

# Developing a Sustainable Water Resource for Clayton County

The Clayton County Water Authority



# Clayton County Water Authority

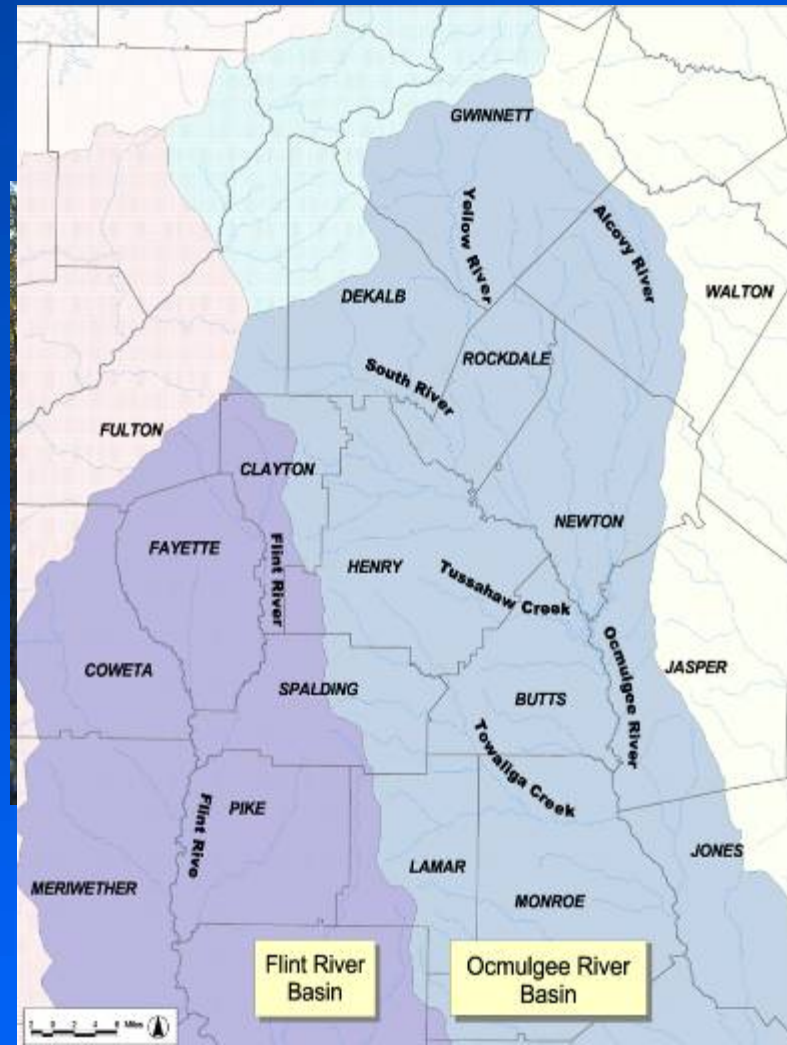


- Southside of Metro Atlanta
- 75,000 Water, Wastewater and Stormwater Accounts
- Serving over 280,000 people
- Water production capacity of 42 mgd
- 4 small reservoirs with 4 billion gallons of combined storage
- Enough water and sewer pipes to stretch from Atlanta to Denver and back!
- Stormwater infrastructure

# Clayton County Water Resources Limited but Sustainable Supply



- Surface water supplies are very limited
- Limited groundwater availability
- 2007 Drought
  - Within 1/2 inch of worst on record
  - Minimum storage capacity was 77% = 230 days supply without additional rain



# Developing a Sustainable Water Supply



- Water reclamation – recapturing highly treated “used” water for reuse as raw water supplies
- Water conservation – efficient use of resource
- Stormwater management – management of rainfall and runoff to maximize quality and quantity



# Recycling of Treated Wastewater – Irrigation



- CCWA has utilized land application for reclaiming and recycling “used” water back into our water supplies for almost 30 years
- Over 2,400 forested acres receiving spray irrigation of treated wastewater
- 70% of the reclaimed water sprayed onto the site was returned as streamflow



# Transition from Land Application to Constructed Wetlands



- Existing land application acreage being converted to constructed wetlands
  - Increased treatment capacity
  - Efficient water recharge
  - Lower maintenance and operational costs
  - Recreational & educational benefits
  - Continues tradition of natural treatment



