



# Utilities Department



## **Hernando County Airport Water Reclamation Facility Full Expansion**









## **Nitrogen Reduction Goals**

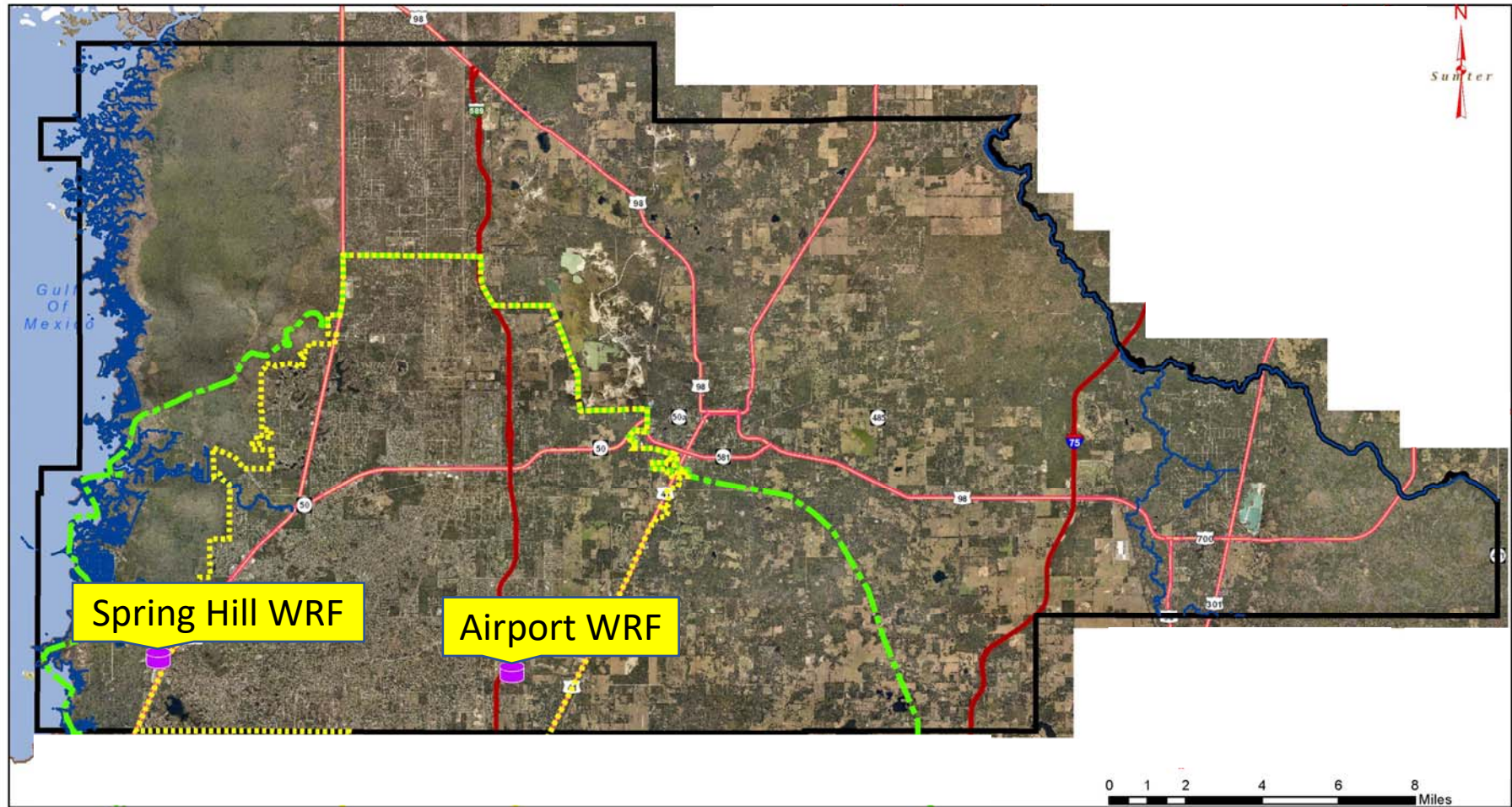
- ❑ **5 years – 58,560 lb-N/year**
- ❑ **10 Years – 97,600 lb-N/year**
- ❑ **15 years – 39,040 lb-N/year**



