

## Paul Amieux

I am writing in support of Soap Lake's designation as an Outstanding Resource Water—Tier III(B). Over the years working at Bastyr University in Kenmore, Washington, I have become aware of this outstanding body of water in Washington State that has scientific and cultural significance as a body of water used for its therapeutic and healing properties by indigenous peoples of Washington State, but also for its remarkable chemistry as a meromictic haloalkaline lake (also called a soda lake) with a unique mineral composition and one-of-a-kind species of bacteria like *Thioalkalimicrobium microaerophilum* with unique biosynthetic pathways that may provide new future breakthroughs in ecology, medicine, agriculture and biofuels. The Absolute uniqueness of this lake due to: -1-i) its sharp stratification into two layers with different features and ii) an unprecedentedly high sulfide concentration in the anaerobic layer-1- with the highest sulfide concentrations ever recorded in natural waters make it a true rarity from a global perspective. ( Sorokin DY, Foti M, Pinkart HC, Muyzer G. Sulfur-oxidizing bacteria in Soap Lake (Washington State), a meromictic, haloalkaline lake with an unprecedented high sulfide content. *Appl Environ Microbiol.* 2007 Jan;73(2):451-5. doi: 10.1128/AEM.02087-06. Epub 2006 Nov 17. PMID: 17114324; PMCID: PMC1796962.).