Water Stewardship

Developing and Using Metrics to Guide Water Management

LIVE POSITIVELY

SUSTAINABILITY

Environment: Water Stewardship

CONSERVING FRESHWATER RESOURCES AROUND THE WORLD

Water is the most precious, yet threatened, resource on our planet. It also is the main ingredient in every beverage we make.

The Nature Conservancy
Protecting nature. Preserving life.™

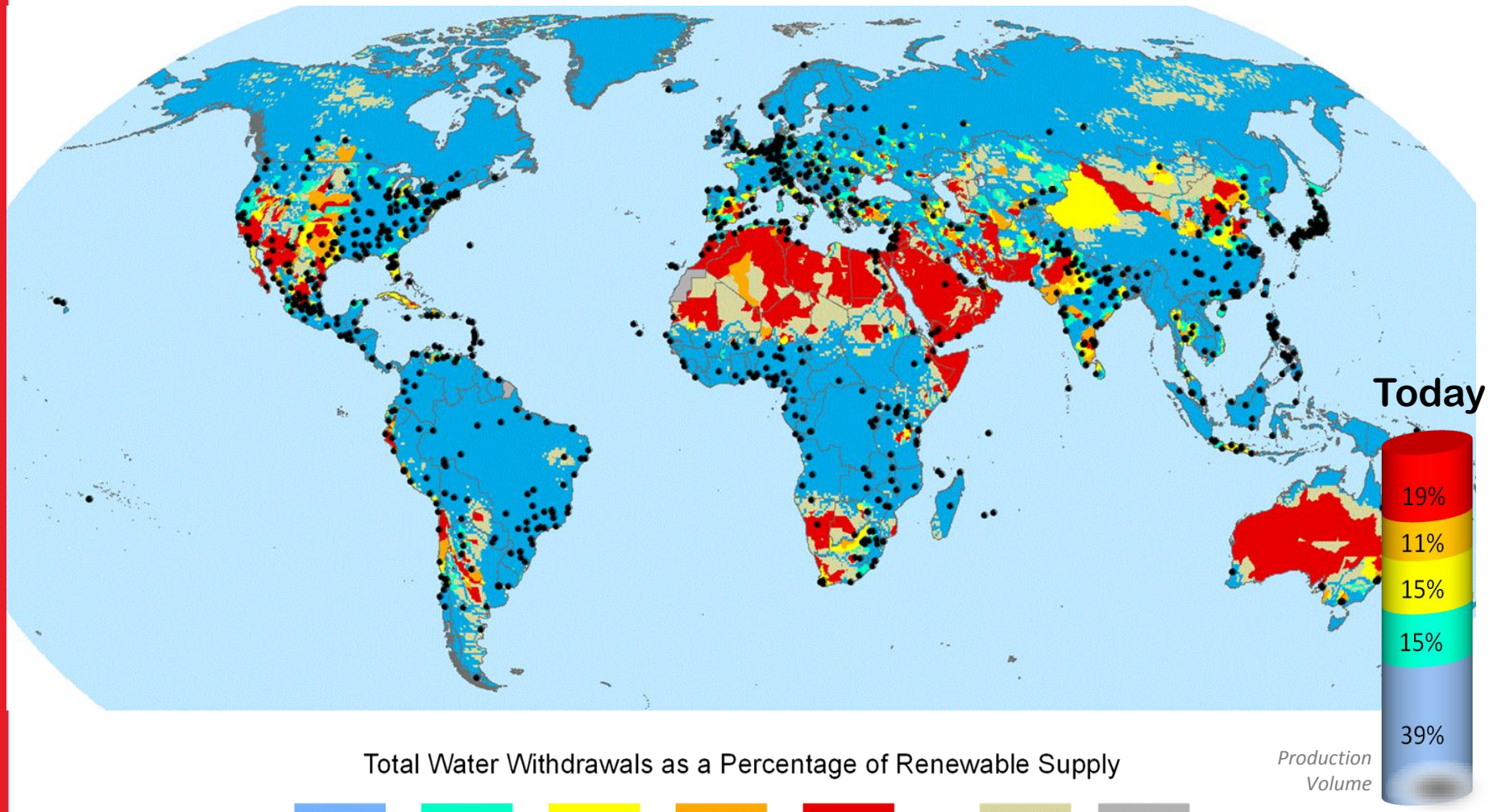
Goal: 'give back' the water we use by:

