

Don Long

Soap Lake certainly deserves designation as an Outstanding Resource Water (ORW).

First, Soap Lake is one of only 14 meromictic lakes in the US. Worldwide, approximately 1 out of every 1000 lakes is meromictic. These facts alone should be enough to merit designation of Soap Lake as an ORW.

Second, meromictic lakes have unique mineral distributions, especially in their lower layers. Water samples from Soap Lake's lowest layer have found it to be anaerobic and very caustic. Similar to life forms found around ocean hydrothermal vents, these lower levels may support life forms found nowhere else. It is ecologically important to preserve these meromictic layers to preserve whatever life forms they may support.

Third, the unique mineral composition of Soap Lake is well known for its curative properties for Buerger's disease, rheumatoid arthritis and other diseases. Any dilution of the lake's mineral density will diminish its healing properties.

The mineral density of Soap Lake has been greatly reduced in the last 70 years or so. This is directly attributable to the development of the Columbia Basin Project, which has created a significant increase in underground freshwater inflow from irrigation runoff into the lake. The USBR has installed some interceptor wells to decrease this inflow, but more could be done.

For these reasons, I fully support designating Soap Lake as an Outstanding Resource Water. In my opinion, Soap Lake should be designated as a Tier III(A) ORW, for which no further degradation is allowed. As part of this designation, DOE should work with the USBR to install additional interceptor wells to reverse the de-mineralization caused by irrigation runoff inflows into the lake.