

The uncertain future of Lake Abert

By **Helen Schmidling**
Correspondent

Oregon's Lake Abert is an internationally important migratory bird habitat with an uncertain future. Between 2012 and 2014, when all of the lakes in south-central Oregon were drier than normal, Abert shrunk to a tenth of its normal size. Because it's remote, the event was barely noticed, save for a small group of private citizens who collected documentary data.

Abert is — or was — Oregon's fifth-largest lake, with a recent maximum surface area of 64 square miles: 16 miles long by six miles wide. Evaporation, drought, and lack of water from the Chewaucan River have reduced the current surface area to less than five square miles, according to Dr. Ron Larson, U.S. Fish and Wildlife biologist emeritus.

Larson is one of a number of authorities coming to the April 25 seminar at Black Butte Ranch, to present the facts and discuss the future of Lake Abert. Larson hopes to bring public attention to the crisis and create ongoing dialog and workable solutions for the many species of wildlife dependent on the lake.

Reached at his home in Klamath Falls this week, Larson explained the delicate ecological balance of Lake Abert, and why it's so important to seek its restoration. The lake bottom is rich in algae, which nurtures both alkali flies and brine shrimp (also known as "sea monkeys.")

The lake is both saline and alkali (think of salt and baking soda). The concentrations of salt and soda are heavy at normal, but extreme in drought, to the point that flies and brine shrimp have disappeared. In normal conditions, thousands of migratory birds rest and feed on these species on their 7,000-mile flight.

More than 80 species, such as Wilson's phalarope, travel annually between the provinces of Western Canada and the Northwest states to Chile

and Argentina. At their peak in 2013, 300,000 Wilson's phalaropes were counted at Lake Abert. Last year, they were barely noticed. The drop-off is catastrophic.

Because no official effort has been made to monitor the migration, Larson does not know where the birds have chosen to rest and feed, but due to the interruption, the migratory pattern may or may not be recoverable. Wilson's phalaropes often fly continuously for two days, and they need great energy reserves to do that. Lake Abert was their food superstore, but it's dried up to less than a corner market. "If they don't eat at the lake, where do they go?" he pondered. The next closest saline lake is Mono Lake in California, followed by Great Salt Lake, both hundreds of miles away.

"Mono Lake is in bad shape, so if birds can't use Abert, using Mono as they would normally do is not a viable option anymore. The birds are stranded," according to Susan M. Haig, Ph.D., senior scientist, USGS Forest and Rangeland Ecosystem Science Center, and professor of wildlife ecology, Oregon State University.

The Chewaucan River is the main source of water for Lake Abert in southeastern Oregon. Rainfall averages about 8.5 inches annually. Water levels in the lake have been falling since 2000, culminating with near desiccation in 2014.

In the 1990s, an earthen dam was built on private property with the best intentions, to create a freshwater reservoir for birds and a home for trout and other freshwater fish, as well as a resource for crops and livestock. Unfortunately, Larson said, remains of Native American burial grounds were unearthed in the process. Once that happened, some of the agencies backed away, and oversight of the region "slipped through the cracks," according to Larson. "The lake, the wetlands, the wildlife — it's hard to see that they are

doing everything possible to preserve the ecosystem."

Lake Abert is one of five closed-basin lakes in south-central Oregon, between Klamath Falls and Lakeview. The others are Summer, Harney, Bluejoint and Goose. All are considered terminal or closed-basin lakes because they do not overflow. Records indicate water levels in these lakes were highest in the 1900s and 1950s, and lowest in the '20s, '30s, and 2014. Abert has the highest salinity, far saltier than ocean water.

The April 25 seminar will include representatives of federal, state, and local agencies that manage water and wildlife resources; and private individuals who have proprietary concerns with the lake's future. It is open to the public, and tickets are \$5. The seminar starts at 9 a.m. in the conference rooms of the Welcome Center at the Ranch.

