FLORIDA DEPARTMENT OF HEALTH

WEKIVA Commission Meeting Update, December 2005
Bureau of Onsite Sewage Programs
Division of Environmental Health
Florida Department of Health

Today's Presentation

- **Status of Rule Development**
- **Information Update**
- **OSTDS Impact**

Status of Rule Development

- **TRAP meeting held on Nov 2nd 2005**
  - Extensive discussion on the topic.
  - Tabled the issue pending a privately funded review of existing research and data.
  - Scheduled a Jan 12th, 2006 meeting to hear from the private consultant. (Orlando Airport Marriott)

Information Update

- **What is the Department's legislative mandate?**
  - Initiate rulemaking to achieve nitrogen reductions protective of water quality within the Wekiva Study Area.
- **What is the proposed reduction in nitrogen?**
  - The proposed 10 mg/L treatment level represents a 75% reduction in the nitrogen being discharged into drainfields by conventional septic tanks currently in use.

Information Update (cont.)

- **What are the nitrogen levels in the springs?**
  - Wekiwa and Rock Springs contain 20 times the level of nitrogen than springs without development (1.5 mg/L Wekiwa, 1.6 mg/L Rock as compared to Juniper Springs which has 0.08 mg/L.)
- **What is the Source of the nitrogen?**
  - A mixture of fertilizer and animal waste (human included) contributions.

Information Update (cont.)

- **How much nitrogen is being discharged from existing septic tanks in the Wekiva Study Area?**
  - Conventional onsite systems do not provide adequate nitrogen removal and discharge 1.148 million pounds per year in the Wekiva Study Area.

Information Update (cont.)

- **How fast does nitrate move through the soil and rock?**
  - Nitrate is very soluble and will move at the rate of the groundwater.
  - USDA Soil Surveys document movement of between 1.2 to greater than 40 feet per day.
  - The karst study documented movement rates of 1 to 280 feet per day.

Information Update (cont.)

- **Why is the tertiary zone less vulnerable?**
  - They have fewer karst features such as sinkholes.
  - They are areas of groundwater discharge instead of recharge.
  - Soils have slower permeability and limit the transport of nitrogen.
  - They may have impermeable layers that protect the deeper groundwater from surface sources of pollution.

Information Update (cont.)

- **Are the proposed new systems proven to remove nitrogen?**
  - The proposed new systems have either been field tested to perform by third-party testing agencies (NSF, Baylor) or by the Department of Health.

OSTDS Impact

- **55,417** **Existing onsite systems**
  32,975 – Orange County
  9,214 – Lake County
  13,228 – Seminole County
- **50,972** **Systems in sewer service areas**
- **583** **Repairs/modifications annually**
  Nitrogen-reduction system
  @ $10,800 = $6.30 M
  Standard repair 333 sq ft
  @ $ 3,400 = $1.98 M
  Cost Difference
  @ $ 7,400 = $4.32 M