

Issues Facing Water/Wastewater Utilities in Florida – GRU Perspective

Rae Hafer, PE
Utility Engineer
Gainesville Regional Utilities



Topics

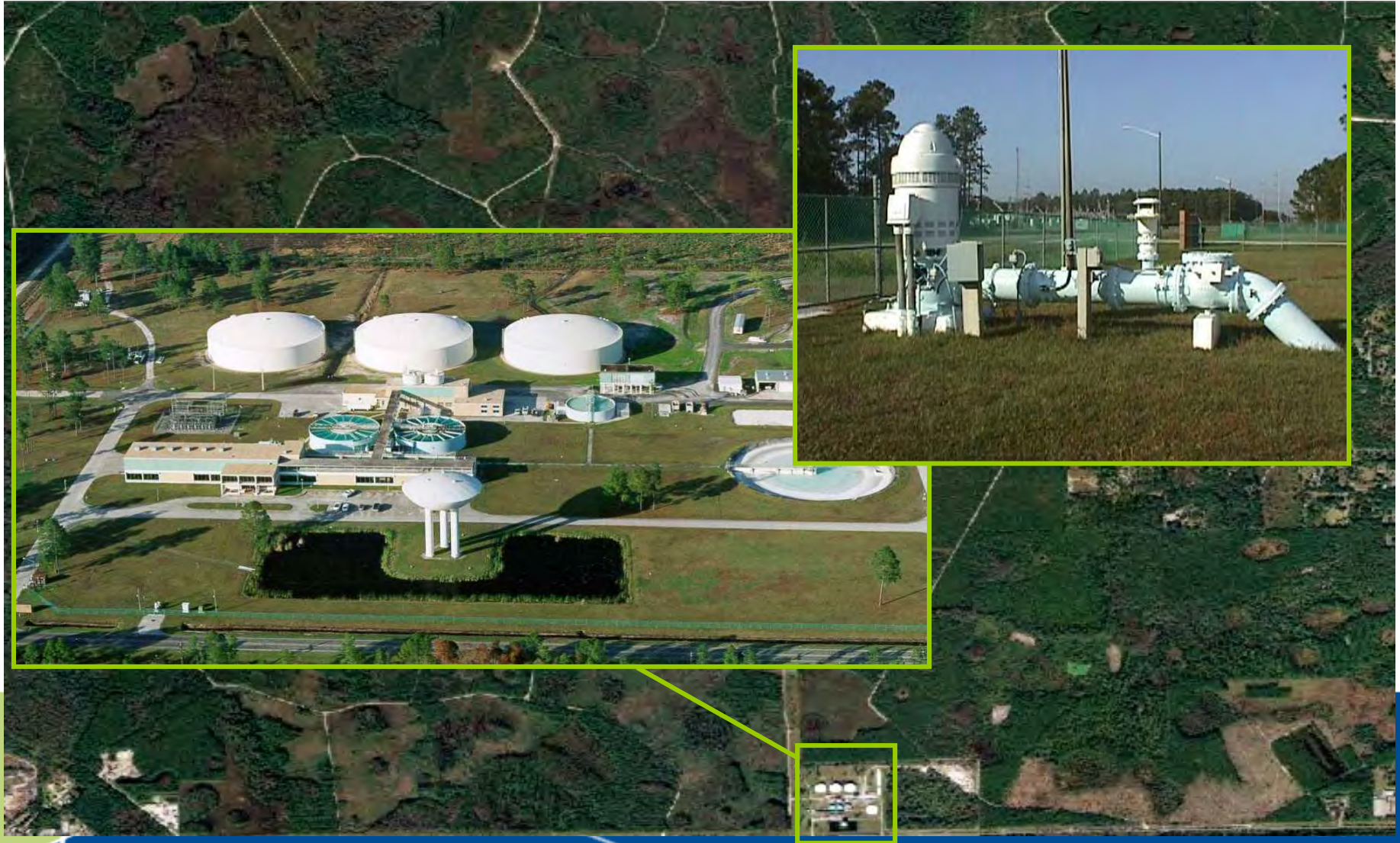
- GRU Overview
- Water Supply Challenges
- Water Reuse & Water Quality
- Aging Infrastructure
- Irma Response

