RAIN, RAIN, RAIN!! DROUGHT RELIEF FOR CALIFORNIA BRINGS CHALLENGES TO LAKE MERRITT — It’s official. NOAA’s National Drought Center reports that the 5-year drought is over in Northern California. NorCal reservoirs are over 100% full, and the Sierra snowpack is above normal too.

Yet most of SoCal remains in “moderate to extreme drought.” It may take several years for our aquifers, forests and endangered fish species to recover from drought impacts. Neither “La Nina” nor “El Nino”, the new weather pattern has yet to define itself. And still, 2016 was declared the warmest year on record.

The three “atmospheric rivers” delivered 9.08 inches of rain to the Lake Merritt watershed this January, twice the historical average. But the very high water levels you may have noticed in the lake in December were not caused by rainfall but by the extreme tides, “King Tides”, that occur around Winter Solstice. Alameda County keeps lake levels low during storms to prevent flooding by operating tide gates on the estuary channel at 7th Street.

The deluge’s real impact on the lake is visible in other all-too-familiar signs: murky waters from street runoff and erosion, the arrival of carpets of little plants called duckweed from the quarry pond below the golf course and flotillas of plastic and paper trash swept into the lake from the 62 storm drains all over town that lead directly to Lake Merritt. The petro-barrier protecting the lake from incoming trash at Glen Echo Creek inlet at Grand and Harrison broke loose from its attachment again and trash over-topped the worn barriers at 18th St. and the Embarcadero.

The A-Team noticed a lot of Styrofoam packing materials. A recent study by Matthew Savoca, graduate student at UC Davis, showed that sea birds are attracted to an algae-produced chemical (DMS) that sticks to plastic.

Photo: Katie Noonan, Jan 24, 2017
WATER QUALITY REPORT RELEASED – SOME UNEXPECTED FINDINGS

The much anticipated 2014-2015 Lake Merritt Water Quality Report has been made public by the City Public Works Department. The study conducted by AMEC Foster Wheeler focused specifically on conditions affecting DO (dissolved oxygen) in the lake -- a critical factor, the lack of which landed Lake Merritt on the State Water Quality Board (303d list) in 2006 as an “impaired water body”.

Key Findings:

- Levels of dissolved oxygen DO have not improved since opening the 12th St. culverts in November 2012. All parts of the lake experience low DO’s, but the average is above the 5ppm standard.
- When the County closes the 7th Street tide gates during storms for more than 48 hours to prevent flooding, DO decreases significantly, especially near the bottom of the lake.

High School Students Contribute!

Katie Noonan and Kevin Jordan’s AP Environmental Science classes at Oakland High School analyzed Alameda County Flood Control District circular tide charts to find out when and for how long the tide gates were closed. When closed, there is no twice-daily rise and fall of water due to tides (see blue highlight on chart at right).

The students’ findings were vetted by AMEC scientists and appear in Appendix F of the official report. Great work, young scholars!

Image: Screenshot from Report, Appendix F, pg. 19

City Public Works Report Recommendations:

- Prioritize keeping the tide gates open as long as possible using more local weather and tide information.
- Continue efforts to keep high organic material out of the lake, i.e. LOVE YOUR LAKE! Join LMI and drop in on a weekly A-Team lake clean-up!

LMI Comments: Although the average DO level was above the 5 ppm standard, it is the minimum levels at lake bottom that determine if and where bottom dwelling life can survive. These bottom levels were as low as 1 – 2 ppm, not sufficient to sustain a healthy environment.

The County now routinely closes half of the tide gates at 10th Street even during dry weather. This negates the purpose of the Measure DD culvert removal project. The County must revise their tide gate closure protocols in order to emphasize water quality as well as flood control. Citizens might lobby them to do so!

MicroBioBlitz at the Rotary Nature Center – California Center for Natural History

The California Center for Natural History drew fifteen or more Oaklanders out to the Rotary Nature Center on a rainy night to explore microscopic life at the bottom of the food web at Lake Merritt. Participants learned to make amazing foldscopes of cardboard and viewed life with compound and stereo dissecting microscopes. Highlights under the scopes were various lively pennate diatoms, rotifers, roundworms, maybe an ostracod, and the currently blooming filamentous green algae Melosira.

(For details see: https://calnature.org/events/2016/12/12/microbioblitz-lake-merritt)
Young Sadie Fitzhugh, of Berkeley, was delighted to learn how to tell different algae species apart and to get an eyeball to eyeball view of oyster drill! (Photo right: Katie Noonan, Jan 18, 2017)

Photo (far left): Lake Merritt Diatoms: Elliptical diatom, two pennate diatoms (Damon Tighe, Jan 18, 2017)

STATE OF THE CLIMATE – AND WHAT TO DO ABOUT IT
A Guest Editorial by Dr. Richard Bailey

By now we all know that 2016 was the hottest year ever recorded; that 16 of the 17 hottest years on record have occurred in the current century; and that the North Pole was 40 degrees above average on Christmas day. National Oceanographic and Atmospheric Administration recently reported that at just over a foot of sea level rise, most coastal U.S. cities could see a 25-fold increase in disruptive and damaging floods as early as 2030. We also know that federal government officials who came into power on Jan. 20th have expressed the “alt-facts” that climate change does not exist, or if it does, it will not be that bad, or that jobs are more important than global warming.

