voices Are Rising** conduct a trash audit with **Rotary Nature Center Friends**. Result? A lot of trash comes from lunch packaging and could have been reduced, re-used, recycled or composted. Sadly, this trash – all of it – will go into the landfill.

WE NEED NETS TOO! -A cool story of **repair** and **refurbish** over **<replace** and **<recycle** in the 5 R's hierarchy. Thank you, Alain, Alfredo and Paris.

The thousands of pounds of trash The Lake Merritt Institute removes from the lake each year are mostly removed by local volunteers like YOU with nets through our Clean Lake Program. When we have Atmospheric Rivers, the amount of trash arriving through storm drains into the lake can double or triple. Unfortunately, because of the pandemic and the city budget woes, we must make the lifetime of our nets extend longer and longer.

A recent LMI volunteer **Alain C.** with MillerKnoll.com group, came up with a solution to torn nets using his sewing skills! Alain took it upon himself to mend the nets with fishing line so they can continue to serve. Alain has repaired about a dozen nets so far. Alfredo and Paris put the repaired net heads back on refurbished functioning extender poles that they fixed up. Great inspiration and team work! Thank you!



Photos by Paris Organist

Outrunning the Chill at Lake Merritt – by Hilary Powers, Golden Gate Audubon Society



Photo -Wikipedia

February's 4th Wednesday was cap-C Cold but bright and only moderately windy, making it a pleasant break in the wintry weather. A crowd of hopeful birders gathered to see what was to be seen at the lake, which was mostly at first glance Black-crowned Night-Herons. Unlike recent trips, when we've been pleased to glimpse a few individuals scattered here and there, this time they were perched all through the bushes on the near island – evenly spaced a few feet apart from side to side and top to bottom, looking for all the world like buttons on a tufted sofa cushion. Plenty elsewhere too, allowing for discussion of age differences from spotted brown hatch-year birds through shades of tan to the gray-and-black business suits of the full adults (around age 3).

It was a bright day – worth mentioning twice. So bright that the morning sun hit the water and bounced up at us like a laser cannon, promising a really uncomfortable stroll along the shore. So bright that we decided to flip our usual route and head from the Rotary Nature Center to the Garden Center and back through the garden before going down toward El Embarcadero to see what the lake had to offer. Not the ideal course as the group tends to get very spread out and meets some relatively rough footing early on, but it worked OK – with three trip leaders plus one extremely experienced (and scope-toting) birder, everyone had someone around to answer questions. We paused at the weird cement platform up the hill across Bellevue from the Nature Center to admire *two* Brown Creepers working the small oaks on the other side of the park road. Someone in the group had a laser pointer and knew how to use it – don't point at the bird, point at a spot a foot or two below it – so it was easy for even the beginners in the group to enjoy the treat. Brown Creepers are well named, always starting low on a tree and creeping up it (and along the undersides of branches) as though gravity just isn't part of their world, putting them high on everyone's favorites list.

In the same area, we had lots of Western Bluebirds fluttering from lawn to branches and back, both bright blue-and-orange males and pastel females, plus a few that I thought might be juveniles, though it was totally the wrong season for them. Unusually drab females, perhaps; Sibley's guide shows a second plumage gray and streaky enough to be match my mental image.

The lake was calling, so we moved fairly rapidly to the front of the Garden Center, pausing to search the catalpa trees across Bellevue for sapsuckers and finding none this time, then heading through the iron gate into the garden itself. We poured into the bench circle in the composting area and hopefully held out palms full of peanuts. The group, still numbering more than 20, proved too busy for the chickadees to crowd in as they sometimes do – but a few did come to nibble, including one who honored the youngest in the party, a girl who looked to be less than 10 years old.

Back at the lake, the surface was more or less as expected: lots of Ruddy Ducks but few Greater or Lesser Scaup and even fewer Canvasbacks. Most of the scaup drakes had gleaming white wings in place of the dingy brownish feathers they arrived with last fall, clearly about ready to travel. The Ruddy Ducks, by contrast, were uniformly drab brown with only white cheeks and black caps to help identify the drakes among them, except for one overachiever already in full breeding plumage – all the brown replaced by auburn-human red, and beak bright blue instead of black.