**Table 6. Summary of Potential Credits for the Weeki Wachee BMAP to Meet the TMDLs**

<b>Nitrogen Source</b>	<b>Credits to Load to Groundwater (lb-N/yr)</b>	<b>Description</b>
OSTDS	195,668 – 285,977	Credits are based on lots of all sizes inside the PFA being remediated by either enhancing onsite system or connecting to sewer. An estimated 27,538 lb-N/yr have been provided as OSTDS remediation projects which may be on these lots or in the larger BMAP area. Any projects outside the PFA would add additional reductions to the estimates listed.
UTF	12,590	DEP approved credits (6%) for public education activities as well as credits identified for stakeholder stormwater projects.
STF	5,342	6% BMP credit for sports fields and 10% BMP credit for golf courses on STF load to groundwater, assuming 100% BMP implementation on golf courses and sports fields.
FF	24,590	15% BMP credit on FF load to groundwater, assuming 100% owner-implemented BMPs on all fertilized lands.
LW	9,135	10% BMP credit on LW load to groundwater, assuming 100% owner-implemented BMPs at all livestock facilities.
WWTF	33,058	Achieved by BMAP WWTF policy if BMAP-wide (achieving 3 or 6 mg/L).
WWTF Decommission	46,171	Hernando County Spring Hill WRF Decommissioning Project (Project HC-20)
WWTF-Biological Application	53,272	Pasco County Crews Lake Restoration Project (Project PC-02).
Total Credits from BMAP Policies and Submitted Projects	379,826 - 470,134	
Advanced Ag BMPs	5,032 – 27,954	Pursue additional practices over next 20 years.
<b>Total Credits</b>	<b>384-857 – 498,088</b>	<b>Estimated load reduction to meet TMDL is 195,200 lb-N/yr.</b>




