

**UT** County Technical Assistance Service  
INSTITUTE FOR PUBLIC SERVICE

## County Environmental Compliance

---

---

---

---

---

---

---

---

### Counties have a Key Role in Environmental Planning and Compliance

- ▶ 39,000 local governments around the country make daily decisions that impact Environmental Quality
- ▶ Examples: Siting and Types of Private Development
- ▶ Public Infrastructure Planning and Funding
- ▶ Decisions about Land Use—development to accommodate transportation, housing, workforce and education needs
- ▶ Water and Sewer
- ▶ Waste Management

**UT** County Technical Assistance Service  
INSTITUTE FOR PUBLIC SERVICE

---

---

---

---

---

---

---

---

### How Will Your Community Grow?

<p><b>Costs</b></p> <ul style="list-style-type: none"> <li>▶ "Pollution Mitigation"</li> <li>▶ Cleanup and Development of Brownfields</li> <li>▶ Infrastructure Improvements</li> <li>▶ Capital Improvements</li> <li>▶ Development and Reuse</li> <li>▶ Preparedness</li> <li>▶ Regulatory Compliance               <ul style="list-style-type: none"> <li>▶ Air</li> <li>▶ Land</li> <li>▶ Water</li> </ul> </li> </ul>	<p><b>Needs</b></p> <ul style="list-style-type: none"> <li>▶ Strong Economy               <ul style="list-style-type: none"> <li>▶ Workforce and Employment Training</li> <li>▶ Good Jobs</li> <li>▶ Financial Well-Being</li> <li>▶ Affordable Places to Live</li> </ul> </li> <li>▶ Cost Effective Government</li> <li>▶ Affordable Public Works Services</li> <li>▶ Preservation of Farming and Forestry</li> <li>▶ Stronger Communities               <ul style="list-style-type: none"> <li>▶ Great Places</li> <li>▶ Healthy Lifestyles</li> <li>▶ Healthy environment</li> <li>▶ Quality of Life</li> </ul> </li> </ul>
---	--

**Challenge to balance needs and costs— both current and future.**

**UT** County Technical Assistance Service  
INSTITUTE FOR PUBLIC SERVICE

---

---

---

---

---

---

---

---

CTAS Role...

- ▶ To help counties understand how federal environmental regulations are implemented at the state and local level.
- ▶ Environmental regulations impact:
  - ▶ Solid Waste Departments, Highway Departments, Public Works Departments, Stormwater Departments, Planning Departments and Regional and State Transportation Organizations




---

---

---

---

---

---

---

---

Water

Water Quantity

Water Quality

Source Water Protection






---

---

---

---

---

---

---

---

Safe Water Drinking Act and Source Water Protection

- ▶ The Safe Water Drinking Act (1974) establishes maximum contaminant levels and standards for metals, corrosiveness, turbidity, along with addressing wellhead protection.
- ▶ Requires large water suppliers to inform customers about where their water comes from, any contaminants in the water, and how their water compares to health standards.
- ▶ Public water systems must demonstrate adequate financial, technical, and management capacity.
- ▶ About 1/2 of US drinking water is from surface water, about 1/2 from Groundwater.
- ▶ However, in rural America ground water accounts for about 90 percent of the overall water supply.
- ▶ Leaking pipes result in the loss of an estimated 17% of America's annual potable water use.
- ▶ EPA estimates that community water systems will need to invest almost 400 billion in the next two decades for installing and upgrading water systems.




---

---

---

---

---

---

---

---



### Clean Water Act 1972

- ▶ Administered by EPA, but day-to-day regulation mainly carried out by states
- ▶ EPA sets water-quality ratings, a waterbody rated less than Class B is considered "Impaired"
- ▶ EPA also establishes water quality standards, such as swimmable and fishable (Class A and B)
- ▶ Requires states to list the designated uses of a water body

UT County Technical Assistance Service INSTITUTE FOR PUBLIC SERVICE

---

---

---

---

---

---

---

---

### Clean Water Act Requirements for US States

- ▶ Have a plan to maintain water quality
- ▶ Protect against the degradation of high-quality waters and water bodies that already meet the fishable/swimmable standards
- ▶ Clean up polluted or impaired waterways
- ▶ EPA allows states to set standards for use other than drinking. Unlike Clean Air Act

*The Commission shall have the power, duty, and responsibility to... post or cause to be posted such signs as required to give notice to the public of the potential or actual dangers of specific uses of such waters.*  
Tennessee Water Quality Control Act

UT County Technical Assistance Service INSTITUTE FOR PUBLIC SERVICE

---

---

---

---

---

---

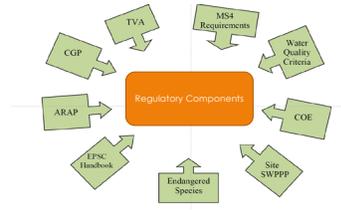
---

---

### Clean Water Act Sections

There are multiple programs within the Clean Water Act

- Section 201—Construction of Public Sewage Treatment Plants
- Section 208—Standards and plans for controlling pollution
- Section 303(d)—Allowed "Total Maximum Daily Loads" for pollutants
- Section 319—Grants for control of nonpoint pollution
- Section 402—Stormwater and NPDES Permits
- Section 404—Wetlands



