County Officials Orientation Program

2026

Hosted by University of Tennessee County Technical Assistance Service
in coordination with the Tennessee County Services Association and the County Officials Association of Tennessee

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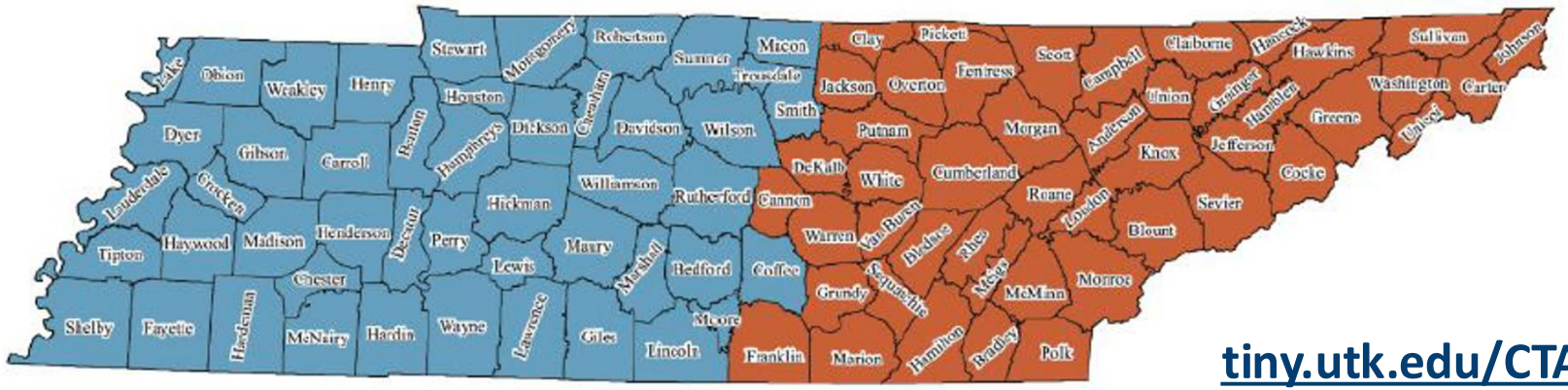

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SPILL PREVENTION CONTROL & COUNTERMEASURE (SPCC) PROGRAM

As required by EPA And TDEC

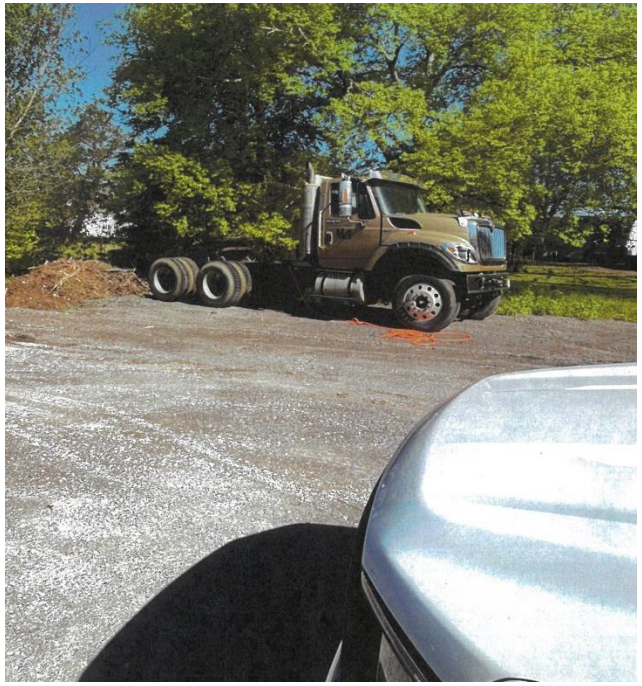
SPILL PREVENTION, CONTROL, AND COUNTERMEASURE (SPCC) PLAN – WHAT IS IT?

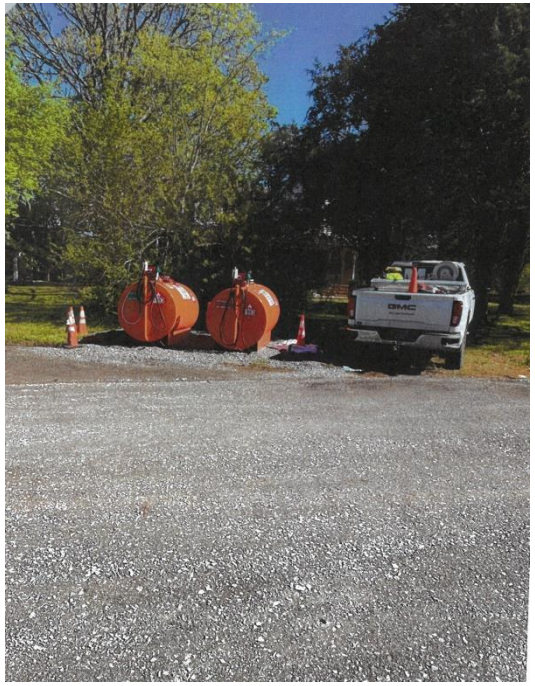
The SPCC Rules are found in 40 CFR - PART 112 of the Code of Federal Regulations.

