



Oregon Lakes Association

[www.oregonlakes.org](http://www.oregonlakes.org)

Theo Dreher, President | [theo.dreher@gmail.com](mailto:theo.dreher@gmail.com)

## *The Proposed*

# Lake Abert Wild and Scenic River

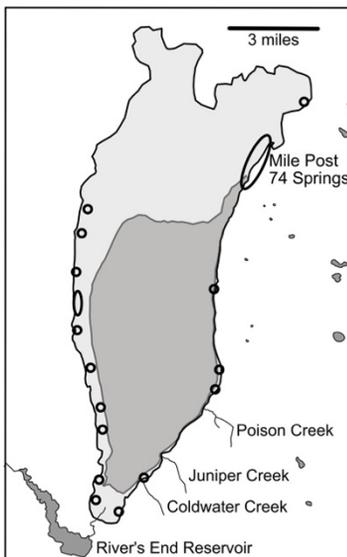
## *Oregon's Only Hypersaline Saltwater Lake*

*(Note: This nomination is hydrologically interconnected and highly complementary with the proposal of the Oregon Lakes Association to also establish the Upper Chewaucan Wild and Scenic River.)*



*Figure 1. Lake Abert, Oregon (Ron Larson, photo).*

### Summary



The Oregon Lakes Association (OLA) proposes establishment of the Lake Abert Wild and Scenic River (LAWSR). Under the Wild and Scenic Rivers Act of 1968, lakes may be deemed by Congress as wild and scenic rivers. The proposed LAWSR would also include the three main tributaries draining from Abert Rim—Coldwater Creek, Juniper Creek, and Poison Creek. The upper portion of the Chewaucan River, the source of most water flowing into Lake Abert, is separately proposed as a Wild and Scenic River (WSR).

**Map 1.** *The Chewaucan River enters Lake Abert from the south after passing through River's End Reservoir. Abert Rim is to the east of the lake where the Coldwater, Juniper and Poison Creeks occur. Springs are indicated with circles, the largest being the Mile Post 74 Spring complex. The lake is mostly owned by the Bureau of Land Management with most of the remainder owned by the State of Oregon.*

## Introduction

Lake Abert, located in south-central Oregon in Lake County, is Oregon's 6<sup>th</sup> largest lake, being approximately 64 square miles in surface area. It is the largest landlocked saline water body in the Pacific Northwest. Almost all water to the lake is supplied by the Chewaucan River.

The lake is essential to post-breeding shore, wading, and other migratory waterbirds, providing them with an abundant supply of invertebrate food. The highly productive lake has large populations of brine shrimp and alkali flies that are needed by the birds to replace fat reserves lost during the breeding season. The birds rely on the abundant brine shrimp and alkali flies to provide them with energy reserves to enable their migrations between North and South America.



*Figure 2. Part of a large flock of Wilson's Phalaropes is present in the shallows. Phalarope flocks of several hundred thousand have been seen at the lake (Ron Larson, photo).*

From June to November, up to several hundred thousand water birds, including American avocet, Black-necked Stilts, Western and Least Sandpipers, Wilson's and Red-necked Phalaropes, Eared Grebe, Ring-bill and California Gulls, Northern Shovelers, and other birds occur at the lake. The largest interior nesting population of Snowy Plovers, a federally-threatened species, in Oregon is found at the lake.

The Bureau of Land Management (BLM) has established the Lake Abert Area of Critical Environmental Concern because of its importance to migratory birds. Numerous conservation organizations also recognize Lake Abert as being essential to migratory birds, and recognize that the ability to nurture these birds is at risk if water inflows diminish and salinity exceeds 15%, as it did in 2014-2016.

Most of the land beneath Lake Abert is administered by BLM. Approximately 2,400 acres of lands are owned by the State of Oregon. There are also some private inholdings that are generally in small wedges that reach from the shore to the center of the lake. These private lands are completely undeveloped. The establishment of a wild and scenic river increases the opportunity to acquire non-federal holdings within a wild and scenic river from willing sellers using Land and Water Conservation Fund monies.