- **Improve our water use efficiency, 20 percent by 2012**
- **Treating wastewater from our manufacturing processes**
- **Assess the Vulnerabilities of the Quality and Quantity of water sources for each of our bottling plants and implement source water protection plans by 2013**

WWF

- **Replenishing water in nature and communities by supporting relevant local water projects**

Assess: TCCC Global Water Stress: 2008 Update



Total Water Withdrawals as a Percentage of Renewable Supply

Low Stress (<10%)	Moderate Stress (10-20%)	Medium-High Stress (20-40%)	High Stress (40-80%)	Extremely High Stress (>80%)	Arid & Low Water Use	No Data or Out of Area

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Water Stewardship: Measures of Progress

Metric	Units	Notes
Reduce – Water Use Ratio	Liters of water/Liters or Product produced	1.70 for North America
Reduce – Total Water Consumption	Total Gallons or Kilo-liters of water purchased	Decreasing since 2004
# of Water Efficiency Projects Executed	# of Completed Projects	Developing project list by platform
# Water Source Vulnerability Assessments initiated	# SVAs initiated	On Track for 2013
# Source Water Protection Plans Completed and Approved	# SWPP approved	On Track for 2013
# Community Watershed Partnerships	# Partnerships	Over 60 CWPs
# of Replenish Projects	Funded, active projects	Company Replenish Report
% of Production Volume Replenished	Billions of Liters	Developing Process

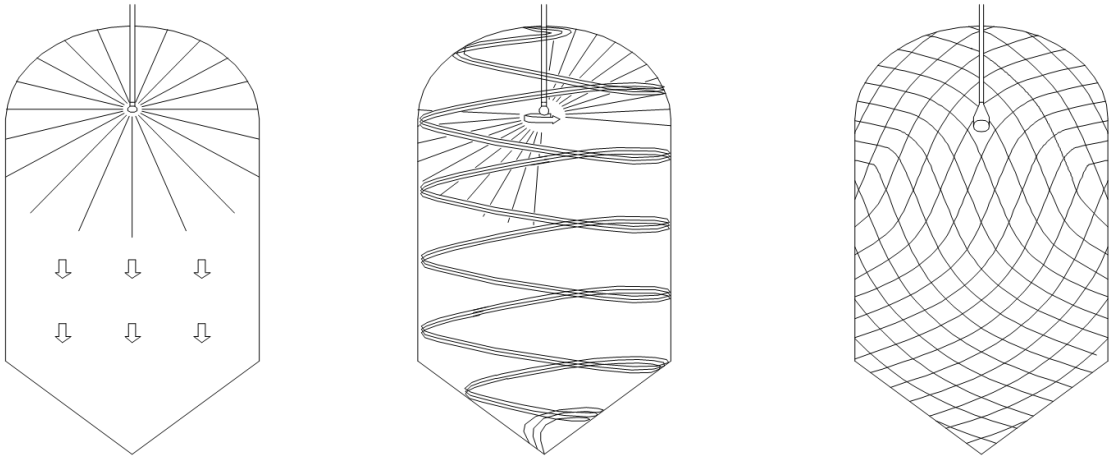
Reduce: Improve Water Efficiency in the Plant

reduce recycle replenish

Goal: Be the most efficient water user among peer companies. Reduce water consumption by 20% by 2012 (baseline 2004).

