Comprehensive Overview
Freeze Protection Action Plan

June 9, 2010
Technical Work Session

January 2010
Dover/Plant City Freeze Event
Action Plan Topics

- Funding
- Well Standards
- Complaint Allocation
- Communications
- Planning

- Optimizing Use
- Data
- Cap
- Alternative Methods
Funding

- Small Business Administration
- FHWA Emergency Declaration
- WMD Assistance – Well Complaints
- Industry Assistance – Well Complaints
Well Construction Standards

- Governing Board Approved Rules at May 2010 Meeting
- Anticipated Effective Date – August 2010
North Dover and South Dover Well Construction Stipulation Areas

Legend:
- North Dover
- South Dover
- Proposed North Expansion
- Proposed South Expansion
- Plant City

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Allocation Procedure for Well Complaints

- Prepared for Next Cold Season
- Enhanced Equity Among Permittees
Enhancing Communication

- Letter to Permittees at Beginning of Cold Season
- News Media Alert
- Automated Telephone Calls to Residents
  – Projected 25’ NGVD at DV-1
- How to Report a Dry Well
- Timely Communication With Complainants and Permittees
Local Government Coordination and Land Use Planning

- Transfer / Clustering of Development Rights
- Disclosure of Well Conditions at Time of Sale
- Renovation of Substandard Wells at Time of Sale or Improvement
Optimizing Water Use for Freeze Protection

- FAWN
  - On/Off Alerts
  - Mobile Tools
  - Education
- MIL
- IFAS Research
- Automated Meter Reading (AMR)
Expanding Data Collection

- Eleven Additional Monitor Wells at Existing Sites ($305,000 FY 2011)
- Three New Monitor Well Sites, Nine Wells ($514,000 FY2011)
- Expand Meters to All Permits With Freeze Protection Quantities and Implement AMR ($4,250,000 over FY2010 - 2013)
Limiting Additional Groundwater Quantities for Freeze Protection

1. Establish a Water Use Caution Area within which no new groundwater freeze protection quantities would be issued
   – Prevents the problems from getting worse
Limiting Additional Groundwater Quantities for Freeze Protection

2. Establish a minimum aquifer level associated with freeze protection withdrawals
   – If actual groundwater levels remain above this minimum during future freeze events, the potential for sinkholes and well complaints is reduced
2001: ~200 Dry Wells
Unk. Sinkholes

2009: ~150 Dry Wells
~6 Sinkholes

2010: ~750 Dry Wells
~140 Sinkholes
Simulated Water Level @ DV-1 with Percentage Reductions

- Calibrated DD
- 10% Reduction
- 20% Reduction
- 40% Reduction

Water Level (NGVD)

Date / Time

1/3/10 1/4/10 1/5/10 1/6/10 1/7/10 1/8/10 1/9/10 1/10/10 1/11/10 1/12/10 1/13/10 1/14/10 1/15/10 1/16/10 1/17/10 1/18/10 1/19/10 1/20/10

0 10 20 30 40 50 60

-10

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Limiting Additional Groundwater Quantities for Freeze Protection

3. Adopt management goals to reduce freeze protection using groundwater:
   – 10% in 5 years
   – 20% in 10 years

4. Implement an incentive-based, cooperatively funded program to reduce freeze protection quantities
Increase Use of Alternative Freeze Protection Technologies

- Tailwater Ponds, Covers, Foam, Etc.
- FARMS Funding Assistance
  - $2,000,000 FY2011 Budget
  - Up to 75% Eligible Costs
  - “Equipment” Eligible
5. Prohibit new freeze protection quantities outside the WUCA from impacting levels within the WUCA.
Freeze Protection Action Plan

• Next Steps

➢ June Governing Board: Overview
➢ July – August: Outreach, Stakeholder Meetings
➢ July Governing Board: Initiate Rule Making
➢ September – October: Rule Making Public Workshops
➢ November Governing Board: Rule Adoption