*Figure 3. A view of the lake from Abert Rim (Ron Larson, photo).*

### Proposed Extent

Table 1 details the extent of the proposed Lake Abert Wild and Scenic River.

<b>Table 1. Extent of the Proposed Lake Abert Wild and Scenic River</b>			
<i>Segment</i>	<i>Mileage</i>	<i>Upper Terminus</i>	<i>Lower Terminus</i>
Lake Abert at its highest lake level and associated wetlands.	~6 miles at widest point and 16 miles at longest point at maximum depth (~36,500 acres)	Not applicable	Not applicable
Coldwater Creek	~1	Headwaters on high Abert Rim	Unknown, goes underground
Poison Creek, Upper	3.5	Headwaters above Abert Rim	North boundary SW1/4, NE1/4, S1, T35S, R21E, WM
Poison Creek, Lower	0.5	North boundary SW1/4, NE1/4, S1, T35S, R21E, WM	Lake Abert
Juniper Creek, Upper	1.0	Headwaters high on Abert Rim	Eastern right-of-way boundary US 395
Juniper Creek, Lower	0.2	Eastern right-of-way boundary US 395	Lake Abert

#### ***“Lakes” as Wild and Scenic Rivers***

“River” means a flowing body of water or estuary or a section, portion, or tributary thereof, including rivers, streams, creeks, runs, kills, rills, and **small lakes**. [emphasis added]

—*The Wild and Scenic Rivers Act (16 USC 1286(a))*

*Lake Abert ~57 square miles in size, a size that most would not consider “small” and probably far larger than what the 90<sup>th</sup> Congress had in mind when it enacted the Wild and Scenic Rivers Act into law in 1968.*

*Waldo Lake, an Oregon Scenic Waterway and proposed as an addition to the North Fork Middle Fork Willamette Wild and Scenic River, is ~10 square miles in size.*

*In the end, a current Congress is not bound by the Acts of a previous Congress, so the Lake Abert Wild and Scenic River could be established, without reference to its size.*

*The outstandingly remarkable values of Lake Abert are worthy of protection for the benefit of this and future generations and wild and scenic river status could achieve that end.*

## Outstandingly Remarkable Values

Table 2 identifies and details the ORVs of the proposed Lake Abert Wild and Scenic River.

