TPDES in Pristine Stream Watersheds

1. **The science is clear: phosph9prus concentrations drive degradation in low phosphorus streams.**

2. **There are only 12 TPDES permits that actively discharge into Pristine Streams**

-only 2 discharge over 1 MGD (City of Liberty Hill and City of Hondo)

City of Lefors
City of Liberty Hill (South Fork only)
City of Rocksprings
City of Junction
City of Mason
City of Big Lake
City of Eldorado
City of Bandera
City of Hondo
City of Sonoro
Crockett County WCID 1
Medina County WCID 2

3. **TPDES permits in Pristine Streams have significant compliance issues, likely due to the fact that low phosphorus streams are easy to pollute**.
   - 9 of the 10 permits reported to the EPA had some noncompliance with the discharge permit in the past 12 quarters; during this time, 5 had significant violations with the permit reported
4. **TCEQ does not have a standardized approach when issuing TPDES permits into low phosphorus streams.**
   - Only ONE of the 11 actively discharging permits has a limit on how much phosphorus can be discharged into the low phosphorus stream.
5. **For this single permit, the Executive Director acknowledged the importance of phosphorus in causing algal blooms.**

"*Phosphorus is a key nutrient necessary for algae growth and is often in limited supply in freshwater systems. By restricting the amount of phosphorus in the treated wastewater, the likelihood of the discharge stimulating excessive growth of algae or other aquatic vegetation is reduced significantly. To ensure the effluent from the City of Liberty Hill will not cause an excessive accumulation of algae, the Executive Director performed a nutrient screening which indicated that because of the high clarity of the water column, lack of shade along the banks, and minimal dilution, a total phosphorus limit is needed in the draft permit. The Executive Director included a total phosphorus limit of 0.5 mg/l for the Interim I phase, and a total phosphorus limit of 0.15 mg/l in the Interim II, Interim III and Final phases, respectively, to preclude the excessive accumulation of algae.*" From Page 4, June 15, 2021 RTC for WQ0014477001

6. **The phosphorus limits proposed by the ED do not pass even a precursory scientific once-over.**

   - In order to achieve a final phosphorus concentration that will not degrade a pristine stream, an effluent concentration of 150 mcg/L would require a 17 fold dilution. For 4MGD of effluent, the stream flow would have to be 7.4 cfs x 17 = 105 cfs. According to 54 years of USGS monitoring, **median flow for the South Fork of the San Gabriel River is 2.9 cfs**; the mean is 18 cfs , the 75th percentile is 75 cfs, and maximum flow was 261 cfs. Only during flood events would this phosphorus limit be protective, even at the Phase II discharge limit of 0.40MGD, which would require flow of 12.58 cfs to allow for sufficient dilution.