Regulatory Agencies: TDEC, TVA, Corps of Engineers, Dept of Agriculture, MS4's

UT County Technical Assistance Service INSTITUTE FOR PUBLIC SERVICE

---

---

---

---

---

---

---

---

### Clean Water Act Section: NPDES Permits for Stormwater Discharge, Phase I & Phase II

- ▶ Phase I of this federal program was implemented in 1990.
- ▶ Phase I used a permit system to regulate storm water discharges from larger cities and construction projects.
- ▶ In 2000, TDEC expanded Phase I by requiring counties, cities, and additional other parties to implement programs and practices to control stormwater runoff (Phase II).
- ▶ This primarily applies to the 20 larger counties and cities within. If you are named, you need a Permit and Plan




---

---

---

---

---

---

---

---

### Clean Water Act Section: NPDES Coverage for County Public Works Programs

- ▶ Typically, to obtain authorization to discharge under a construction general permit, a discharger (any owners and operators of the construction site; typically, a developer, builder, and/or contractor) submits to the permitting authority a Notice of Intent (NOI) to be covered under the general permit.
- ▶ An NOI is not a permit or a permit application, but by submitting the NOI, the discharger acknowledges that it is eligible for coverage under the general permit and that it agrees to the conditions in the published general permit.
- ▶ Discharges associated with the construction activity are authorized consistent with the terms and conditions established in the general permit.



Construction, Conveyances, and Stream Alteration




---

---

---

---

---

---

---

---

### Clean Water Act Section: Surface Run Off (Non-Point Source Pollution)

- ▶ Counties must notify the Division of Water Pollution Control to receive a permit for grubbing, clearing, grading or excavation of 1 or more acres of land
- ▶ Best Practices require construction activities to minimize water quality impact by reducing runoff.
  - ▶ Bare soils contribute to runoff
  - ▶ increase likelihood of flooding
  - ▶ lead to "impaired stream" designation
  - ▶ result in permit violations



Between 70-80 percent of water pollution comes from nonpoint sources.




---

---

---

---

---

---

---

---

### Clean Water Act Section: MS4 Program (Municipal Separate Storm Sewer System)

- ▶ US has two main types of public sewer systems: Combined sewer systems and sanitary sewer systems.
- ▶ A combined sewer system collects waste water from homes and businesses as well as stormwater and snowmelt through street grates and sends those waters through a single pipe to a sewage treatment plant. Found mainly in older cities.
- ▶ When excess rainfall occurs, these systems over flow and bypass the treatment processes, releasing raw sewage back to surface waters.
- ▶ US still has almost 1000 CSO's.




---

---

---

---

---

---

---

---

### Clean Water Act Section: MS4 Program and Separate Systems

- ▶ Modern systems are Separate, meaning Sewage is collected separate from Stormwater.
- ▶ Areas covered by SSS's often have a municipal separate storm sewer system (MS4) to collect and convey runoff from rainfall.
- ▶ The stormwater is typically untreated and directed back to waterways. Nationwide, almost 16,000 systems. MS4 operators must obtain a NPDES permit.
- ▶ CSO's and SSO's are permitted as point sources of water pollution.




---

---

---

---

---

---

---

---

### Clean Water Act Section: Water Pollution Control

- ▶ About 40 percent of America's waterways are not fit for swimming or fishing.
- ▶ Bacteria and sediment are the most common pollutants in rivers and streams.
- ▶ Water Pollution comes from Point sources: Stationary and easily identified. "End of pipe"
- ▶ And Nonpoint Sources: Dispersed and not in a fixed location. Harder to identify, measure, control.




---

---

---

---

---

---

---

---

Applies to All Counties in Tennessee

- ▶ Certain County Facilities may need a Stormwater Pollution Prevention Plan (SWPPP)



---

---

---

---

---

---

---

---

Summary: How Counties Implement Water Quality Standards

- ▶ Through MS4's and Stormwater Ordinances
- ▶ Through Public Works Best Practices: Erosion Control, Pollution Prevention Measures
- ▶ Through Development Permitting: Construction and Post Construction Practices
- ▶ Through Rural County Conservation Districts and Natural Resources Conservation Service (NRCS): BMP's for Agriculture
- ▶ Through Zoning and Zoning Overlays: can require development to locate away from high-quality water bodies, impaired waterways, or wellhead protection areas.
  - ▶ Can restrict steep slope developments, require setbacks, determine Septic Drain locations, and control Landfill and other Industrial siting.
- ▶ Through Subdivision regulations: During and Post Construction Developers are required to have Stormwater management and Erosion and Sediment Controls.



