

The background image shows a calm body of water, likely a lake or slough, under a cloudy sky. In the distance, there are rolling hills and some trees. On the right side, a small, modern-looking building with a flat roof and large windows is visible, situated near the water's edge. The overall scene is peaceful and natural.

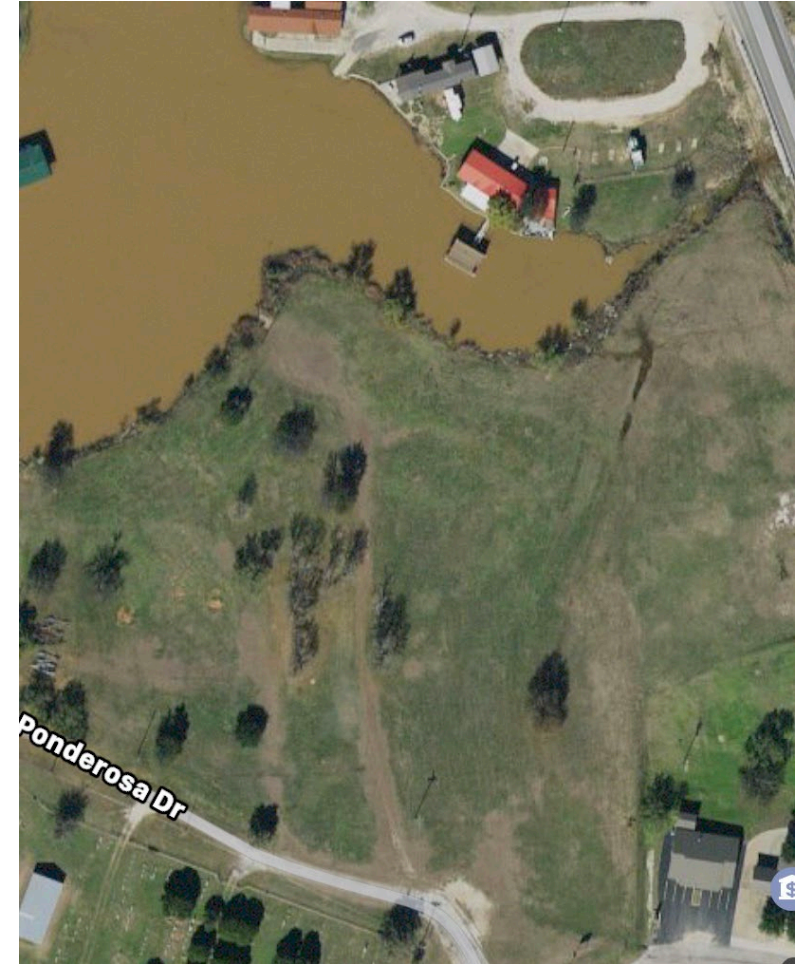
Stormwater/Effluent Runoff & Environmental Concerns

Prepared by Neighbors for the Protection of Willow Beach Slough
Possum Kingdom Lake, Texas
May 24, 2021

Soil Disturbance, Minimal Vegetation, and Impervious Surfaces

- Every inch of the soil on the property has been disturbed
- All vegetation has been removed
- Caliche roads and pavement to cover the property
 - Where will the vegetation be?
 - Vegetation and undisturbed soil allows for:
 - Increased saturation
 - Impeded runoff flow
 - Adequate stormwater runoff filtration

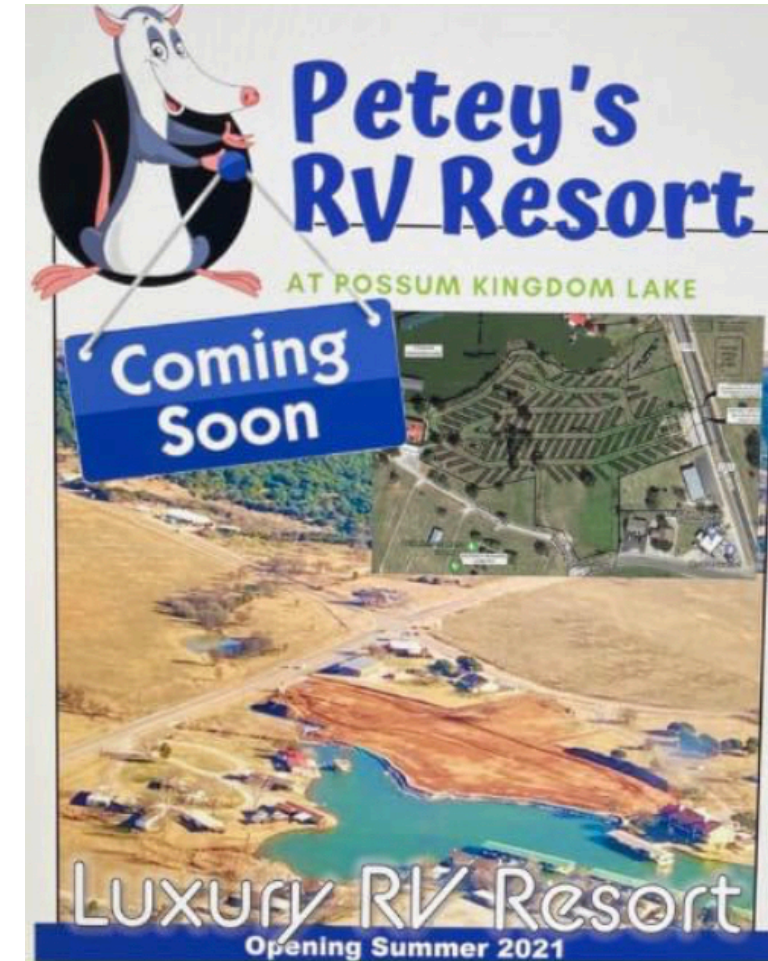




Before...




Facebook.com/PeteysRVResort



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After...



Topographical Changes & Calculated Runoff Increase

- Topographical changes found in a drainage plan submitted to the county show soil improvements that allow for more runoff toward the lake
 - Water that once flowed from the Petey's property to across FM2353 now flows to the lake
- Calculations on the drainage plan show a runoff rate increase of almost two-fold
 - Pre-developed ON-A $Q1=3.28$ cfs; Post-developed ON-A $Q1=5.71$ cfs
 - Pre-developed ON-B $Q1=6.54$ cfs; Post-developed ON-B $Q1=11.39$ cfs
 - The septic drainfield is in area ON-B
- Almost half of the property will be impervious surfaces
 - 151,207 square feet impervious
 - 165,213 square feet pervious

Environmental Concerns

- Sedimentation of an already small, shallow cove
- Potential runoff mixed with septic effluent
- Potential runoff from any oil, metals, or chemicals from anthropogenic sources
 - Vehicle traffic & parking
 - Heavy metals from tire wear, antifreeze, engine oil
 - RV chemicals
 - Pesticides/herbicides