Given the disconnect between some American politicians and what is happening to the climate, what are we to do? Because both the warming and sea level rise will not stop until carbon levels in the air are reduced, the only solution is to rapidly reduce carbon emissions, then remove carbon from the air.

But how can this be done without damaging the economy? The answer is simply to put an annually rising price on carbon emissions, levied only at the source, the mine, well or port of entry (and therefore paid by energy companies) but not at the cash register (and therefore not paid by the customer). Returning 100% of this money to the people via a monthly check from the IRS would stimulate the economy.


If conservative politicians are to do anything about climate change, this is the most likely scenario because it is a market based solution that does not increase the size of government, nor does it impose regulations, and because it would create new jobs by stimulating the economy. To find out more about this exciting proposal, go to http://citizensclimatelobby.org/ The Citizens’ Climate Lobby has helped recruit 20 members of Congress into a bipartisan House Climate Solutions Caucus, which has equal membership from both sides of the aisle. YOU can help this group grow by recruiting conservatives to join. Or would you rather see geese swimming down Harrison Street?
A STRANGE DAY AT LAKE MERRITT – Hilary Powers –

The species count was down to 39 for the 4th Wednesday Golden Gate Audubon bird walk, but the rarity count was way up. We had Barrow’s Goldeneyes (the black and white ducks with crescent moon cheek mark) for the first January this decade, and we had not one but two pair each of Common and Red-breasted Mergansers, the brilliantly colored drakes as well as the gray-and-dust ducks. A first-year Red-tailed Hawk sat on one of the islands till the crows ran it off, and a tiny Brown Creeper – another January first and the first of any month since November 2003 shared a tree near the playground with a Nuttall’s Woodpecker and a Western Bluebird.

In the garden, a Fox Sparrow (a dusky brown bird with black cuneiform-style markings on a white breast, so rare in the park that it didn’t show up in my records at all) joined the White-crowned and Golden-crowned Sparrows in the vegetable beds.

So the 20-odd participants in the walk were delighted with what they saw and hardly noticed what common sights of past years they were missing: both Western and Clark’s Grebes, wild White Pelicans, even Double-Crested Cormorants were at least in sight (though I did see one cormorant after the walk, while loading the scope in the car). No Great Egrets or Great Blue Herons, no Green Herons, no Belted Kingfishers, no Titmice, no House Sparrows or House Finches….

A strange day indeed – cold but sunny and bright, providing very good looks at what there was to see. Familiar wonders like the American Coot’s lobed green toes or Hank-the-rescue-pelican’s twisted shoulder, mild surprises like a Ruby-crowned Kinglet – usual description: if you didn’t see it, it was a kinglet! – fluttering around the front of a branch in plain sight for several minutes.

There was raw if possibly misguided courage from the group members who slithered down a concrete goose-ramp to rescue a turtle the size of a salad plate from a salty death (and it came out dry, with the turtle in a plastic bag to bear off to a better home).

But a good day all around, well up to the standard of Lake Merritt, where every day truly is a good day.

HAPPENINGS AROUND THE LAKE –

AUDUBON BIRDWALKS AT THE LAKE: Join bird expert Hilary Powers any fourth Wednesday of the month for a free “Birdwalk” at the lake. Muster at the geodesic bird cage near the Nature Center at 9:30 for what are always fascinating introductions to lake bird life.

OMCA (Oakland Museum of California): All Power to the People: Black Panthers at 50 through February 26th; “Bees: Tiny Insect; Big Impact”; through June 2017. See: http://museumca.org/

EDITORIAL ARTICLE: “RAY OF HOPE” - In Memoriam

With great sadness, we must tell “The Tidings” readers that Editor Ray Perman passed away Saturday February 4, 2017. Ray was a guiding light of LMI, and was known for his positive energy and forthright opinions. According to Ray’s wishes, the wishes of LMI Director James Robinson, and the Board of Directors, the “Ray of Hope” Editorial will be presented in his honor every month.

Ray cared deeply about immigrant communities in Oakland especially the “Newcomer” children. He was moved by the recent protests in Oakland in support of women, Black lives, and immigrants.

Ray told James that taking care of the lake kept him alive beyond the expectations of his hospice doctors. So, for Ray, Lake Merritt was a place of celebrating Oakland’s diversity and of healing. May it continue to be so.

There’s a place I go to, when I need some shelter from the storm.
Where none will find me, yet tomorrow I’ll return, my soul reborn.

LAKE MERRITT

“LIGHT FROM A DISTANT SHORE” by Steve McDonald, adaptation by Dick Bailey

EDITOR: Katie Noonan - “The Tidings” is published by the Lake Merritt Institute (LMI) for the purpose of publicizing the work of the organization, as well as providing articles of interest regarding the environment, and natural and anthropological history of Lake Merritt, and its surroundings. Comments and contributed articles are welcome. Please feel free to contact me directly: “ktnoon@gmail.com” 🌐

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