

Dripping Springs Draft Permit to Discharge Treated Wastewater to Onion Creek

**Presented to LCRA Water Quality Advisory Group
April 19, 2017**



Wastewater disposal regulated by the Texas Commission on Environmental Quality (TCEQ)

Treat and irrigate effluent on the land

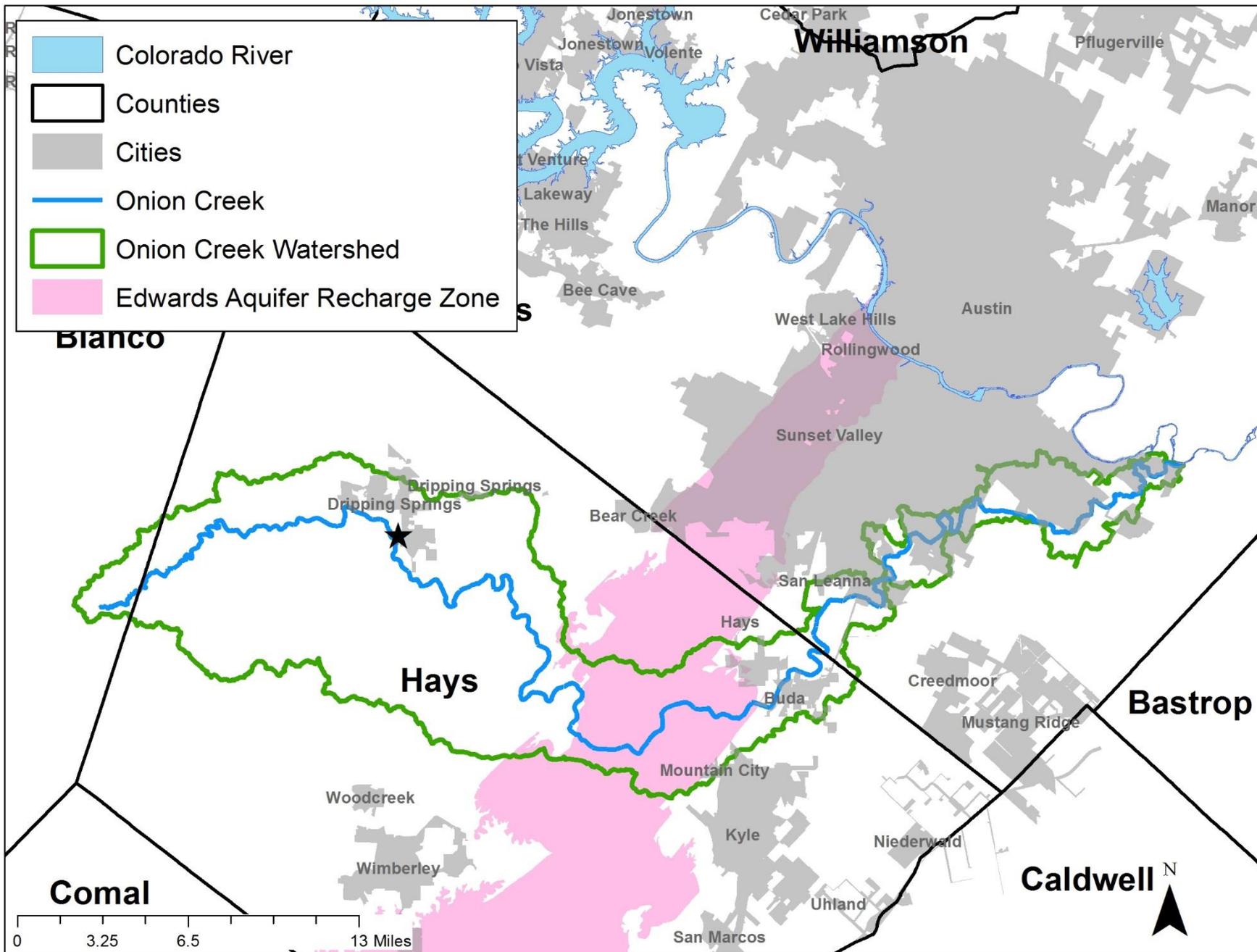
- Dripping Springs current permit



Treat and discharge effluent directly to a water body

- Dripping Springs proposed permit for 995,000 gal/day to tributary of Onion Creek