GRU Overview

- GRU Services
 - Water - Electric Power - Internet
 - Wastewater - Natural Gas
- Owned by City of Gainesville
- Profits (General Fund Transfer) to City
 - Approximately 40% of City operating revenue
- Governed by City Commission




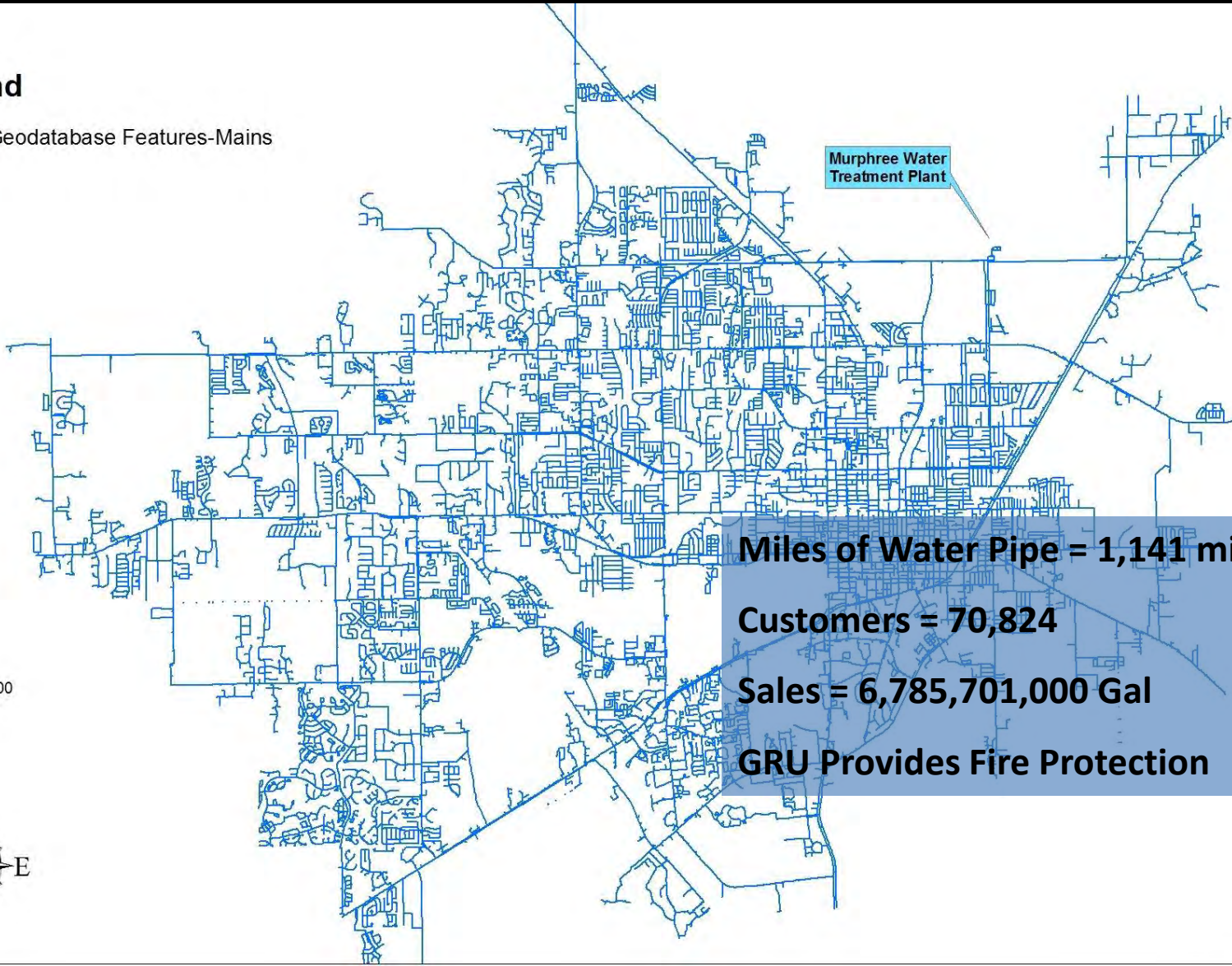
Water Supply: GRU Wellfield



NOTE: LOCATIONS AND DIMENSIONS ARE GIVEN FOR UTILITIES STAFF USE ONLY. ENGINEER/CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION

Legend

 Geodatabase Features-Mains



Miles of Water Pipe = 1,141 mi.