# Hernando County



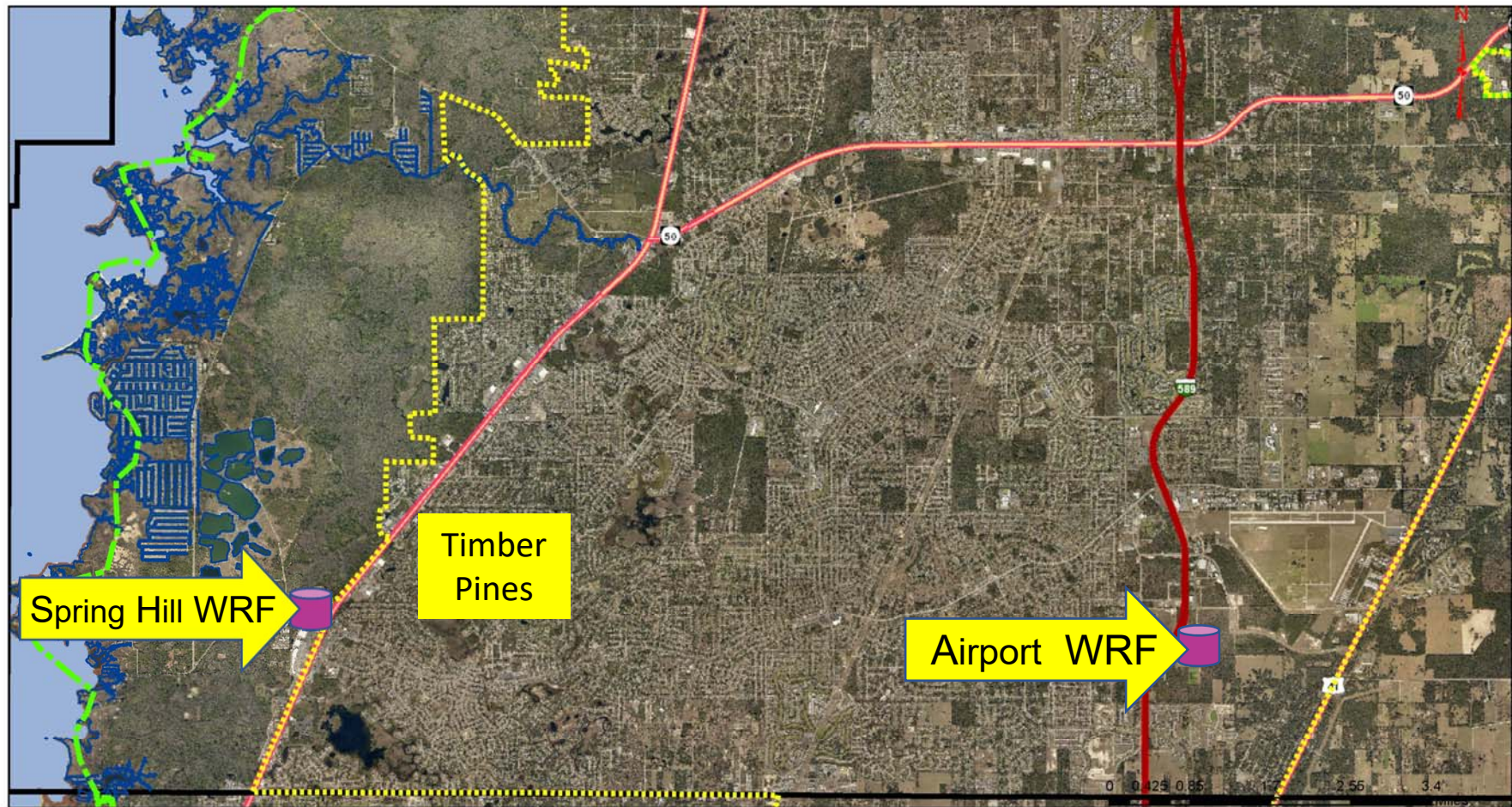
Weeki Wachee BMAP & PFA



## Legend




-  Water Reclamation Facility
-  Weeki Wachee PFA
-  Weeki Wachee BMAP





Weeki Wachee BMAP & PFA

**Legend**

-  Water Reclamation Facility
-  Weeki Wachee PFA
-  Weeki Wachee BMAP



# **Hernando County Utilities Department**

## **FY 2020 Funding Projects**

### **☐ Priority 1**

**Hernando County Airport  
Water Reclamation Facility (WRF)  
Total Nitrogen Reduction**

### **☐ Priority 1A**

**Hernando County Airport  
Water Reclamation Facility (WRF)  
Full Expansion**

❖ Facility Expansion



# **Project Description**

- ❑ **Expansion of the Airport Water Reclamation Facility (WRF) and aquifer recharge basins from currently permitted 3.5 MGD to 6 MGD**
  - **Expansion is critical path to take the Spring Hill WRF out of service**
- ❑ **Multi-year project with funding requested in FY2020 and FY2021**
- ❑ **Cost effectiveness: \$18/lb of TN**

# **Timeline and Funding Breakdown**

- ❑ **Design – Underway**  
**Funding:**
  - **\$1.8 million 100% HCUD**
  - **(not included in funding request)**
- ❑ **Total Project Cost ~ \$26 million**
- ❑ **Construction – FY 2020**  
**Funding:**
  - **\$2.5 million Springs**
  - **\$10.5 million HCUD**
- ❑ **Construction – FY 2021**  
**Funding:**
  - **\$2.5 million Springs**
  - **\$10.5 million HCUD**



## **Project Benefit**

- ☐ **Recharge Weeki Wachee Springshed**
- ☐ **Remove Spring Hill WRF from service**
  - **TN reduction 48,666 lb-N/yr**
  - **Close to meeting 5 year goal of the BMAP (58,560 lb-N/yr)**

**QUESTIONS?**



## Contact Information

---

Gordon Onderdonk, PE, LEED AP  
Director of Utilities  
Hernando County Utilities Department  
15365 Cortez Blvd.  
Brooksville, FL 34613  
352-540-4368





