

Oso Watershed Characterization – Ground Water Monitoring

CBBEP Project 0541

Presented to Oso Creek/Oso Bay
Stakeholders Meeting

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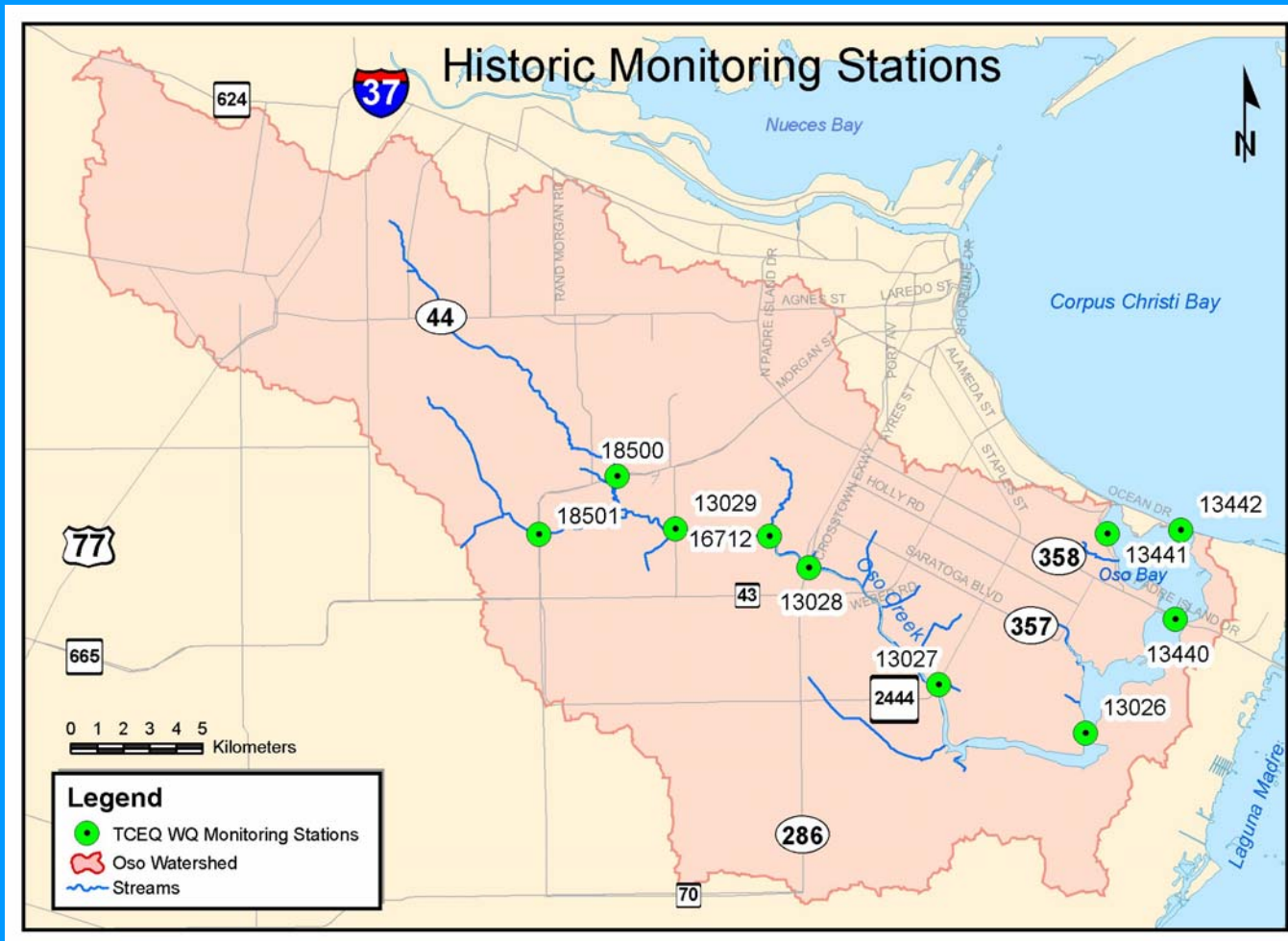


Objectives

- Quantify the flux between the ground water and surface water flow regimes using thermal profilers.
- Determine if the indicator bacteria *Enterococcus* exists in ground water adjacent to Oso Creek/Oso Bay
- Measure the concentration of nutrients in the ground water adjacent to Oso Creek/Oso Bay
- Investigate the occurrence/distribution of *Enterococcus* in a vertical soil profile.



Study Area



Scope of work

- Develop Quality Assurance Plan
- Install 40 monitoring wells along Oso Creek and Oso Bay.
 - Wells will be grouped in pairs
 - Shallow well at top of water table (~10' deep)
 - Deeper well into the water table (~25' deep)
- Install 20 thermal profilers in creek/bay adjacent to monitoring well pairs.



