

**Agenda Item 130302**

# **Biosolids Dewatering Equipment for Water Reclamation Facilities**

**Water & Wastewater Engineering Department  
Gainesville Regional Utilities**



**September 19, 2013**

# What Are Biosolids?



# What Are Biosolids?

- Biomass harvested from water reclamation process
- Valuable as fertilizer
  - Nutrients
  - Slow Release
  - Organic soil amendment
- Application highly regulated, controlled & monitored to ensure protection of public health, safety & the environment

# Current GRU Biosolids Program

- Land Application at Whistling Pines Ranch
- Beneficial to farmer & environment
  - Organic soil amendment
  - Farmer uses less chemical fertilizer
- >30 year operating history at WPR
- Compliance with all regulatory requirements
- 2004 EPA Exemplary Biosolids Operation Award

# What is Grown at the Farm?



- **Corn, sorghum, beans & other row crops**

# What is Grown at the Farm?

- **Bermuda grass for hay livestock feed**
- **Also Rye grass in winter**

# Recent History

## 2007 – GRU Proposed to purchase WPR

- Prior to purchase, requested determination from Alachua County on ULDC applicability
- AC determined Special Exception Required
- Special Exception Application submitted
- Concerns raised by some neighboring citizens
- Archer City Commission objected
- Multiple public meetings

# Recent History (cont'd)

## 2007-2010 Alachua County Requests GRU investigate citizens' concerns

- GRU performed extensive scientific evaluations of potential health, environmental, and other concerns raised by citizens
- Results confirmed no significant threat posed by GRU biosolids program



# Recent History (cont'd)

2011

- If BoCC were to grant Special Exception would require 300 ft setback & vegetated buffer
  - Would make site operation infeasible
- Statewide increasing regulation and public objection to Class B land application
- Eventual “Death by 1000 cuts” likely
- Negotiated settlement

# Negotiated Settlement

- GRU and AC staff proposed and City Commission and BoCC approved negotiated settlement in 2011
- GRU continue land application of Class B biosolids at WPR until no later than Feb 2016
  - Additional BMPs

# Evaluation of Biosolids Alternatives

## Conventional

- Drying
- Contract Lime Stabilization
- Landfill

## Developing Technologies

- Alachua County Organics Recycling Bioreactor (ORB)
- Waste to Energy
- Innovative fertilizer processes

# Evaluation of Biosolids Alternatives

- All alternatives likely to increase costs over current program
- Biosolids Technologies Rapidly Evolving
- All alternatives will require dewatering
  - GRU currently “thickens” biosolids to 5% solids
  - “Dewatering” Facility required to increase to ~20% solids

# Plan

- **Continue WPR land application, phase out by 2016**
- **Construct dewatering facilities**
  - \$12M originally budgeted for WPR purchase is being used to construct dewatering
- **Issue Solicitation for vendors to receive dewatered biosolids**
  - Flexibility
  - Potential for innovative technologies
  - Short or long-term

# Schedule Summary

- May 2012 - Selected Engineering firm & started Dewatering design
  - Pilot Testing to determine best equipment type, sizing & number of units
- June 2013 - Issued Invitation to Bid for Dewatering Equipment (*Complete*)
- July 2013 – Equipment Bids Received & Evaluated
- Sept 2013 - Request City Commission Approval to Award Dewatering Equipment Contract

# Schedule Summary (cont'd)

- Dec 2013 – Solicitation for vendors for biosolids recycle
  - City Com approval of Evaluation Criteria
- Jan 2014 – Complete Dewatering Design
  - Invitation to Bid for Dewatering Construction
- Apr 2014 – Evaluate bids for biosolids recycle & for dewatering construction
  - Request City Com approval to award Contract(s) for:
    - Biosolids recycle
    - Dewatering construction

# Schedule Summary (cont'd)

- Apr 2014 to Feb 2016 - Transition to new biosolids recycle program
- Feb 2016 – Cease land application of Class B biosolids at WPR



# Dewatering Equipment Bids

- Evaluated equipment types as part of engineering design
- Centrifuges selected as equipment type to meet performance goal of 20% solids
- Issued Invitation to Bid (ITB) to 5 known centrifuge manufacturers
- 4 bids received, 2 were nonresponsive due to noncompliance with technical specs

# Dewatering Equipment Bids

- Bids evaluated based on
  - Capital and life cycle costs
  - Technical capabilities
  - Service & warranty
  - Project approach
  - References
- Andritz Separation received highest bid evaluation & was lowest cost of the responsive bids
  - Recommend issue purchase order to Andritz for \$968,500

# Recommendation

- The City Commission:
  1. Authorize the General Manager, or his designee, to execute a contract with Andritz Separation, Inc. for the purchase of dewatering equipment for the Water Reclamation Facilities; and
  2. Approve the issuance of a purchase order to Andritz Separation, Inc. for dewatering equipment in the amount of \$968,500, subject to the approval of the City Attorney as to form and legality, subject to the final appropriation of funds.