Customers = 70,824

Sales = 6,785,701,000 Gal

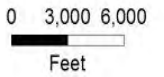
GRU Provides Fire Protection



PLOTTED/SHEET BY C.A.G.
D:\ARCD\A\WATER\WATER FACILITIES 8/24 WATERCAD.MXD

GRU Wastewater Collection Facilities

NOTE: LOCATIONS AND OTHER SHOWN ARE
GIVEN FOR UNITS OF 1:50,000 ONLY.
ENGINEER/CONTRACTOR IS RESPONSIBLE
FOR FIELD VERIFICATION.



Legend

- WW Treatment Plant
- Force Main
- Lift Station
- Gravity Main
- Plant Divider
- City Limits

Miles of Gravity Pipe = 632 mi.

Mile of Force Main Pipe = 140 mi

of Lift Stations = 168

Customers = 63,191

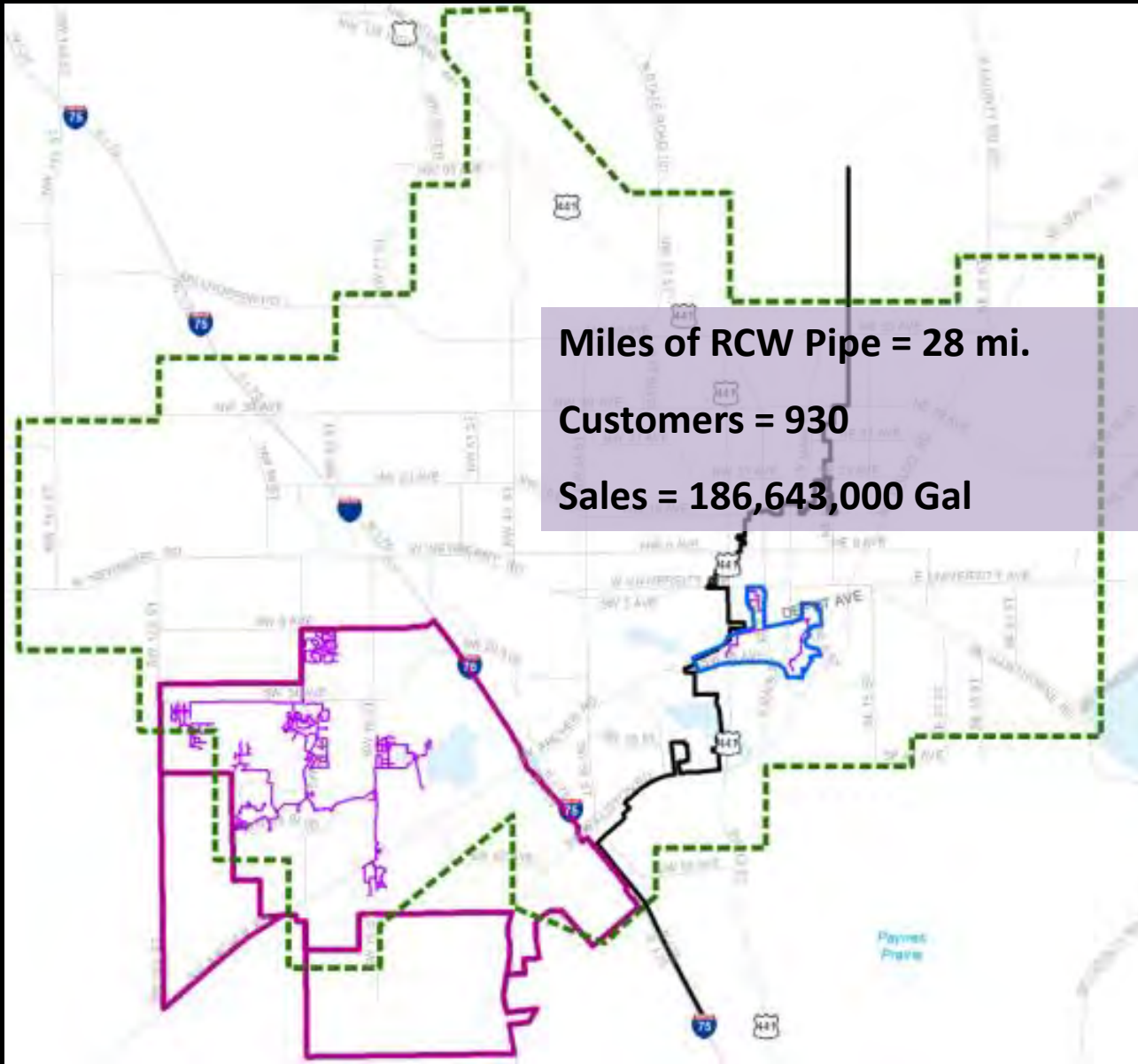
Sales = 4,491,110,000 Gal

NOTE: If shown, the "Plant Divider" layer
illustrates the approximate dividing line between
flow that goes west to the Kanapaha WRF
and flow that goes east to the Main Street WRF.