Scope of work (cont)

- Data Collection/Sampling
 - All wells will be instrumented for automatic collection of ground water temperature measurements
 - 3 wells (one adjacent to the non-tidal creek, one adjacent to the tidal creek, one adjacent to the bay) will be instrumented for automatic collection of water level measurements



Scope of work (cont)

- Data Collection/Sampling (cont)
 - All wells will be sampled for the indicator bacteria *Enterococcus* twice, once during a wet period and once during a dry period.
 - Split spoon cores will be collected at two locations and composite soil samples will be taken from various depths and analyzed for *Enterococcus*.

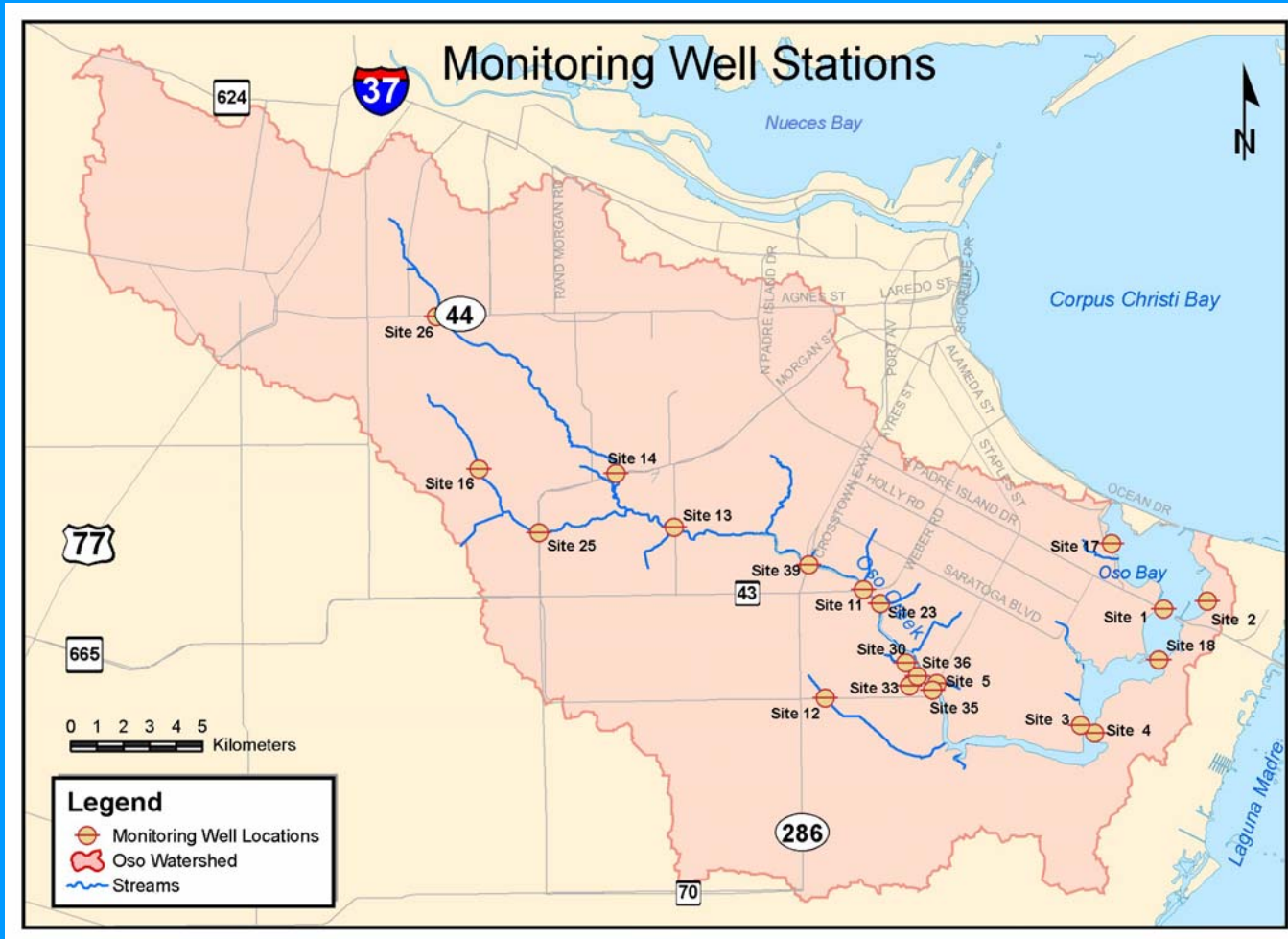


Scope of work (cont)

- Evaluate ground water as a potential source/pathway for bacteria and nutrients
- Develop numerical model using temperature profiles and measured heads to estimate the volume and seasonality of water exchanged between the ground water flow system and the surface water flow system.



Monitoring Well Locations



Current Status

(6/7/2008)

- QAPP is under revision due to change in tasks and acquiring new lab contractor.
- Negotiations for well installation in public right of way are continuing (lots of lawyer interaction).
- Field testing thermal profilers
- Reviewing water well driller bids



Questions?