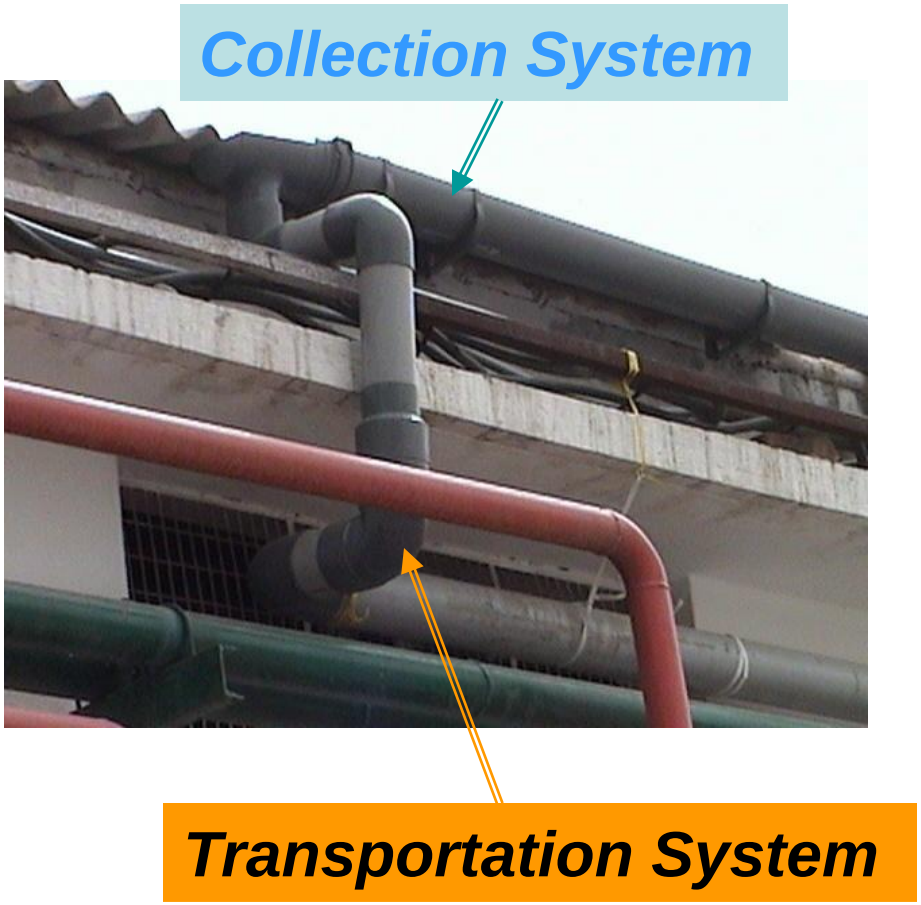
U.S. Coca-Cola System is the most efficient, saving an estimated 2.3 billion gallons of water through reduction efforts across all facilities. Improved water efficiency by 8 percent since the 2004 baseline.

Challenge Convention



Static spray ball Rotating spray head Rotating jet head

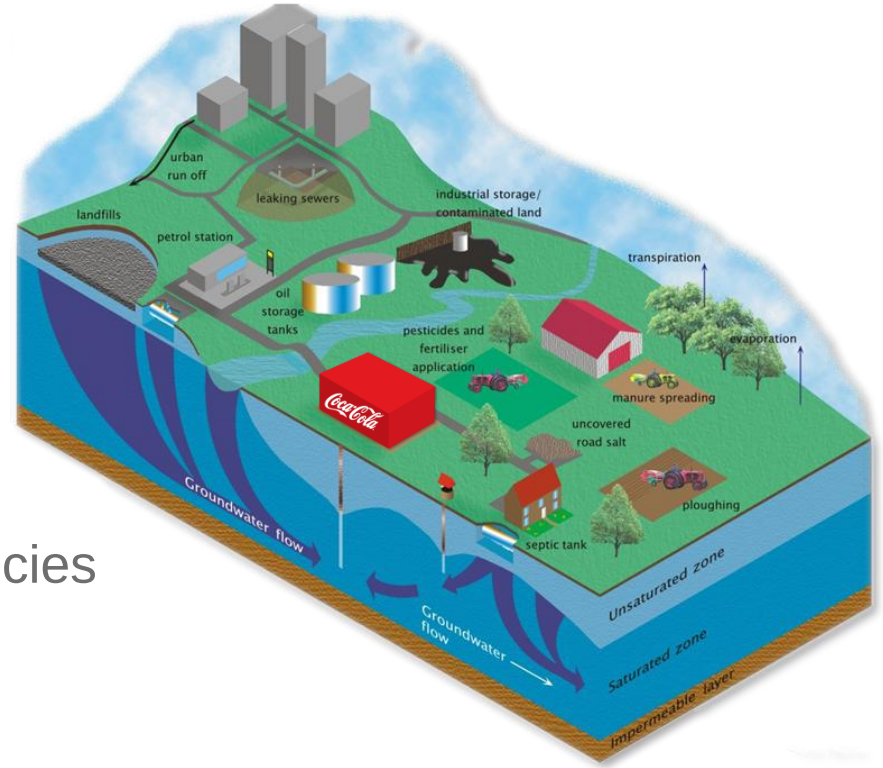
Innovate - Roof Rain Water Harvesting



- Capture & use of Rain Water water for non-product uses
- Displacement of potable water from utility
- Capture and use of other water streams for re-use – ex. HVAC Condensate