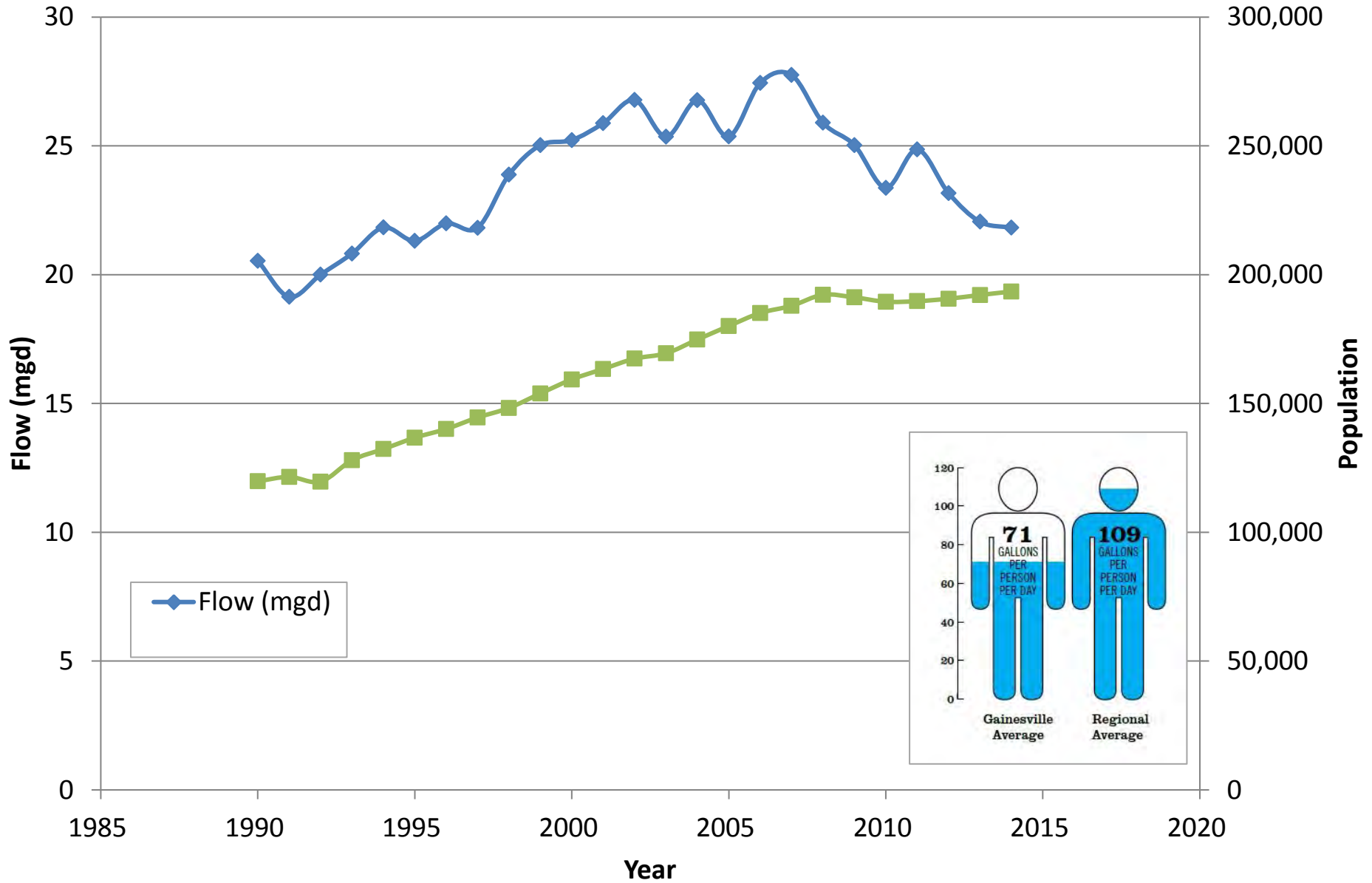
Wastewater Collection & Treatment



Kanapaha Water Reclamation Facility



GRU Water System Service Population and MWTP Flows