The organizer is Frank P. Conte, PhD, of Camp Sherman, Oregon State University professor of zoology (emeritus) and president of the High Lakes Aquatic Alliance Foundation (HLAAF). As an expert on salt (in water, in your body, and in the environment), Conte has become one of Lake Abert's champions.

The HLAAF is dedicated to sustaining the health and nutritional values of Oregon's high lakes and their tributaries, for the benefit of the organisms that live there. The high lakes are generally formed by snow melt; however, the lack of snowfall this year favors rain rather than snow in much of the Cascades and other areas of the West. Rain does not provide the slow dispersal of water as snow does.

The seminar at Black Butte Ranch will be preceded by a one-day workshop on April 24 at Camp Sherman. Here, representatives of various state and federal agencies and private organizations will gather to discuss their current jurisdictional responsibilities as they affect a sustainable management plan for fresh-water



PHOTO PROVIDED

Lake Abert is critical — and fading — habitat.

inflow to Lake Abert. The Oregon Water Resources Department and its director, Tom Byler, are coordinating invitations. This meeting will be at the HLAAF headquarters

in Camp Sherman.

For tickets and more information on the seminar or HLAAF, contact Dr. Frank Conte at spfclrecon@centurylink.net.

EDUCATIONAL SYMPOSIUM

OREGON'S SALINE LAKE ECOSYSTEM — LAKE ABERT

Saturday, April 25, 2015 | 8:30 AM to 5:00 PM
Black Butte Ranch | Administration Conference Rooms

8:30 Opening Remarks: Dr. Frank P. Conte, Professor of Zoology (emeritus), Oregon State University, Corvallis, Oregon

8:45 The Importance Of Great Basin Wetlands To Waterbird Connectivity Throughout The Annual Cycle: Dr. Lewis W. Oring, Professor of Natural Resources (emeritus), University of Nevada, Reno, Nevada.

9:30 Waterbird Responses To Great Basin Wetlands Altered As A Result Of Changing Climates: Dr. Susan Haig, Senior Scientist, U.S. Geological Survey, Forest and Rangeland Ecosystem, Science Center, Corvallis, Oregon.

10:15 Coffee Break

10:30 Comparative Biology Of Aquatic Grebes While Living In Various Saline Lakes: Dr. Annette Henry, Biologist, National Oceanographic and Atmospheric Administration.

11:15 Comparative Biology Of Algal Species, Brine Shrimp, Brine Flies And Their Lime Gland Organs: Dr. Greg Yanega, Biologist, Salton Sea institute, University of California, Irvine.

12:00 Lunch

1:00 Lake Abert Origin, Basin Topography, Geology And Morphology In Historical, Current And Future Scenarios: Dr. Ronald Larson, Wildlife Biologist (emeritus), U.S. Fish and Wildlife Service.

1:45 Climatology Of The Lower Chewaucan Basin And Lake Abert: Dr. Stephen Bieda, Meteorologist, National Oceanographic and Atmospheric Administration, Pendleton, Oregon.

2:30 Coffee Break

2:45 Oregon's Public Trust Doctrine: Public Rights In Waters, Wildlife & Beaches. What Is Its Potential In Saving Lake Abert? Dr. Michael Blumm, Jeffery Bain Faculty Scholar, Professor of Law, Lewis and Clark Law School, Portland, Oregon.

3:30 Historical Populations Of Brine Shrimp And Financial State Support And Loss Due To Climatic Drought:

Dr. Conte, Keith Kruez, Owner of Oregon Frozen Brine Shrimp on Lake Abert.

4:00 Evidence for Prehistoric Human Use of Lake Abert and its Ecosystem Implications: Dr. Richard Pettigrew, President and Executive Director, Archaeological Legacy Institute.

4:30 Open Discussion for Public Questions and Speakers Comments: Moderator of Discussion by Dr. Frank P. Conte

5:00 Adjourn

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