The EPA states that the purpose of an SPCC PLAN Is to help facilities prevent a discharge of oil into adjoining navigable waters or adjoining shorelines.

The EPA requires facilities to develop, maintain, and implement an Oil Spill Prevention Plan or SPCC PLAN. These plans help facilities prevent oil spills and control a spill should one occur.

WHY DO WE NEED ONE?
THE STORAGE YARD





The Road Commission/Highway Department uses, stores, and disposes of Oil and other Petroleum Products in significant enough quantities to cross the threshold for the SPCC requirements per CFR 40-112.

Storage of oil or oil related products in above ground storage containers totaling more than 1,320 gallons in aggregate storage capacity. Additionally, all storage of oil/used oil products in containers 50 gallons or more are to be counted towards these thresholds and accommodated within your required SPCC Plan.

SOURCE: EPA 540-K-09-110 - *A Facility Owner/Operators Guide to Oil Pollution Prevention*

WHAT DOES THE SPCC PLAN NEED TO INCLUDE?

Per the EPA:

Important Elements of an SPCC Plan:

- Facility diagram and description of the facility
- Oil discharge predictions
- Appropriate secondary containment or diversionary structures
- Facility drainage
- Site security
- Facility inspections
- Requirements for bulk storage containers including inspections, overfill, and integrity testing requirements
- Transfer procedures and equipment (including piping)
- Requirements for qualified oil-filled operational equipment
- Loading/unloading rack requirements and procedures for tank cars and tank trucks
- Brittle fracture evaluations for aboveground field constructed containers
- Personnel training and oil discharge prevention briefings
- Recordkeeping requirements
- Five-year Plan review
- Management approval
- Plan certification (by a Professional Engineer (PE) or in

SOURCE: EPA 540-K-09-110 - *A Facility Owner/Operators Guide to Oil Pollution Prevention*

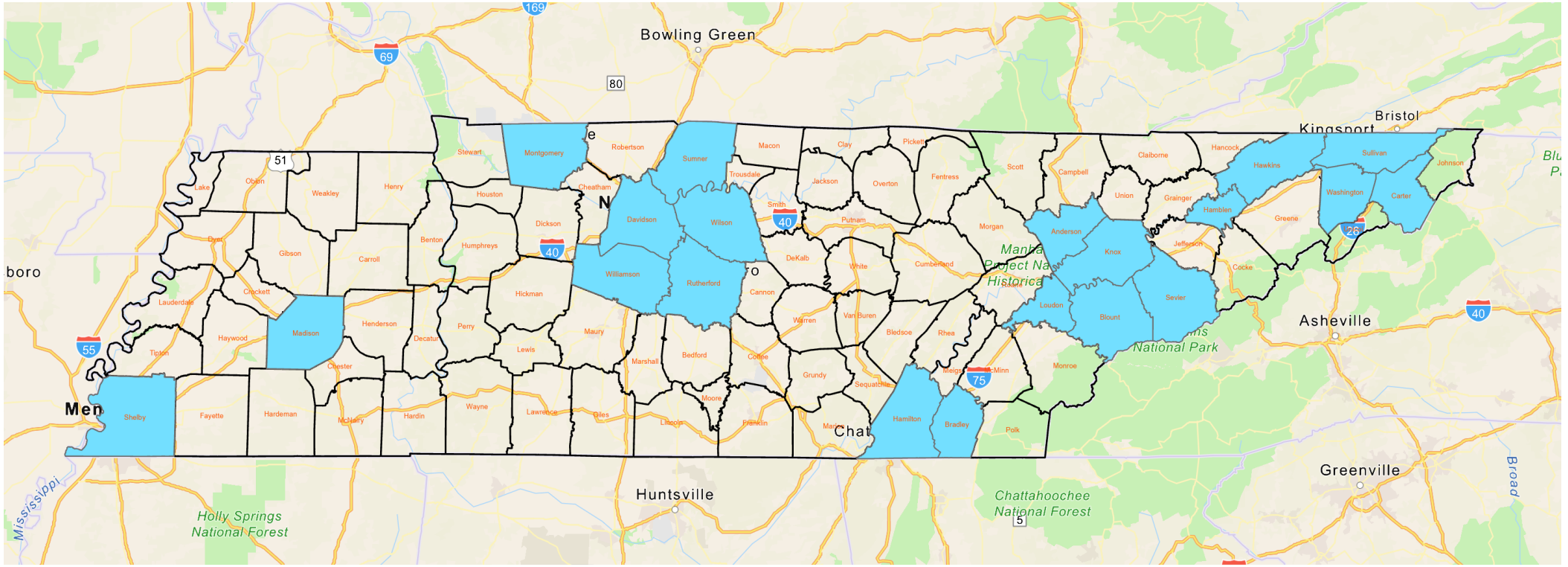
A CLEAR PLAN FOR HOW OIL AND OIL-BASED LIQUIDS ARE STORED.