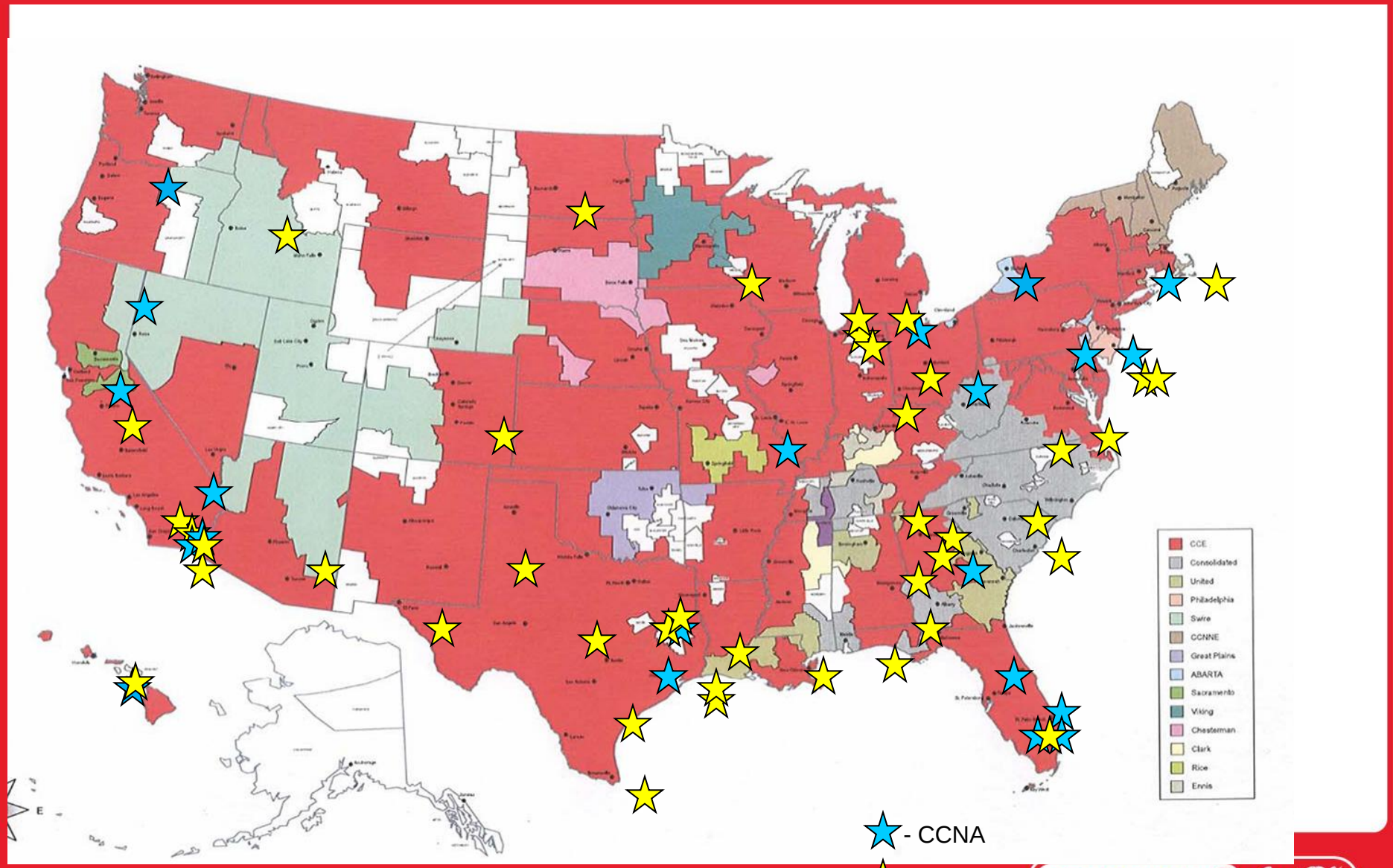
Assess: Source Vulnerability Assessment Process

- SVA Process Includes:
  - Hydrology/Hydrogeology
  - Land use
    - Pollution sources
    - Competing users
  - Regional Water Supply Plans
  - Climatic Effects
    - i.e., drought susceptibility
  - Water Rights, Permits and Policies
  - Social/Community Issues