---

---

---

---

---

---

---

---

Solid Waste Management



---

---

---

---

---

---

---

---

### MUNICIPAL SOLID WASTE

- ▶ Consists of household garbage, industrial waste, hazardous waste, and construction waste.
- ▶ If not handled properly can become breeding ground for pests and generate polluted runoff.
- ▶ Disposing of waste is not cheap, and the cost of disposing of solid waste continues to increase.
- ▶ Managing household waste is typically the third-largest component of a local government budget—after education and public safety.



---

---

---

---

---

---

---

---

### Costs of Solid Waste Management

- ▶ Americans generate about 4.43 pounds of waste/day
- ▶ Americans pay about \$44 per ton to bury garbage compared to \$200-400/tons in Germany/Japan



---

---

---

---

---

---

---

---

### Disposal of Municipal Solid Waste

- ▶ The Resource Conservation and Recovery Act (RCRA) 1976—set standards for the construction, operation, closure, and postclosure maintenance of landfills.
- ▶ As a result, the number of landfills in Tennessee decreased dramatically from almost 158 in 1988 to 36 active now.
- ▶ The siting of new landfills is an important land-use issue for local communities.



---

---

---

---

---

---

---

---

### Full Cost Accounting

- ▶ Encouraged, but not widely adopted
- ▶ Costs are monitored: Front-end costs to create, operate, and backend costs are added
- ▶ Accounts for acquisition of equipment and materials
- ▶ Siting and construction of facilities
- ▶ Collection, processing, and marketing of recycling
- ▶ Transportation
- ▶ Operation and maintenance of facilities
- ▶ Cleanup of illegal dumps
- ▶ Landfill closure/post closure monitoring
- ▶ Program promotion and Administration




---

---

---

---

---

---

---

---

### Solid Waste Management Act of 1991

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>▶ <b>County Responsibilities:</b></li> <li>▶ Proper management of solid waste collection, transfer, transport, processing, and disposal</li> <li>▶ Includes recycling, diversion, waste site management and problem waste collection.</li> </ul> | <ul style="list-style-type: none"> <li>▶ <b>Solid Waste Region Responsibilities:</b></li> <li>▶ Must have Solid Waste Plan</li> <li>▶ Must meet 25% Waste Reduction Goal</li> <li>▶ Must provide for Community Education</li> </ul> |
|---|---|




---

---

---

---

---

---

---

---

### Collection, Transportation and Disposal

- ▶ Each county must assure that a collection system is available to all residents.
- ▶ Type collection system
- ▶ How transported
- ▶ Where disposed
- ▶ How financed




---

---

---

---

---

---

---

---

### Waste Reduction/Recycling

- Counties must divert 25% of Waste (T.C.A. 68-211-821)
- Methods for calculating waste reduction (T.C.A. 68-211-835)





---

---

---

---

---

---

---

---

### Restrictive Wastes

- Whole tires are banned from Tennessee landfills
- Other problem wastes include oil, batteries, and "E-wastes"
- Household Hazardous Waste collection events are funded by TDEC and can serve as participatory community events





---

---

---

---

---

---

---

---

### Financing Solid Waste

<ul style="list-style-type: none"> <li>Sources:</li> <li>Solid Waste Management Fund (T.C.A. 68-211-821)</li> <li>Local Funding Options (T.C.A. 68-211-835)</li> <li>Used Oil Collection Fund (T.C.A. 68-211-1005)</li> </ul>	<ul style="list-style-type: none"> <li>Programs:</li> <li>Recycling Rebate (11 counties)</li> <li>Recycling Equipment/Hub Grants</li> <li>Used Oil Recycling</li> <li>Waste Tire Funding (as of 2014)</li> <li>Household Hazardous Waste Event Funding</li> </ul>
---	---




---

---

---

---

---

---

---

---

## Financing Solid Waste

- ▶ Solid Waste Management Fund (T.C.A. 68-211-821)
- ▶ Local Funding Options (T.C.A. 68-211-835)
- ▶ Used Oil Collection Fund (T.C.A. 68-211-1005)
- ▶ Waste Tire Funding (T.C.A. 67-4-1610)
- ▶ Recycling Rebate (five most populous counties according to the annual census)
- ▶ Grants:
  - ▶ Recycling Equipment
  - ▶ Material Recovery Facility
  - ▶ Used Oil
  - ▶ Development Districts
  - ▶ Household Hazardous Waste
  - ▶ Planning Grants




---

---

---

---

---

---

---

---

## How CTAS can help..

*Technical Assistance Areas*

- Facility Siting and Regulatory Issues
- Waste Reduction
- Bids and Equipment Specification
- Cost Effectiveness
- Benchmarking
- Safety







---

---

---

---

---

---

---

---

## CTAS Consultants

■ Mike Stooksberry  
West/Western Middle TN  
Office: (731) 881-7077  
Cell: (731) 514-1671  
[mike.stooksberry@tennessee.edu](mailto:mike.stooksberry@tennessee.edu)

■ Kim Raia  
East/Eastern Middle TN  
Office: (865) 974-4434  
Cell: (865) 384-6691  
[kim.raia@tennessee.edu](mailto:kim.raia@tennessee.edu)





---

---

---

---

---

---

---

---