Also more or less as expected, we saw lots of Eared Grebes but only one Horned Grebe and a few Pied-billed Grebes along with them. On the other hand, the big Western Grebes were unusually numerous at half a dozen or so; lately we've been lucky to see just one. No Clark's Grebes appeared, unfortunately – it's much clearer to discuss the differences between these two near-duck-sized gray, black, and white long-necked birds with at least one of each on view, but it was still possible to talk about the Western's dull mustardy beak (contrasting with

the warm gold of the absent Clark's) and the position of the eye (actually in the black instead of the white at this season and not in the anonymous gray that covers the area in both species for much of the year).

The floats (both the set crossing the lake and the ones down by the El Embarcadero fountain) were crowded with Double-crested Cormorants of all ages, raising probably vain hopes that the rookery will restart this year. Most of them still had their usual snake-smooth heads, but we did see one near the fountain with pure white crests almost fully developed – looking like shaggy eyebrows instead of rabbit ears but well on the way. *Lotsa good real estate here for your summer home, sir or ma'am.....*

And lots of fine, varied entertainment here for the wandering birder surrounded by the clear air, bright water, and only semi-civilized nature of our nation's oldest wildlife sanctuary, Lake Merritt and environs, where every day is a good day to be alive....

AUDUBON BIRDWALKS AT THE LAKE: Join bird expert Hilary Powers any fourth Wednesday of the month for a free “Bird walk” at the lake. Muster at the geodesic bird cage near the Nature Center at 9:30 a.m. for what are always fascinating introductions to lake birdlife. This trip happens rain or shine. It is free but advance registration is requested by Golden Gate Audubon. Use this link below.

<https://goldengateaudubon.app.neoncrm.com/np/clients/goldengateaudubon/event.jsp?event=10813>

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Community Water Quality Report – Monitoring near Channel Mouth

Water quality was measured on March 7th 2023 at the Amphitheater near the mouth of the Lake Merritt Channel by students in Amy Bohorquez' Biology 1B class and **Rotary Nature Center Friends**.

Depth 0.5 meters; Water Clarity: N/A - too shallow to measure

Temperature: 13 degrees Celsius at the top (55.4degrees Fahrenheit). Normal for this time of year

Salinity 24 parts per thousand (ppt) top

pH: 8

Dissolved Oxygen 12 parts per million (ppm) at the top. (Meets EPA standard).



<=At left, students test for pH and nutrients nitrates, nitrites and phosphates that can cause low DO.

Results: both are below Maximum EPA limit.

LAKE MERRITT WATER QUALITY UPDATE: INVEST IN LAKE MERRITT

A guest editorial by Dr. Richard Bailey

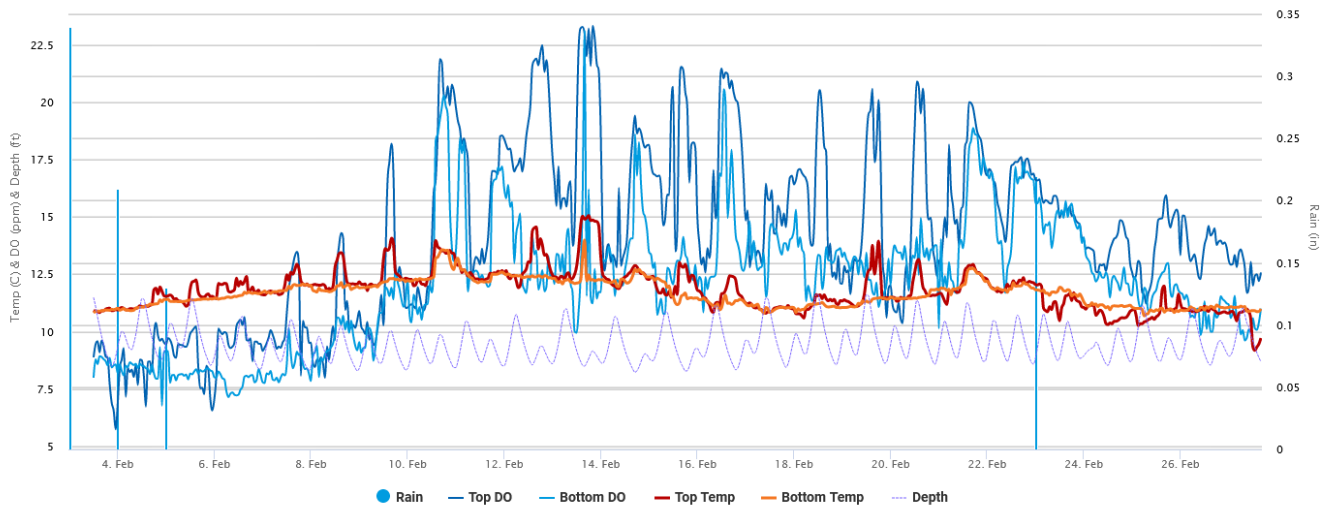
No, we are not selling shares of stock in Lake Merritt, nor selling you the Brooklyn Bridge. Natural resources should not be subject to the whims of profit and loss. But you can support this wildlife refuge and its scenic beauty in other ways. How? By helping to finance long overdue improvements to enhance water quality, thus enabling life there to thrive instead of suffocating in another fish kill.