GRU Water Reuse Program

1. Irrigation & Cooling

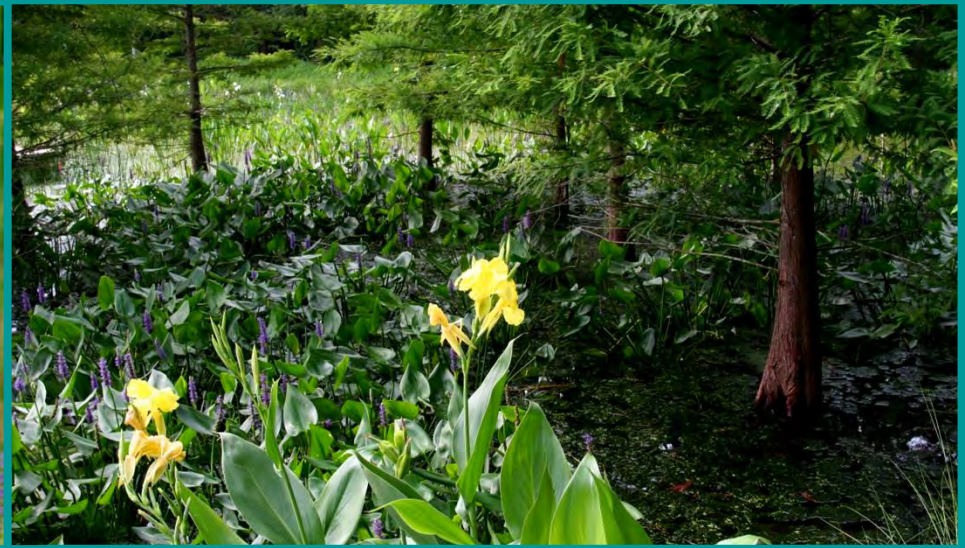
- Reduce demand for groundwater
- Residential & golf course irrigation
- Industrial cooling