## Utilities Department

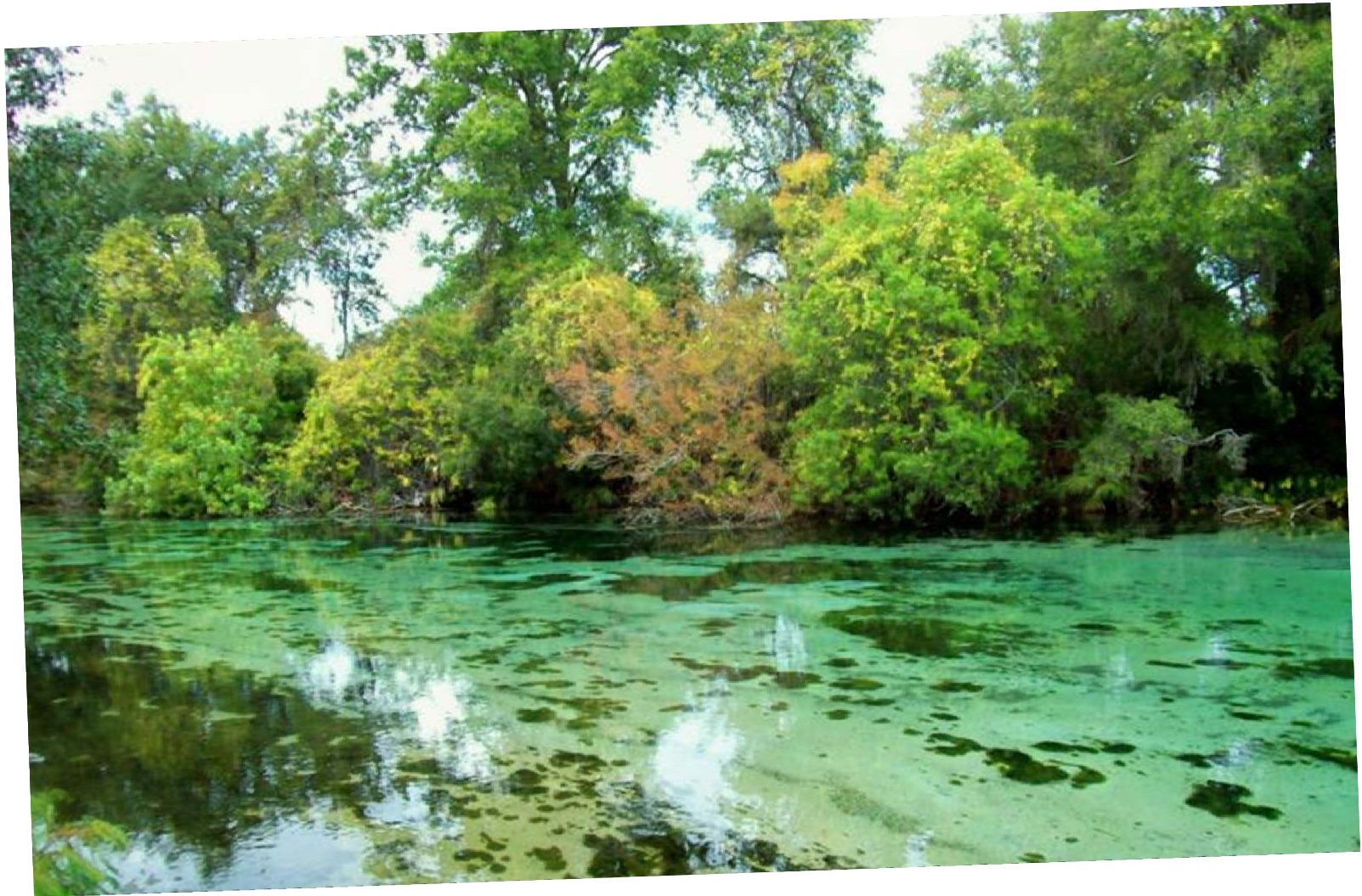


# **Hernando County Airport Water Reclamation Facility Total Nitrogen Reduction**



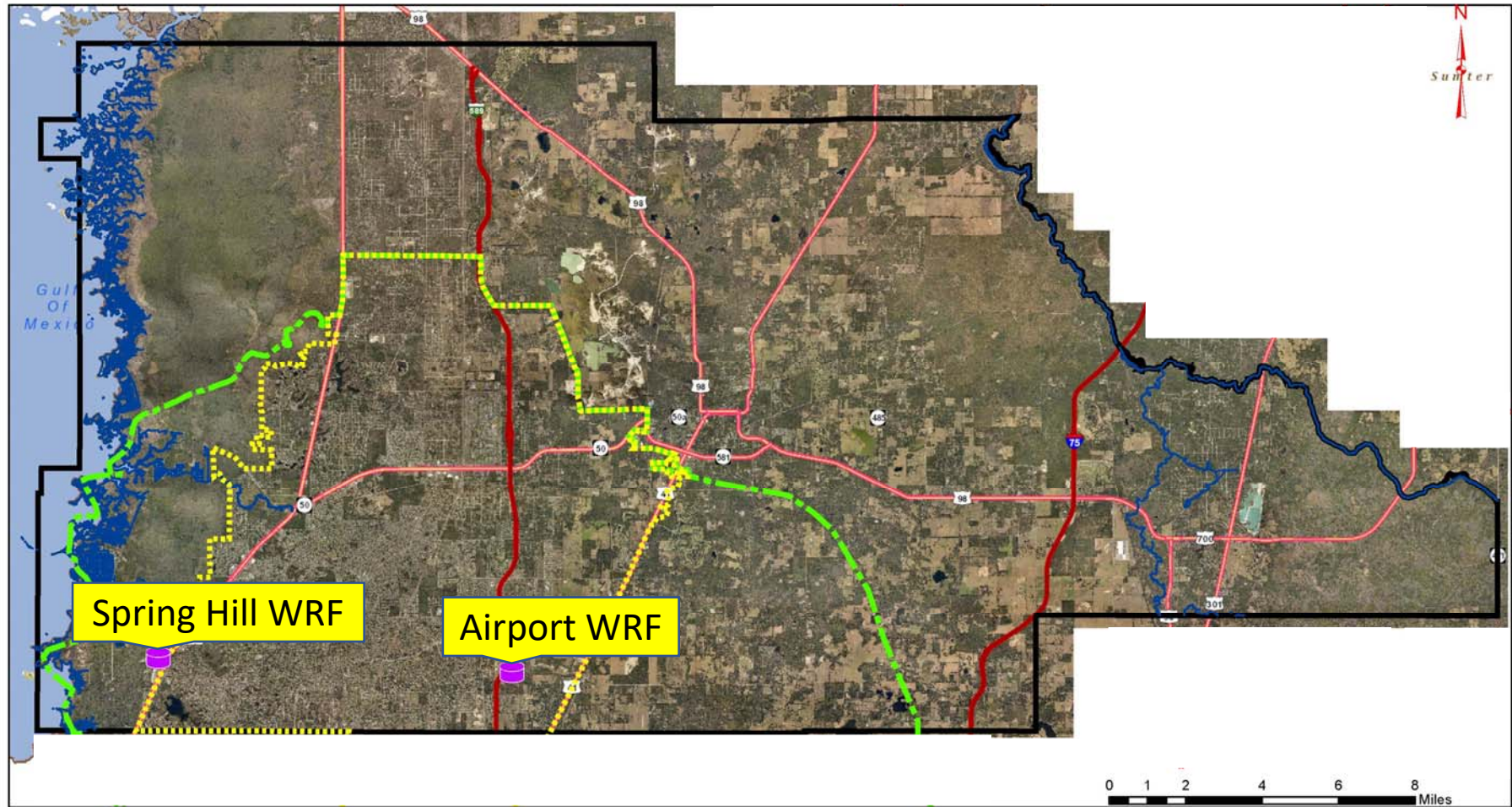











# Hernando County



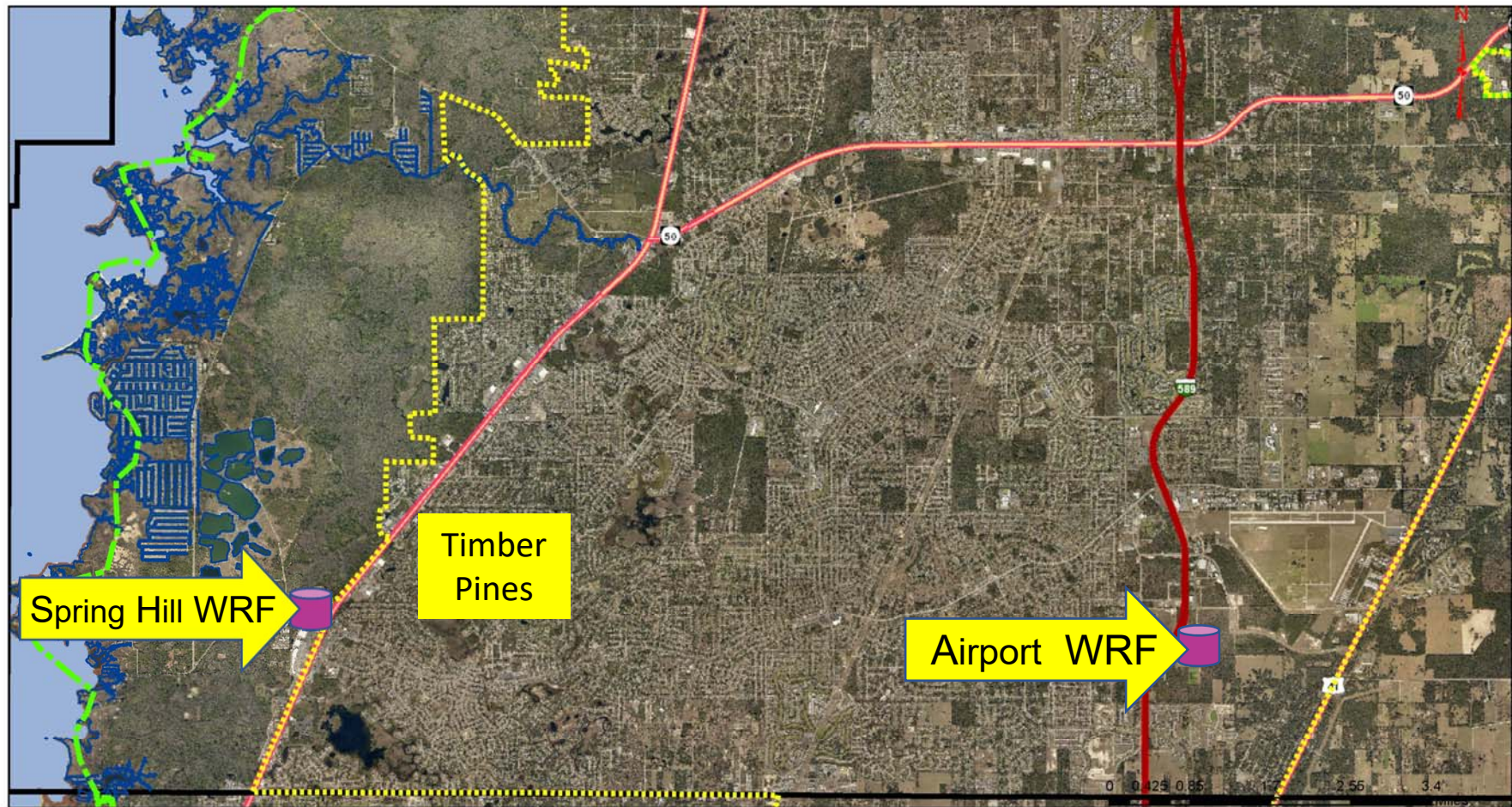
Weeki Wachee BMAP & PFA



## Legend




-  Water Reclamation Facility
-  Weeki Wachee PFA
-  Weeki Wachee BMAP





Weeki Wachee BMAP & PFA

**Legend**

-  Water Reclamation Facility
-  Weeki Wachee PFA
-  Weeki Wachee BMAP





# **Nitrogen Reduction Goals**

❑ **5 years – 58,560 lb-N/year**

❑ **10 Years – 97,600 lb-N/year**

❑ **15 years – 39,040 lb-N/year**

**Table 6. Summary of Potential Credits for the Weeki Wachee BMAP to Meet the TMDLs**

<b>Nitrogen Source</b>	<b>Credits to Load to Groundwater (lb-N/yr)</b>	<b>Description</b>
OSTDS	195,668 – 285,977	Credits are based on lots of all sizes inside the PFA being remediated by either enhancing onsite system or connecting to sewer. An estimated 