



Change in Disinfection Method

Pearland Farms, Orchard Glen and Canterbury Park



Purpose of Meeting

- Explain the Change in Disinfection Process for the water system to Pearland Farms, Orchard Glen and Canterbury Park neighborhoods
- Provide information & answer questions

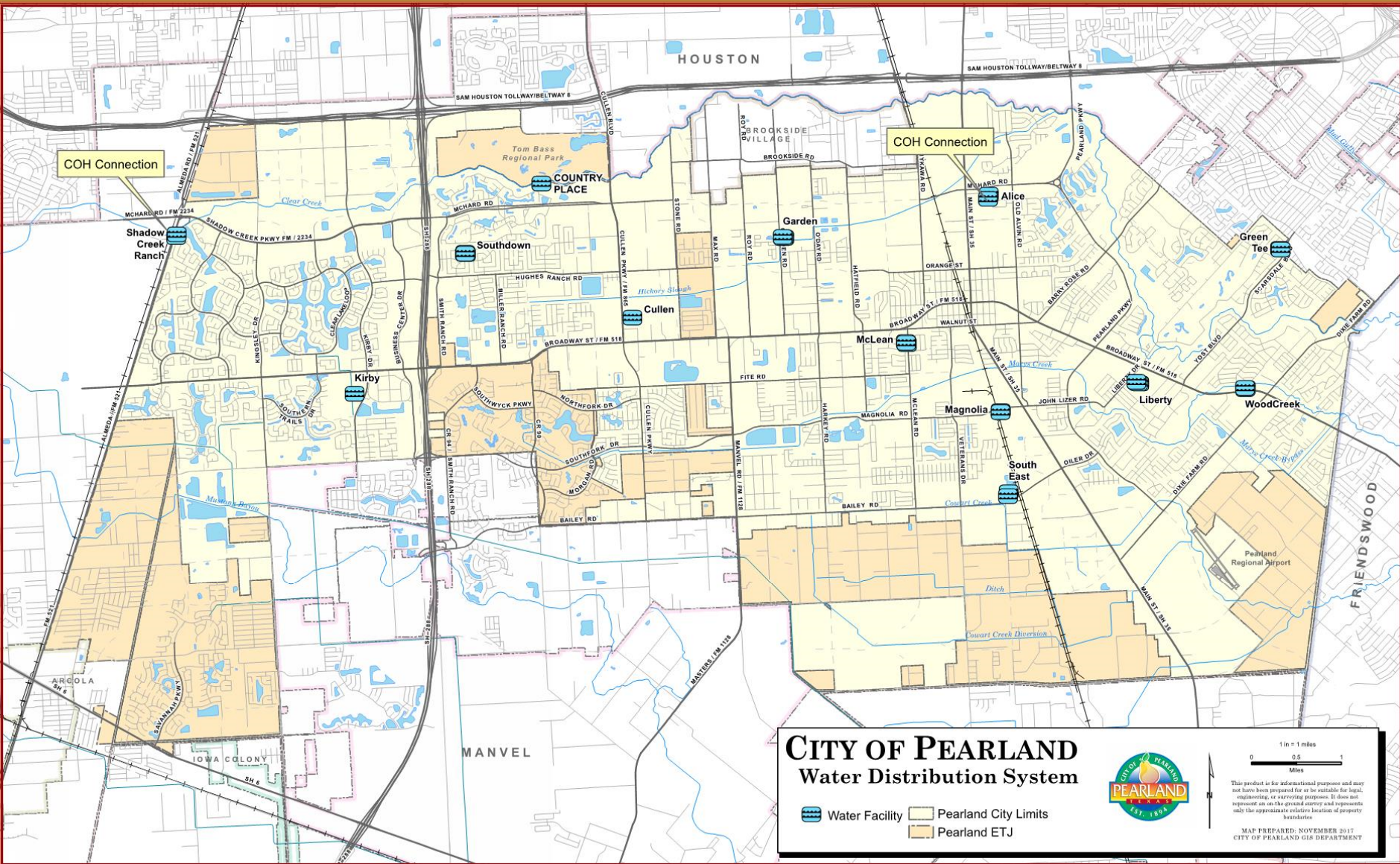


History of Pearland's Water System

- Prior to 2001 – City water system was 100% groundwater
- 2001 – Pearland starts purchasing surface water from City of Houston
- 2007 – Pearland changes disinfection method from free chlorine to chloramine residual.



City's Blended System



CITY OF PEARLAND Water Distribution System

-  Water Facility
-  Pearland City Limits
-  Pearland ETJ



1 in = 1 mile
0 0.5 1
Miles

This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

MAP PREPARED: NOVEMBER 2017
CITY OF PEARLAND GIS DEPARTMENT

Disinfection Methods

- What is the difference between the disinfection methods?
 - Free Chlorine: primarily used in ground water systems because of a very low/nonexistent organic level resulting in little to no production of disinfection byproducts (DBPs)
 - Chloramines: normally used in water systems that are sourced from surface water or combination of surface water and groundwater; made up of chlorine and ammonia; reduces the DBPs



Cause / Problem Identified

Nitrification: microbial process by which reduced nitrogen compounds (primarily ammonia) are sequentially oxidized to nitrite and nitrate. This process occurs throughout the water conveyance system (distribution system and private side)



Cause / Problem Identified

- Nitrification process leads to formation of nitrifying biofilm within the conveyance system.



Solution

- Distribution system maintenance:
 - Scouring system (initiated 2014)
 - 85.7 miles of WL scoured.
 - removes the biofilm and other foreign objects from the public system
 - Disinfectant change- from chloramine to free chlorine
 - oxidizes the biofilm, breaking nitrification cycle



Maintenance process

- Water source will be 100% ground water
 - Ground water and free chlorine do not form DBPs
- Change in disinfectant to free chlorine
- Duration: less than 30 days
- City to test at sample sites and at several home location (front and rear hose bib) to verify residuals.



Expectations

- **Water will be safe** but will smell like swimming pool water
- Short term odor, water discoloration, minor sediment (yellow to brown)
- Special considerations:
 - Aquatic Pets
 - Dialysis patients (in home) will need to adjust equipment from chloramine to free chlorine residual.



Our mission is to provide safe and quality potable water to our customers at all times.



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Questions?



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