But first, a recap of recent water quality. As mentioned in the January update, the rains of December and January caused stratification, and oxygen levels near Grand and Harrison dropped to 3.16 parts per million (ppm). Low oxygen caused by rain water trapping salty tidal water on the bottom is nothing new at Lake Merritt. Indeed, when it rains hard, tide gates are closed for flood control, and incoming tides are kept out, the bottom waters of Lake Merritt suffer from oxygen levels below what is needed for a healthy environment.

Buoy Data: The LMI buoy; On February 3rd, a water quality monitoring buoy leased from LakeTech by the Lake Merritt Institute was installed near the columns, joining two similar buoys deployed by the City of Oakland near Grand and Harrison and near the center of the Lake. These buoys provide 24/7 data, but portals for public access for the buoys has not yet been set up. When it is (soon), you will be treated to real time data, just as if you were a fish swimming around the dock.



However, initial data from the Institute portal is available, and it shows that oxygen levels at the bottom were OK, dropping no lower than 6.78 ppm between February 4 and 18. For reference, levels above 5 are adequate for a healthy lake. In addition, data showed salinity increasing from 16 after the rainfall to a more typical level of low-mid 20's. For reference, fresh water is 0, and ocean water is 36. The buoy also showed that tidal flows were normal, and not impacted by tide gate closure. There was a spike on turbidity on February 12th at 11 pm, possibly due to light rain that fell earlier. Here is the buoy data from Feb. 4 – 27.



City buoys: Due to the storms of January, a shortage of staff, and a ransomware attack on the city's computer system, the city has not yet made data from their two buoys public.

Surface Aerators Needed: Until enough data is compiled and evaluated from the buoys, and from a proposed 2023 pilot aeration project, we need to rely on creating islands of oxygen using surface aerators. These shallow water devices can operate where it is now too shallow to use the decorative fountains; e.g., at the columns, the 18th St. cove, the



bandstand cove. They could also be deployed near the Boating Center and Lake Chalet restaurant if proper electrical outlets are installed.

*\$18,000 is needed for surface aerators
They are on sale in March!*



Funding is Needed: But the aerators are not free, so the Institute has begun a GoFundMe campaign to raise money for them, and for other equipment to keep the Lake clean. If you want to provide oxygen for the Lake and its wildlife, contribute here.

<https://www.gofundme.com/f/help-save-lake-merritt-and-lake-merritt-institute?>

The Institute is also in need of an electric quad utility vehicle for use in moving the numerous bags of trash captured by our volunteers, and equipment such as boots, gloves, bags, barrels, and nets. *An electric quad to carry trash bags is needed: \$22,000 Equipment is needed to remove trash: \$4,000*



Let's go Viral: Pass this on to your social media and other contacts. *We could really use the money.*

Next Up: Watch for the March Water Quality Update, which will include any information supplied by the City of Oakland as they develop their plans for an aeration or oxygenation pilot project.

EVENTS COMING UP:

March 25th - 10 -11:30 am - “Monarchs and More – Biodiversity on a Milkweed Plant.” In-person at the Rotary Nature Center– 600 Bellevue Avenue – Oakland. Register [HERE](#).

April 14th! Rotary Nature Center Friends will present Lakeside Chat #29: “Radical by Nature: The Revolutionary Life of Alfred Russel Wallace.” featuring biologist and naturalist Dr. James T. Costa.

REGISTER [HERE](#)=> https://alfred-russel-wallace_radical-by-nature_with-dr-james-costa.eventbrite.com

View the YouTube recording of Andrew Alden’s March 3rd **Lakeside Chat #28** “Rocks of Lake Merritt” at <https://youtu.be/88k9gsn6mjc>

Please direct questions and comments to The Tidings Editor, Katie Noonan, at ktnoon@aol.com.

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