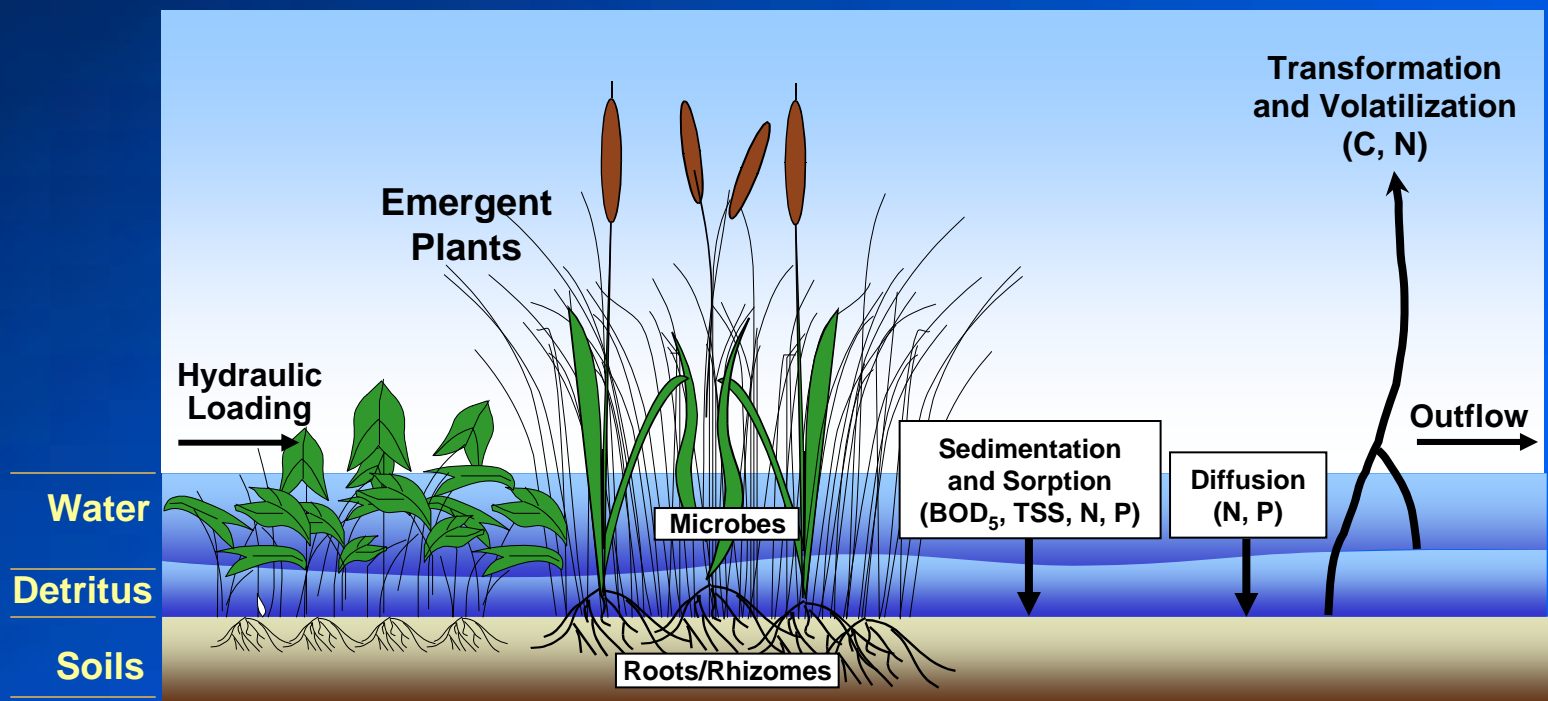
# Constructed Wetlands







# Wetlands use natural processes to improve water quality.

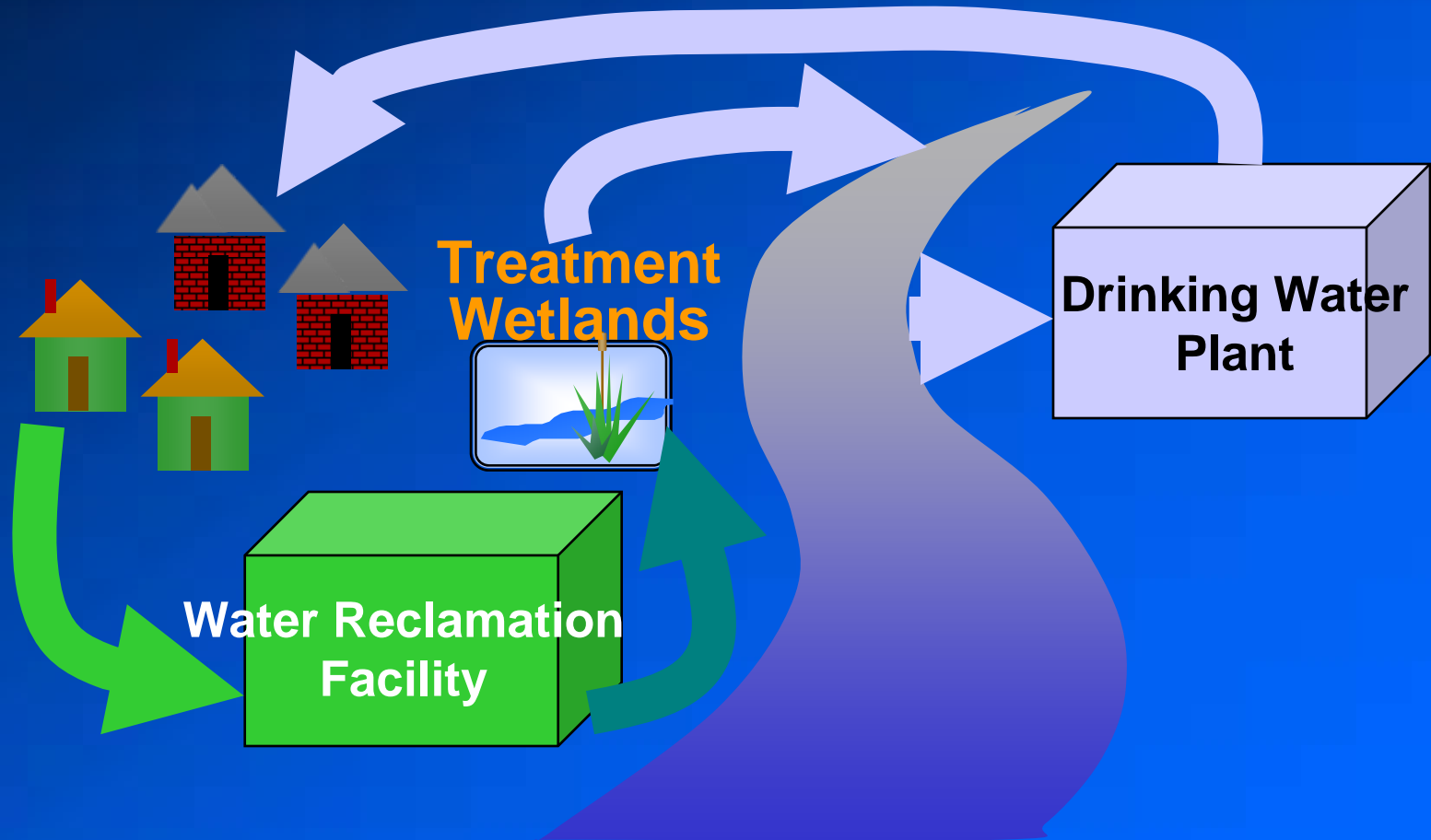


Design Parameters: Loading Rate, Area, Depth, Vegetation, Inflow Concentration

## Natural processes determine design.



# Sustainable Water Supply



*"It's raining every day in Clayton County!"*

# Sustainable Water Supply - Water Conservation is another key element



- Water conservation insures capacity for the future
- Water conservation based rates
  - Four tiers from \$4.32 to \$6.48 per 1,000 gallons
- Toilet Rebate Program
  - \$100 rebate for 1.3 gallon per flush toilet
- Improved metering & customer leak detection
- System-wide leak detection
- Public education, low flow kits