- Plant Water Resource Management Team
- **Output** – Source Protection Plan

SVAs Initiated in North America



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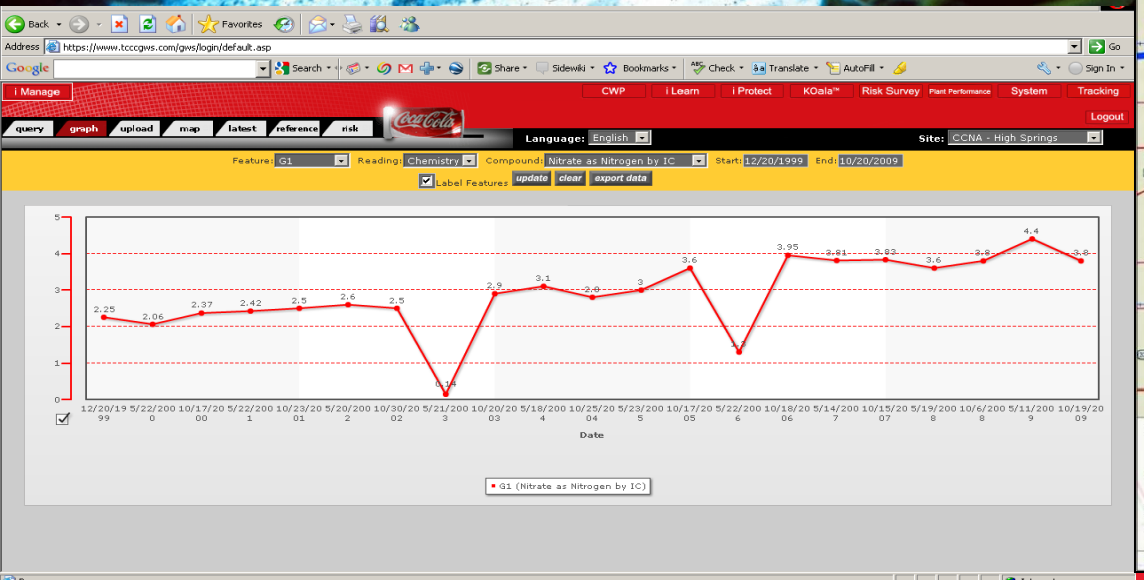
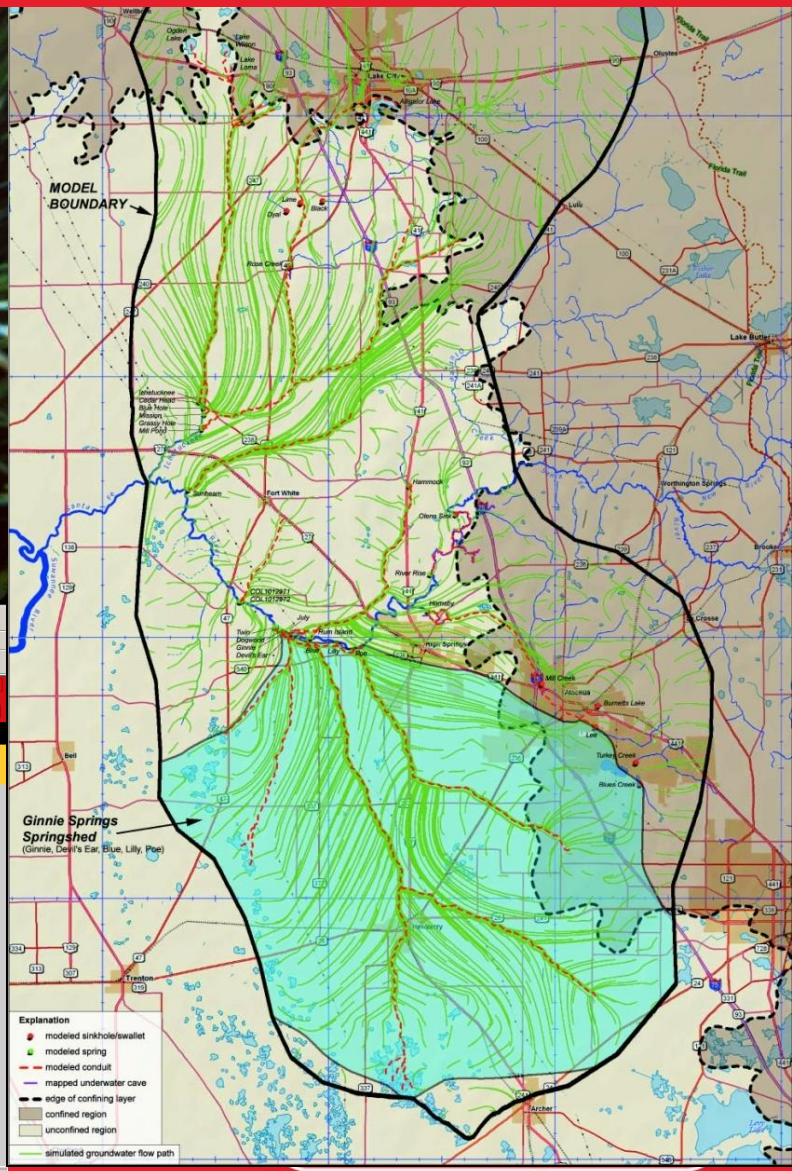
SVA High Springs, FL