- Should illustrate how this storage methodology prevents spillage and subsequent pollution with preventive measures like “Secondary Containment”.

IN SHORT

- Plan(s) for secondary containment in the event of a spill from an above ground container; whether it is from the large fuel tank the Road Commission has OR from a 50-gallon barrel storing used oil for disposal.
- Provides for training and routine inspections with record logs.
- Provides for incident reports and remedial action documentation when a spill does occur.

MANDATED STORM WATER PROGRAMS WITH GOOD HOUSEKEEPING REQUIREMENTS (NPDES)



DEBRIS MANAGEMENT PLANS

Cooperation with EMA and Solid Waste

POST DISASTER DEBRIS MANAGEMENT

A contractor removes debris March 23, 2020 - Putnam County, Tennessee.

Photo Source: US Army Corps of Engineers

EMA Disaster Plans and Solid Waste 10-year Plans now require outlines of cooperation between local agencies including predefined locations for deposit of debris.

They also require pre-defined policies on separation into organic, metal, and construction type debris.

DECLARED DISASTERS

Federal/State agencies may also show up.

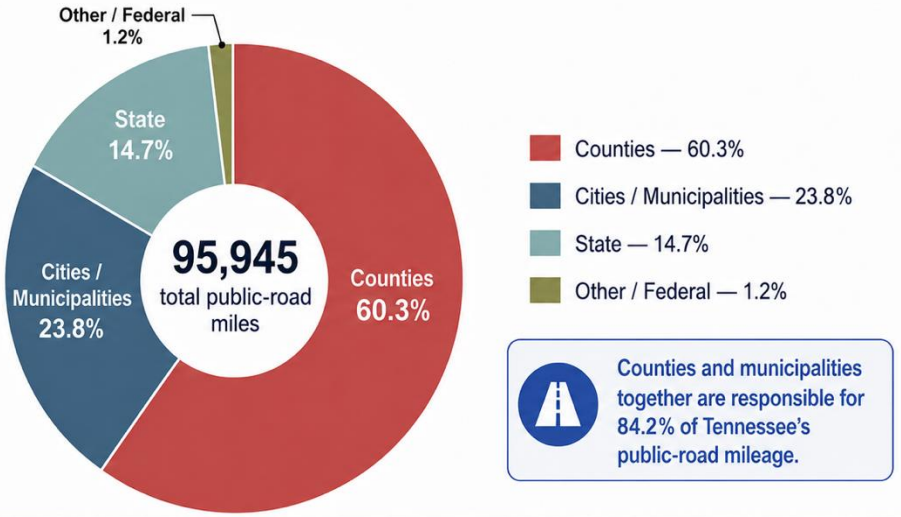
USUALLY as support rather than leadership.

Many have regulations, with potential punitive and/or financial consequences. Most disaster recovery aid works on reimbursement. There are rules.

ROAD AND BRIDGE RESPONSIBILITIES

Who Is Responsible for Tennessee's Public Road Miles?

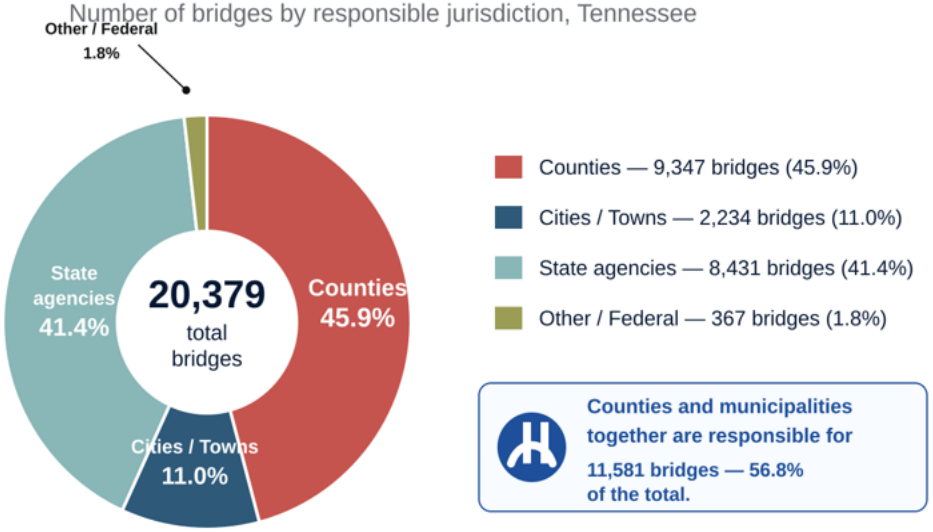
Share of Tennessee public-road mileage by responsible jurisdiction