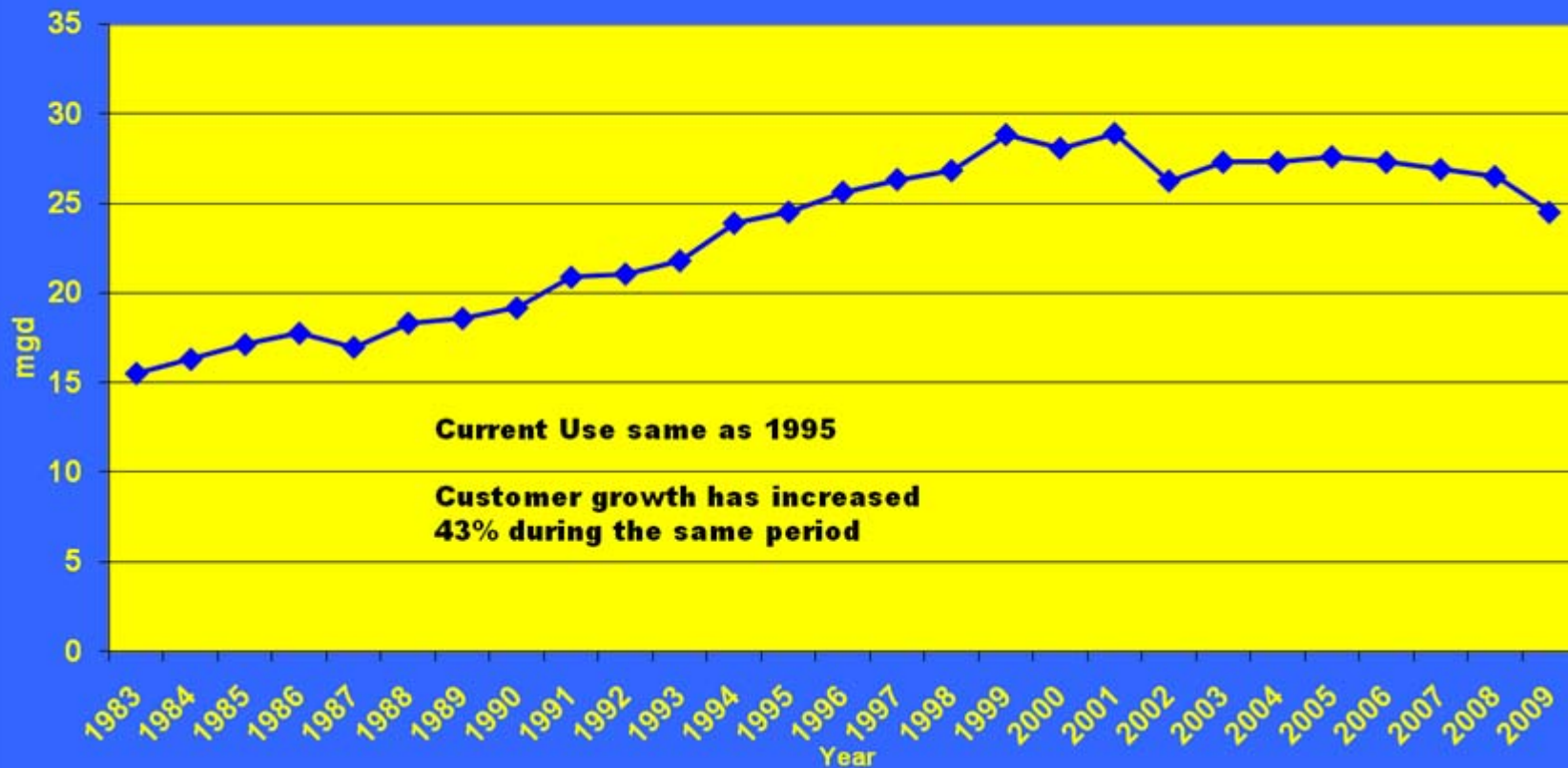
# Water Conservation – Leak Detection





# Water Use

## Annual Water Production - million gallons





# Watershed Management

- Total water management
  - Water Supply & Drinking Water
  - Wastewater Treatment – Water Reclamation
  - Stormwater Management
- Stormwater Management
  - Funding – Utility fees based on impervious surface
  - Restoring urban waters – protecting our water supply source

# Stream Restoration



09.21.2007 16:08



# Summary

- Use of Natural Systems and “green” technology enhances sustainability
- Total water resources management
- Funding support for “green” or sustainable solutions
  - Innovative use of funds – toilet rebate programs, natural systems and credit banking
- Support for innovative funding approaches – pay for impacts