Municipal SVA/SWPP - Common Findings

- Degrading Infrastructure
  - Supply Interruption (Backup Source, Contingency Plan, Redundant Pipelines)
  - Quality Issues (Monitoring, Track Trends, Treatment System Effectiveness)
  - Cost Increases (WUR, Planning)
- Drought Susceptibility
  - Supply Restrictions (Understand Drought Policy, WUR, Communicate Efficiency Efforts)
  - Perception as Large Water User (Water Stewardship, Replenish, Envir. Fact Sheet)
- Water Policy
  - Increased Regulation and Restrictive Policies (Establish relationship with Municipal Provider, Participate in Planning Process, Coordinate with PAC/Govt. Affairs)
- Quality Issues
  - Varying Chemistry from change in source – GW/SW (Establish relationship with Provider to inform when changing sources)

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Volume Target and Replenish Initiatives

- **"Replenish" is the manifestation of our community and watershed partnership work, with the aim to offset the water we use in finished products**
- **Locally relevant projects that support communities and nature, from source water protection implementation to rainwater harvesting projects**

Total amount of water used in Manufacturing

313 Billion liters

−

Treated wastewater

184.2 Billion liters

=

Product Volume and amount to replenish

128.8 Billion liters

Based on 2008 data

We are engaged in 210 community water projects in 60 countries to protect and preserve water resources and help enable greater access to water and sanitation. Our partners include USAID, UN-HABITAT, CARE, UNDP, TNC, WWF, local governments and implementing NGOs.

Watershed Partnerships Can Replenish Water Sources

Flint River Basin Recharge

Remote soil moisture monitoring on the seven participating farms to result in water conservation

=> Hundreds of Millions of liters of water returned/Year

*Determine the efficiency (gallons saved per acre) of remote soil moisture monitoring for each of major commodity crop.

Watershed Partnerships Can Replenish Water Sources

Paw Paw Watershed Replenishment:
Modeling groundwater recharge in the Paw Paw watershed resulting from best management practices (BMPs)

Outcomes:

Removal of glossy buckthorn at Prairie Fen
=> Millions of liters/yr
=> Thousands of Metric Tons of decreased sediment