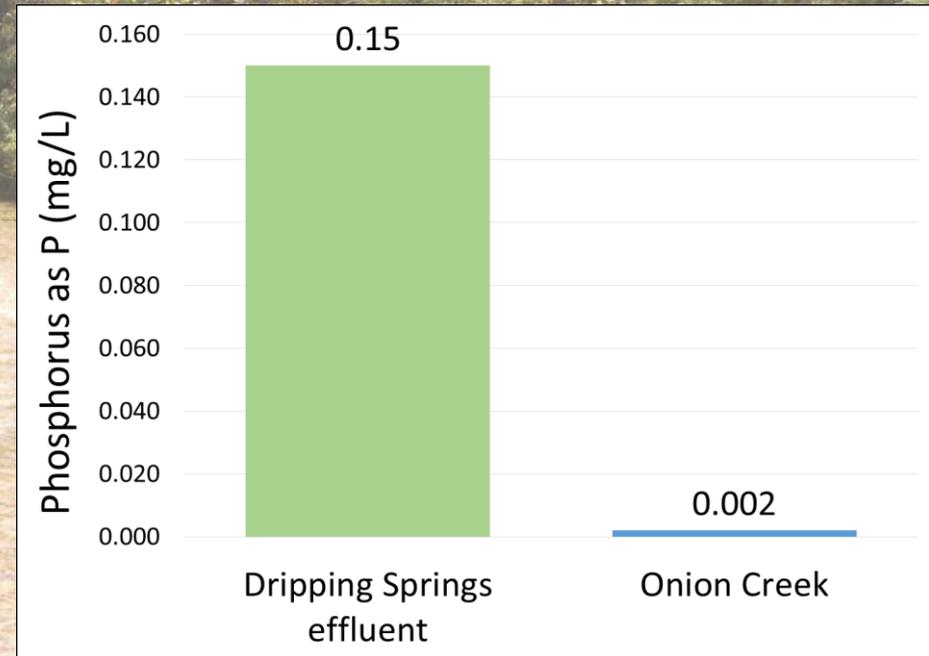
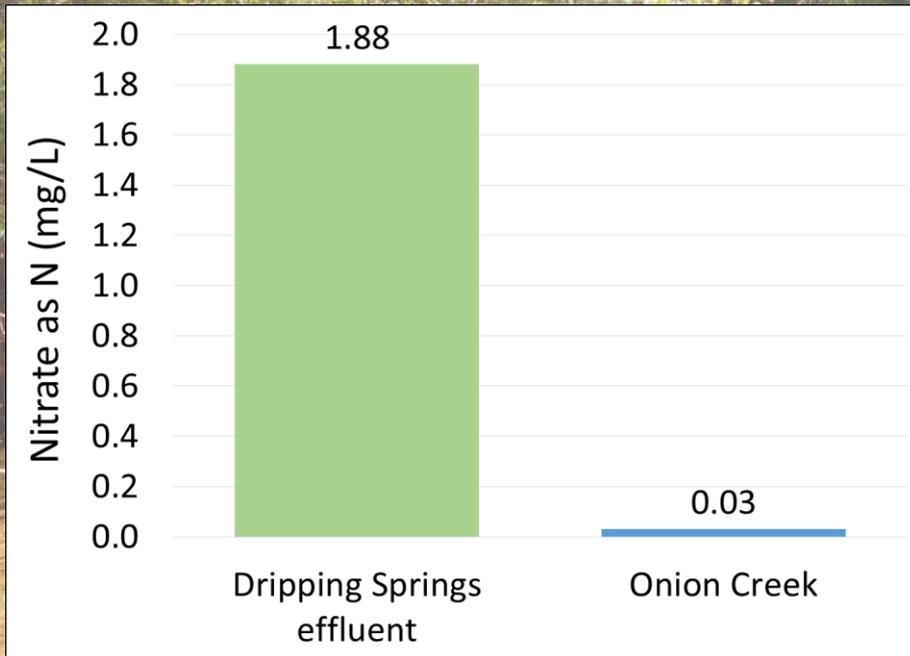