2. Aquifer Recharge

3. Environmental Restoration



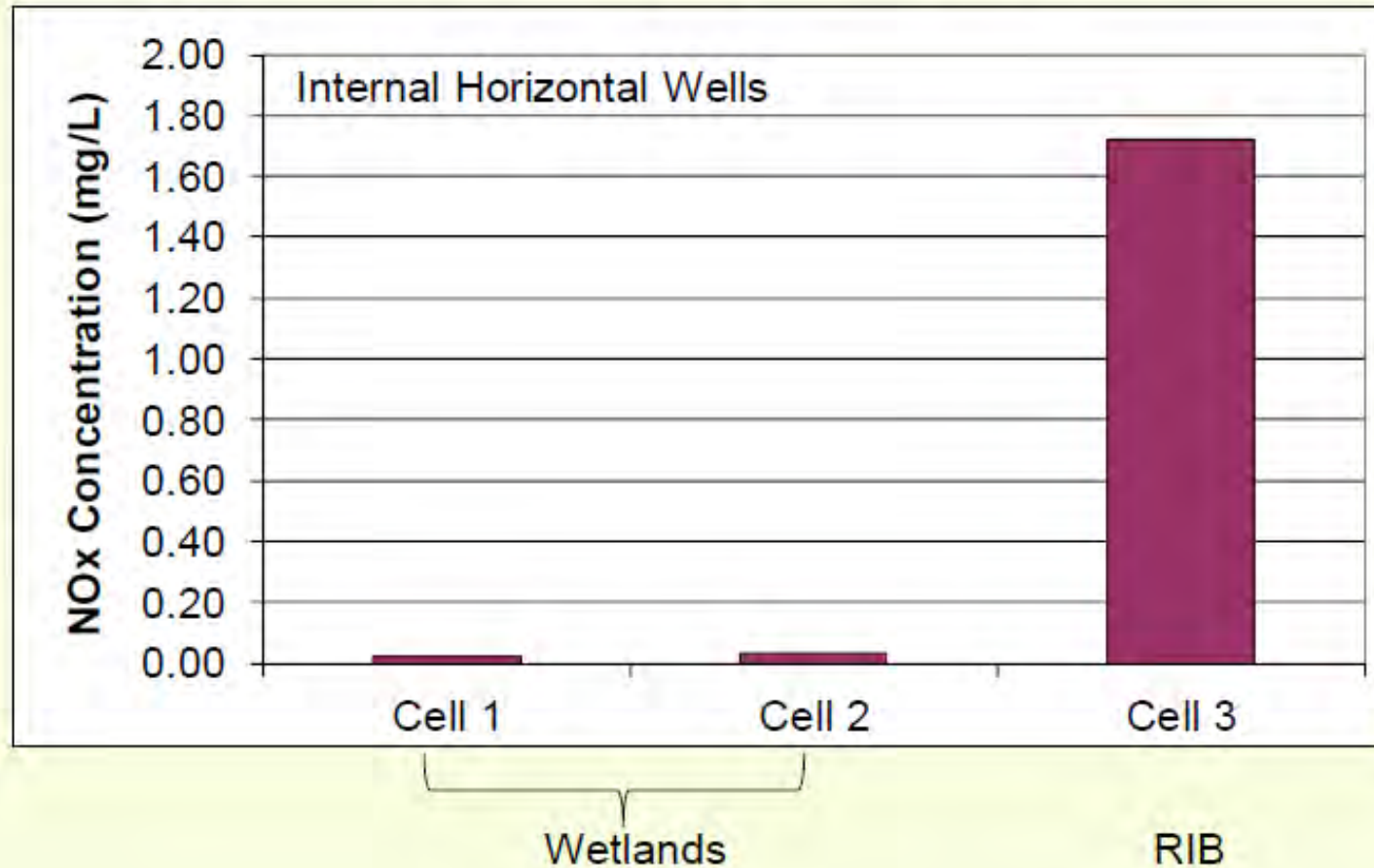
Aquifer Recharge



Reclaimed
Water/Stormwater Recharge
Wetland Kanapaha Middle
School — Gainesville, FL