Conservation tillage
=> Millions of liters/yr

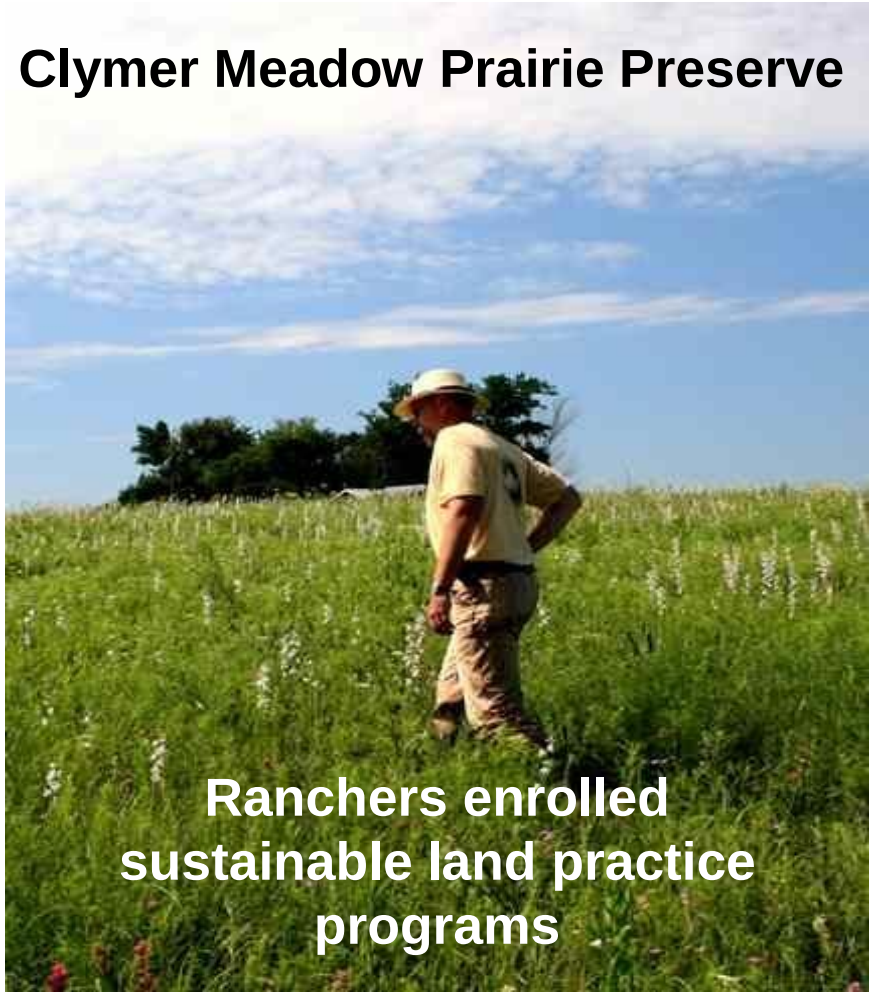
Watershed Partnerships Can Replenish Water Sources

- Private land conservation easement to keep large ranches holdings intact
- => Millions of liters of water/yr returned

- Demonstration projects on restoring and conserving grassland & riparian buffers
- => Millions of liters of water/yr

- Native prairie restoration
  => Millions of liters of water/yr

- Invasive species eradication



Partnerships are Vital

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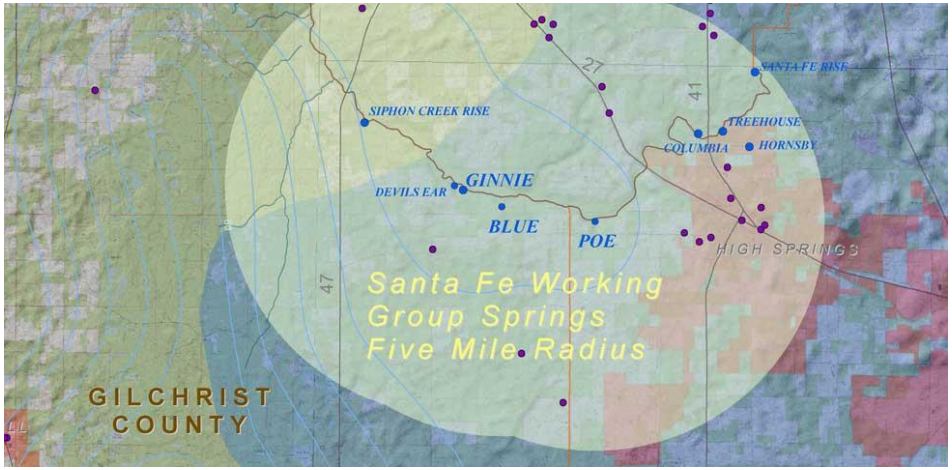

