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**Update on Utah Lake phosphorus findings :**

Phosphorus from atmospheric wet and dry precipitation appears to be over 6 times more than all other P inputs to Utah Lake--and the total P loading to the lake appears to be more than 100 times the amount required to support all algae growth that occurs in Utah Lake--the balance is just harmless residue!

**Ongoing atmospheric deposition research studies:**

Six wet/dry "atmospheric deposition" samplers in Utah Valley and South Davis have been in operation for several months now. The study will continue at least until Feb, 2018.

The atmospheric "dust" phosphorus deposits are startling! The phosphorus deposits on Utah Lake (and likely the same for the entire Wasatch Front, if not most of the Great Basin) during the 5 month May-September period were extremely large and this source is now known to dwarf all other sources--about 1400 tons during the 5 month period; annually, this will likely total more than 1600 tons for the combined atmospheric wet and dry quantities.

In Utah Lake results from other studies, by us and others, have determined that phosphorus inflow from all sources except atmospheric (all surface and groundwater, including all of the sewage treatment plants) is about 300 tons a year. The EPA correlation model (Larsen and Mercier) indicates that only some 17 tons is adequate to support the level of algae growth the lake actually produces--but with the atmospheric addition the lake appears to be receiving nearly 2000 tons.

The bottom line: As we have been finding and explaining: In much of Utah's surface waters, phosphorus is naturally in abundance and additional amounts are of minor concern since phosphorus is usually not the algae growth factor that determines/ limits the growth--in Utah Lake it is most likely the natural cloudiness of the water. Therefore, it is absolutely futile to try to improve water quality by "controlling" phosphorus in Utah Lake!--and many other areas in Utah, particularly in the valley-basin areas, and especially in the Great Basin along the Wasatch Front.

**Moratorium Needed**

Likely the best solution to the dilemma is an **immediate moratorium** on State Division of Water Quality rules and plans for phosphorus removal at Utah POTWs (Publicly Owned Treatment Works) and all other public and private operations until future studies identify the specific waters where logical and rational P control/ removal programs show the costs would render commensurate water quality benefits. This would give communities breathing room and time to carefully consider the options--probably with nutrient removal not required in many cases. This approach would very likely show that phosphorus removal would not improve water quality in most treatment plant receiving waters in Utah--and would ultimately avoid the waste of many billions of dollars of Utah citizen's money.

Respectfully Yours,

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