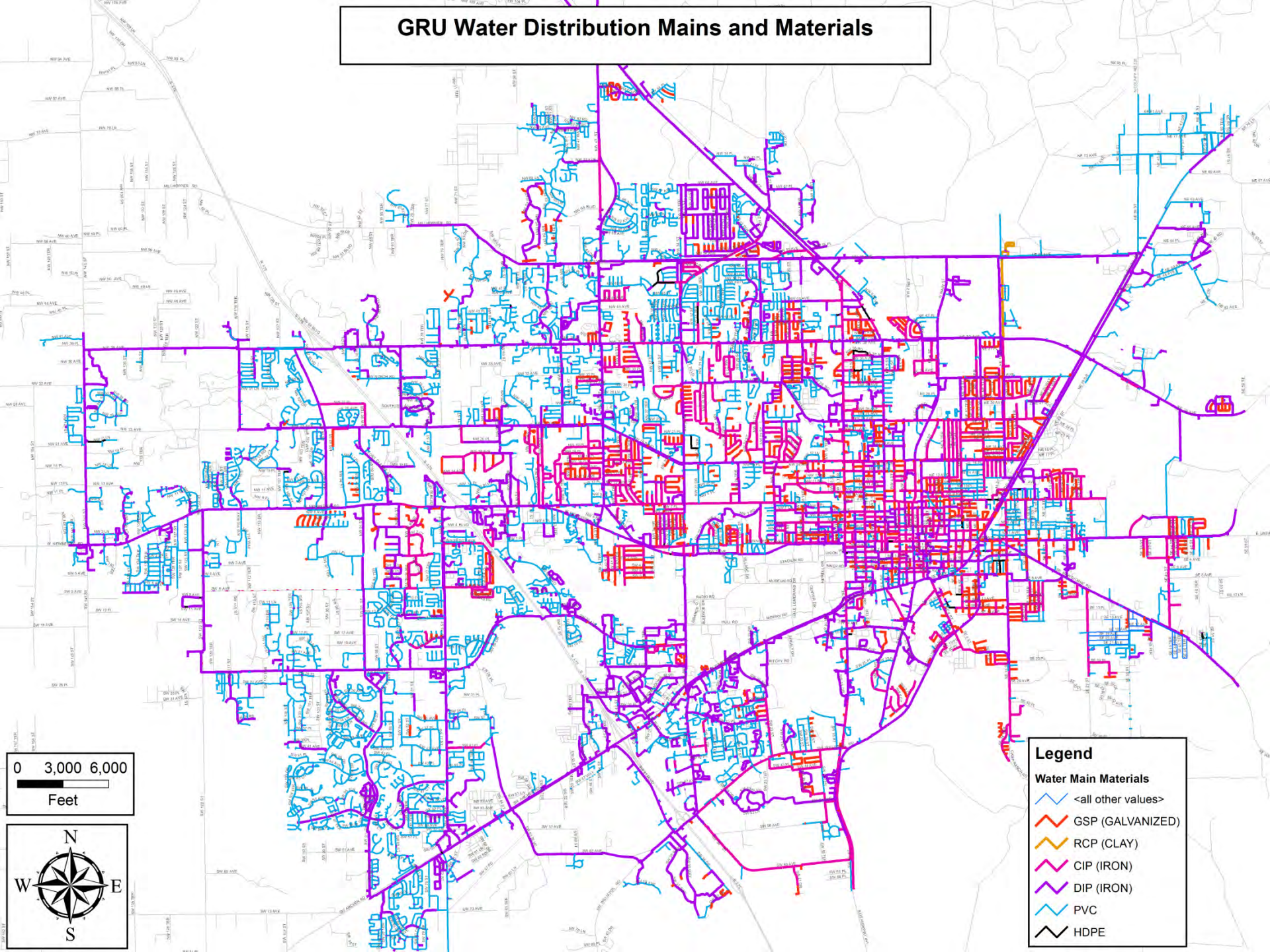
Kanapaha Water Reclamation Facility
Groundwater Recharge Wetland
Gainesville Regional Utilities