Wildlands Conservancy

Bellefonte Borough Authority

ClearWater Conservancy

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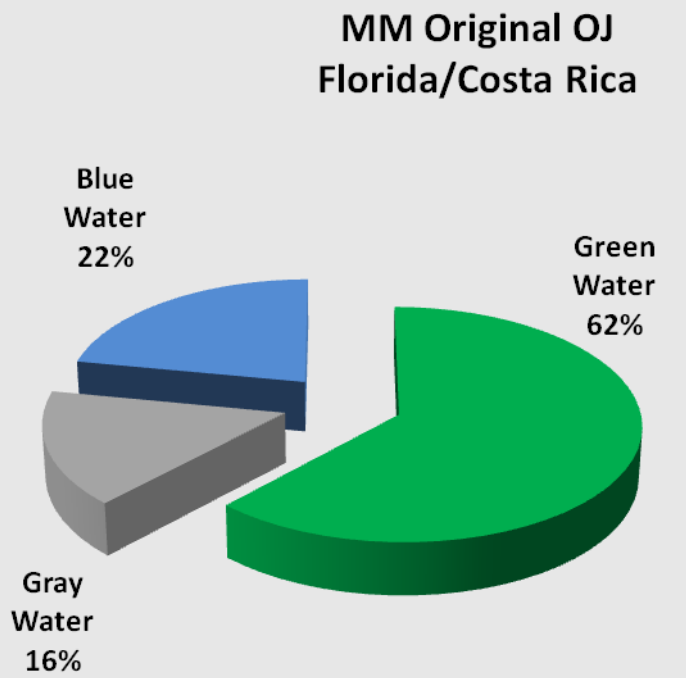
Water Footprinting Methods Development



Water footprints are an excellent tool for companies to begin to understand water use throughout the supply

Product Water Footprint Assessments

- 3 Pilot Studies conducted
- Broad Collaboration with The Nature Conservancy and others
- Participation in Water Footprint Network

- **Ability to disaggregate water use by component and location**
- **The largest portion of the product water footprints assessed came from the field, not the factory**
- **Businesses must manage their direct/operational impacts on local water resources;**
- **Water consumption must be considered in the context of the local watershed and with the cumulative effect of all uses of the shared water resource;**

Sustainable Agriculture

ADVANCING SUSTAINABLE AGRICULTURE IN OUR SUPPLY CHAIN

A healthy agricultural Supply Chain is vital to business growth

We are:

- Incorporating Sustainable agricultural criteria into our long-term ingredient sourcing plans
- Working with partners and suppliers to improve livelihoods, increase crop yields and reduce costs
- Helping farmers to optimize agricultural practices, such as minimizing the use of pesticides
- Watershed Replenishment Projects connection

Tools for Strengthening Sustainability Efforts

- Water Efficiency Toolkit for Facilities
- WUR Metric
- External Commitment
- Internal Reporting
- Sustainability Capital

CAPEX Sustainability Filter

Under Development

Sustainability Scorecard			
Water Sustainability	Energy/Carbon Footprint	Waste Generation	Overall Net Score
5.5	2.0	3.0	4.0
Comments			
Calculations in additional content section			

Rating Key

– Positive Impact	1 - Extreme Positive Impact 2 - Moderate Positive Impact
– Neutral	3 - Minor Positive Impact 4 - Neutral 5 - Minor Negative Impact
– Negative Impact	6 - Moderate Negative Impact 7 - Extreme Negative Impact

CAPEX Sustainability Filter – Water Sustainability

Water Sustainability

PARAMETER	Probability	Severity	Frequency	Score	Comments
Question 1 – Will the project increase or decrease the facility absolute water consumption?	3	3		3	
IF YES, is the facility geographically located in a water stressed area?		6		6	
Is the location in an area current defined as water scarce?		6		6	
Does the Water Source Vulnerability Assessment/Source Water Protection Plan support the project development in terms of local water availability?	7			7	
Question 2 - Will it increase or decrease the facility water use ratio?	4	4		4	
Question 3 – If this proposal results in a change in the quantity or characteristics of a facility's wastewater, will waste water permit compliance be adversely affected?	4	4	4	4	
If this proposal results in a change in the quantity or characteristics of a facility's wastewater, will the existing or planned wastewater system have the capacity/capability to handle the change?	6			6	

Items to connsider when performing this evaluation:

1) Waste Water Treatment Needs:
   - What products will be produced?
   - What is the expected production output
   - If a new product, have jar tests been conducted
2) Are there any community impacts created by this project? Will the project create any adverse perceptions in the community due to resource use?
3) Summarize any environmental certifications, credits, incentives or recognition this project may be eligible for. Examples include Grants, Rebates, LEED certification, Energy Star, Water Wise, etc.

Rating Key:

1 - Extreme Positive Impact
2 - Moderate Positive Impact
3 - Minor Positive Impact
4 - Neutral
5 - Minor Negative Impact
6 - Moderate Negative Impact
7 - Extreme Negative Impact

QUESTIONS/DISCUSSION