Walnut Spring Tributary to Onion Creek in Caliterra Subdivision

Sensitivity of Edwards Plateau Creeks to Nutrient Enrichment

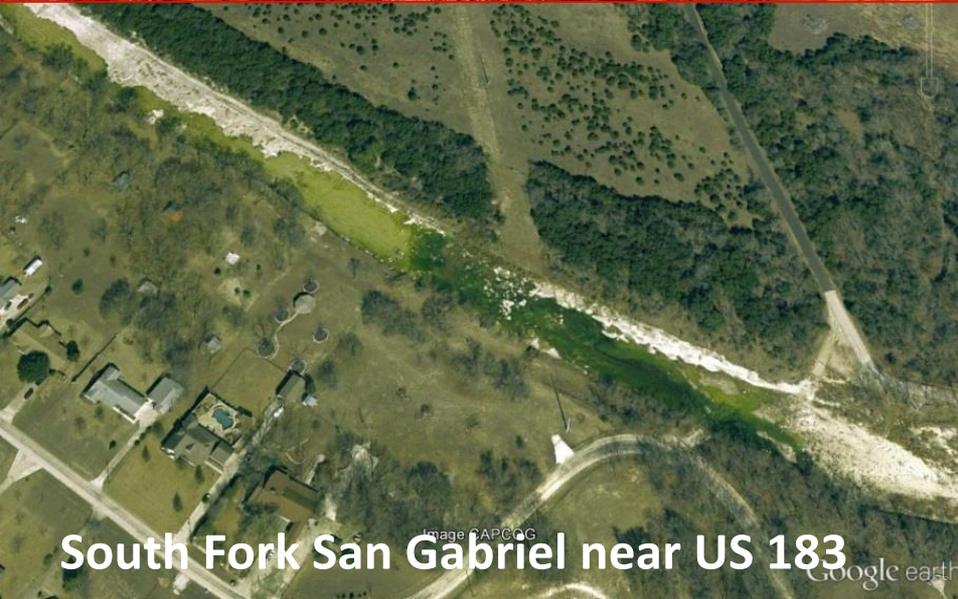


Even highly treated effluent has excessive concentrations of nutrients and will cause water quality degradation in Hill Country creeks

South Fork of the San Gabriel River near US 183



Lake Creek near US 183



South Fork San Gabriel near US 183

Image ©APCCG
Google earth

Generalized Surface and Groundwater Interaction Map Blanco River and Onion Creek, Central Texas