Sweetwater Wetlands —
Gainesville, FL



GRU Water Distribution Mains and Materials

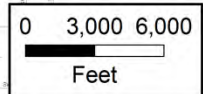
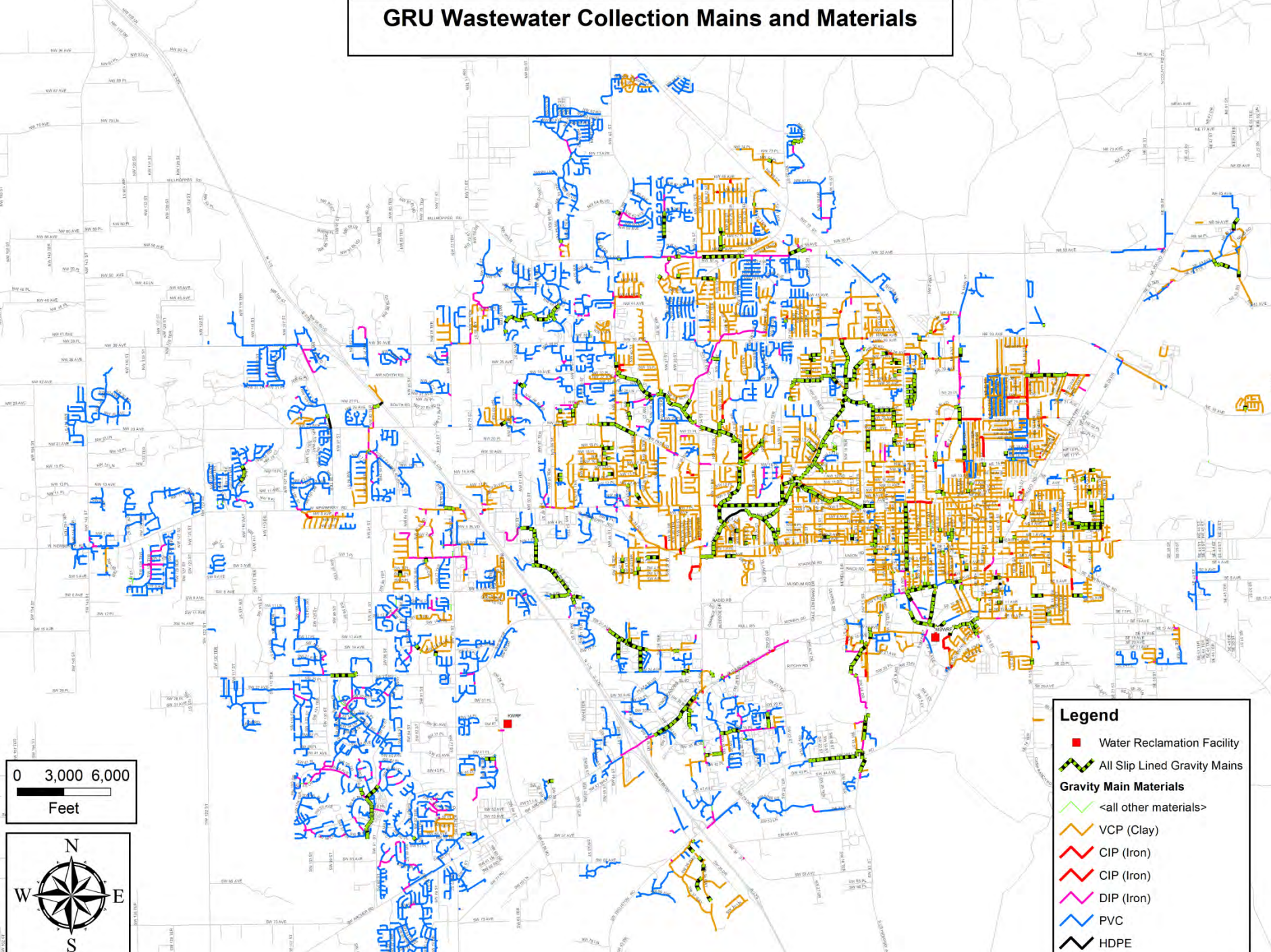


Legend

Water Main Materials

- <all other values>
- GSP (GALVANIZED)
- RCP (CLAY)
- CIP (IRON)
- DIP (IRON)
- PVC
- HDPE

GRU Wastewater Collection Mains and Materials



Legend

- Water Reclamation Facility
- All Slip Lined Gravity Mains
- Gravity Main Materials
 - <all other materials>
 - VCP (Clay)
 - CIP (Iron)
 - CIP (Iron)
 - DIP (Iron)
 - PVC
 - HDPE

Gainesville Regional Utility MSWRF / Duck Pond Basin

MH -3952-74



Hurricane Irma Response





Ongoing Efforts

- Significant investment in R&R and update of our systems
- Continuing to ramp up R&R of WW Collection & Water Distribution
 - Will need to ramp this up further
 - Inflow & Infiltration is “eating up” plant capacity
 - More comprehensive assessment coming



Questions?

Rae Hafer, PE
Utility Engineer
haferra@gru.com