<b>Table 2. Outstandingly Remarkable Values of the Proposed Lake Abert Wild and Scenic River</b>	
<b>ORV</b>	<b>ORV Detail</b>
Scenic	Lake Abert and the adjacent Abert Rim are particularly scenic. The views of the lake from the Abert Rim proposed Wilderness Study Area are spectacular. “The scenic values of Lake Abert and its environs were determined to meet the criterion for Area of Critical Environmental Concern (ACEC) relevance and importance.” (BLM 1995)
Geologic	“Lake Abert, a remnant of the much larger pluvial Lake Chewaucan, is located in the northwestern corner of the Basin and Range physiographic province. The large, shallow, saline, alkaline lake occupies a topographically closed basin that lies on the downthrown side of a normal fault at the base of Abert Rim. Because the drainage basin is closed (i.e., there is no outflow), water is lost predominantly through evaporation, which has resulted in the concentration of large quantities of sodium salts and extreme alkalinity. The geological features (graben lake—high, steep, little eroded, tilted fault block—, massive lava flows, and wave-cut terraces) are very interesting and well displayed. ” (BLM 1995). Abert Rim, a spectacular fault scarp is approximately 7 million years old.
Wildlife	“Lake Abert and the surrounding area is rich in wildlife habitat and species diversity. There is evidence that Lake Abert plays an important role for migratory habitat along the Pacific Flyway, particularly for shorebirds. It is likely that a significant percentage of the Pacific Flyway populations of Western Snowy Plover, Eared Grebes, Wilson's and Red-necked Phalaropes, and American Avocets use Lake Abert. It also provides seasonal habitat for ~2% of the North American population of Northern Shovelers. The magnitude of the total waterfowl/waterbird use (exceeding 3.25 million bird-use days) demonstrates that it is more than locally significant and, in fact, there are 14 animal species at Lake Abert for which a special status has been assigned by either the State of Oregon or the Federal government (Oregon lakes tui chub, Peregrine Falcon, Bald Eagle, Western Snowy Plover, White-faced Ibis, Loggerhead Shrike, Long-billed Curlew, Ferruginous and Swainson's Hawks, Greater Sandhill Crane, White-tailed antelope squirrel, white-tailed jackrabbit, and California Bighorn Sheep). The area supports the third or fourth largest breeding population of western snowy plover in the world.” (BLM 1995)  Lake Abert has been designated by Audubon as an “Important Bird Area.”
Hydrology	Oregon's only hypersaline saltwater lake, Lake Abert, is also the largest saline lake in the Pacific Northwest, and is among the five largest such lakes in the Great Basin (including Mono, Walker, Pyramid, and Great Salt Lakes). Its salinity varies seasonally and yearly with the volume and lake level changes in response to run-off and summer evaporation. In 2014, the lake nearly desiccated because of low inflows. The Chewaucan River provides most of its inflows. The three main tributaries (Coldwater, Juniper, and Poison Creek, also contribute inflows, as do numerous springs located around the lake, with the largest being the Mile Post 74 Spring complex located along the NE side of the lake.
Aquatic Communities	“Lake Abert is an aquatic ecosystem that is exceptionally productive and is comparatively close in functioning to its pristine state. The Oregon Natural Heritage Plan identifies the area as a lacustrine, fault block lake system that is unique to the State of Oregon.” (BLM 1996). Much or most of the primary production in the lake is from the green filamentous alga <i>Ctenocladus</i> . Brine shrimp ( <i>Artemia franciscana</i> ) and alkali flies ( <i>Ephydra hians</i> ) are the dominant invertebrates and occur in the lake in vast numbers. The long-legged fly, <i>Hydrophorus</i> , is also numerous. An amphipod, <i>Hyaella</i> , lives in the springs and spring runs around the lake. In the brackish-water marshes adjacent to springs is a diverse flora and fauna dominated by the common four-square, <i>Scirpus pungens</i> , a sedge. Other plants growing in the marshes are monkey flower and goldenrod.
Cultural	“The Lake Abert area has significant historic and prehistoric cultural values. It contains a National Register District and has one of the highest densities of cultural sites in the region. While other areas have similar sites, they are lower in density and are found in different types of environments. There is virtually no portion of the immediate shoreline of the lake where some form of cultural resource cannot be found. The shoreline of the lake is literally one continuous [archaeological] site area.” (BLM 1995).



**Figure 4.** Lizard petroglyphs from the Lake Abert shoreline (Ron Larson, Photo)

### Potential Threats

Lake Abert lost productivity due to near-desiccation in 2014-2016 and is at risk of such disturbance again in the future. During that event, invertebrate populations plummeted, and there were very few waterbirds present, and some have not returned to their pre-impact numbers. Recent Snowy Plover populations have been the lowest ever documented. Even though established as a BLM ACEC, Lake Abert and environs face several possible threats, including, but not limited to:

- *Dewatering of the Chewaucan River.* A dam was proposed on the Upper Chewaucan River.
- *Sodium Mining.* A large-scale salt extraction operation was proposed to mine the lake bottom.
- *Pump Storage Hydroelectricity.* The Federal Energy Regulatory Agency received a proposal to pump Lake Abert water 2,400 feet to Abert Rim and then release it back to the lake to generate electricity on a daily peaking basis.
- *Climate Change.* Extended and severe droughts would lower Lake Abert water levels and increase salinities to the point that its algae and invertebrate biota would decline and that would eliminate the food supply for the migratory birds, as happened in 2014-2016.

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### **For More Information**

Theo Dreher, [theo.dreher@gmail.com](mailto:theo.dreher@gmail.com)

Ron Larson, [rlarson@ccountry.net](mailto:rlarson@ccountry.net)