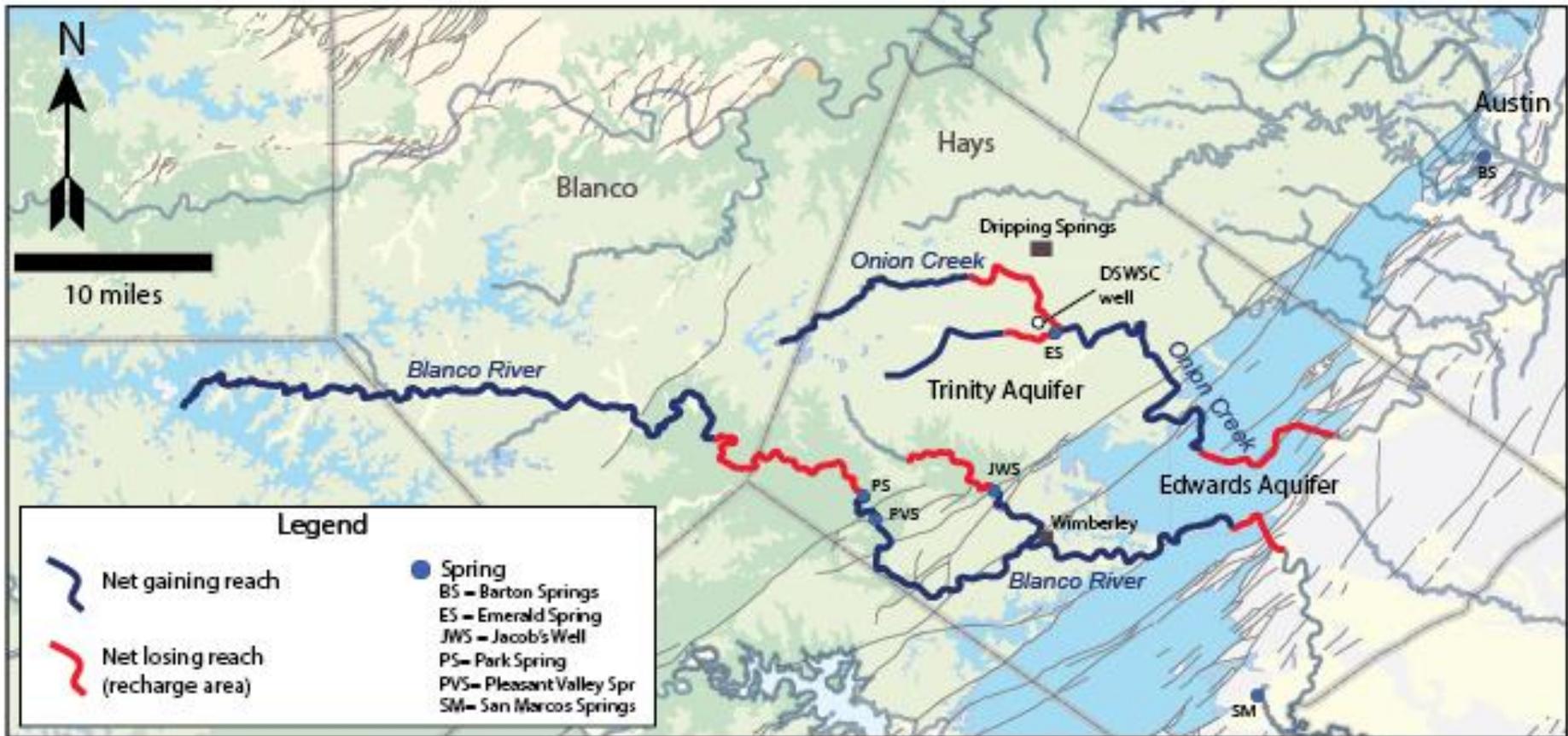


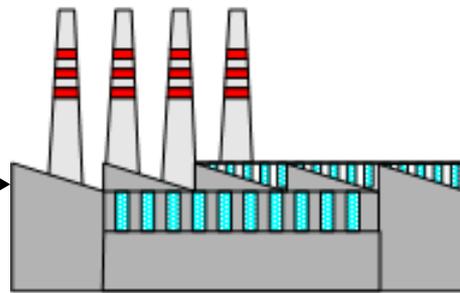
Figure 1. Map showing the generalized geology of Central Texas with the net gaining and losing reaches indicated along the Blanco River and Onion Creek. These are generalized from the studies of Smith et al., (2015) and Hunt et al. (In Press).