27,538 lb-N/yr have been provided as OSTDS remediation projects which may be on these lots or in the larger BMAP area. Any projects outside the PFA would add additional reductions to the estimates listed.
UTF	12,590	DEP approved credits (6%) for public education activities as well as credits identified for stakeholder stormwater projects.
STF	5,342	6% BMP credit for sports fields and 10% BMP credit for golf courses on STF load to groundwater, assuming 100% BMP implementation on golf courses and sports fields.
FF	24,590	15% BMP credit on FF load to groundwater, assuming 100% owner-implemented BMPs on all fertilized lands.
LW	9,135	10% BMP credit on LW load to groundwater, assuming 100% owner-implemented BMPs at all livestock facilities.
WWTF	33,058	Achieved by BMAP WWTF policy if BMAP-wide (achieving 3 or 6 mg/L).
WWTF Decommission	46,171	Hernando County Spring Hill WRF Decommissioning Project (Project HC-20)
WWTF-Biological Application	53,272	Pasco County Crews Lake Restoration Project (Project PC-02).
Total Credits from BMAP Policies and Submitted Projects	379,826 - 470,134	
Advanced Ag BMPs	5,032 – 27,954	Pursue additional practices over next 20 years.
<b>Total Credits</b>	<b>384-857 – 498,088</b>	<b>Estimated load reduction to meet TMDL is 195,200 lb-N/yr.</b>

# **Hernando County Utilities Department**

## **FY 2020 Funding Projects**

### **☐ Priority 1**

**Hernando County Airport  
Water Reclamation Facility (WRF)  
Total Nitrogen Reduction**

### **☐ Priority 1A**

**Hernando County Airport  
Water Reclamation Facility (WRF)  
Full Expansion**



## **Project Description**

- ❑ **Construction of all assets needed to reach advanced wastewater treatment (AWT) for total nitrogen reduction for the existing and expanded WRF**
- ❑ **Assets include:**
  - **denitrification basins**
  - **additional carbon feed system**
  - **effluent filters**
  - **compressed air system**
- ❑ **Multi-year project with funding requested in FY2020 and FY2021**
- ❑ **Cost effectiveness: \$7/lb of TN**

# **Timeline and Funding Breakdown**

- ❑ **Design – Underway**  
**Funding:**
  - **\$1.8 million 100% HCUD**
  - **(not included in funding request)**
- ❑ **Total Project Cost ~ \$10 million**
- ❑ **Construction – FY 2020**  
**Funding:**
  - **\$2.5 million Springs**
  - **\$1.25 million HCUD**
  - **\$1.25 million SWFWMD**
- ❑ **Construction – FY 2021**  
**Funding:**
  - **\$2.5 million Springs**
  - **\$1.25 million HCUD**
  - **\$1.25 million SWFWMD**

## **Project Benefit**

- ❑ **This project will ensure that HCUD's Airport WRF can meet the BMAP required 3mg/l total nitrogen limit**
- ❑ **Total nitrogen reduction from Airport and Spring Hill WRF 48,666 lb-N/year**
- ❑ **Aquifer recharge**



**QUESTIONS?**

## Contact Information

---

Gordon Onderdonk, PE, LEED AP  
Director of Utilities  
Hernando County Utilities Department  
15365 Cortez Blvd.  
Brooksville, FL 34613  
352-540-4368