Figure by Barton Springs Edwards Aquifer Conservation District

bseacd.org/2016/09/onionblanco_flowstudy/

Discharge without Reuse

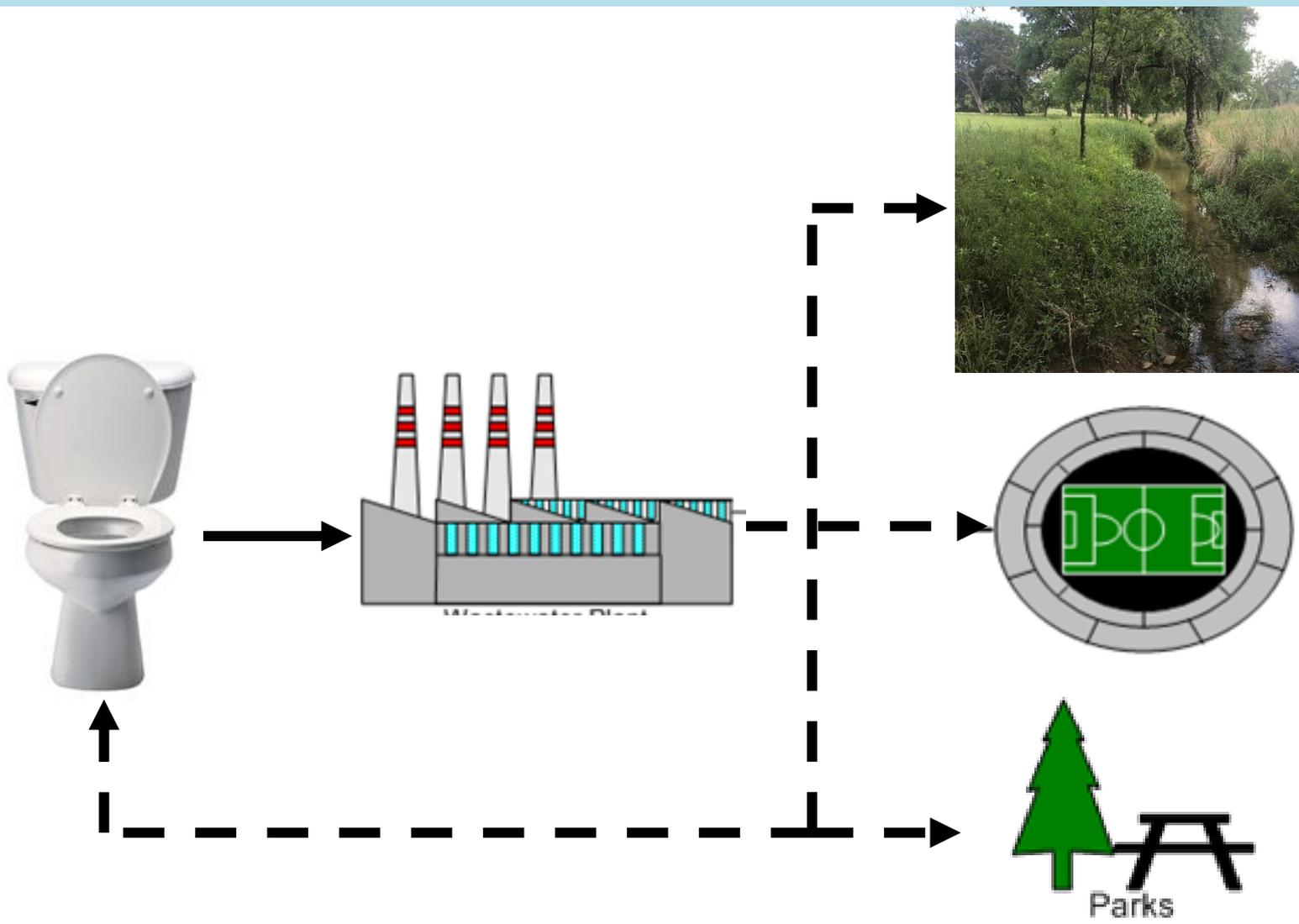
Conventional model without beneficial reuse



**Wastewater
Treatment Plant**



Discharge with Reuse



Dripping Springs Proposed Reuse

Dripping Springs planning:

- Effluent irrigation on 372+ acres
- Storage for 36+ days of effluent

Dripping Springs projects more demand for reuse than effluent

Frequency of Discharge with Reuse

Initial analysis from 1954-2014:

- No discharge in 60% of years
- Average 10 days/year with any discharge
- Average 6 days of continuous discharge when they occur
- Not more than 67 days in any year
- Not longer than 54 days continuously

Onion Creek algae remain in current condition with this level of intermittent discharge