Source: Federal Highway Administration, Highway Statistics 2024, Table HM-10. Shares calculated from Tennessee total public-road length of 95,945 miles. County miles: 57,887; city/municipal miles: 22,852; state miles: 14,079; other/federal: about 1,128.

Who Is Responsible for Tennessee's Public Bridges?

Number of bridges by responsible jurisdiction, Tennessee



Source: Federal Highway Administration, National Bridge Inventory, Bridge Condition by Owner 2024. Shares calculated from Tennessee bridge counts. County: 9,347; city/town: 2,234; state/state agencies: 8,431; other/federal/railroad: 367. Counts, not deck area.

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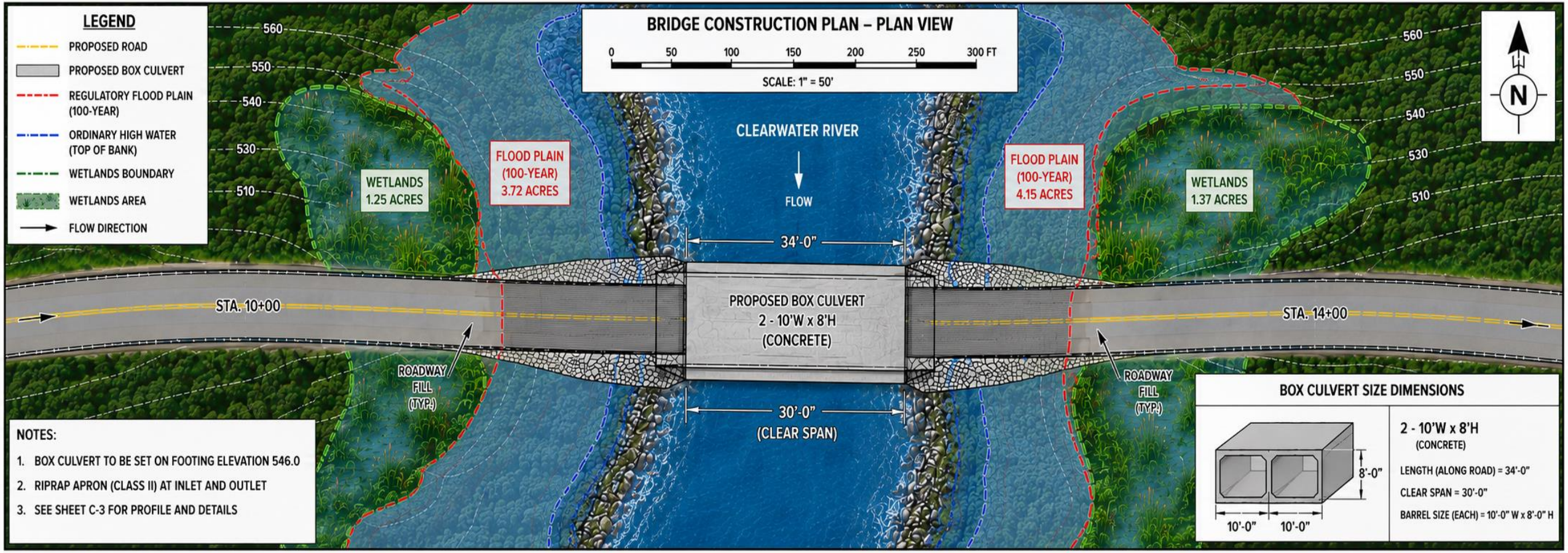
EPA, TDEC, TDOT (AND CORPS OF ENGINEERS): ENVIRONMENTAL PERMITTING



- TDOT - State Bridge Inspection Program
- TDEC - Aquatic Resource Alteration Permits (ARAP)
- US ARMY Corps of Engineers Nationwide Permits
- Endangered Species Act and NEPA permits/Finding of No Significant Impact vs. Remediation.
- FEMA—National Flood Insurance Program (NFIP)

COUNTY HIGHWAY STORMWATER COMPLIANCE

Q. **Do we need a permit for that?**

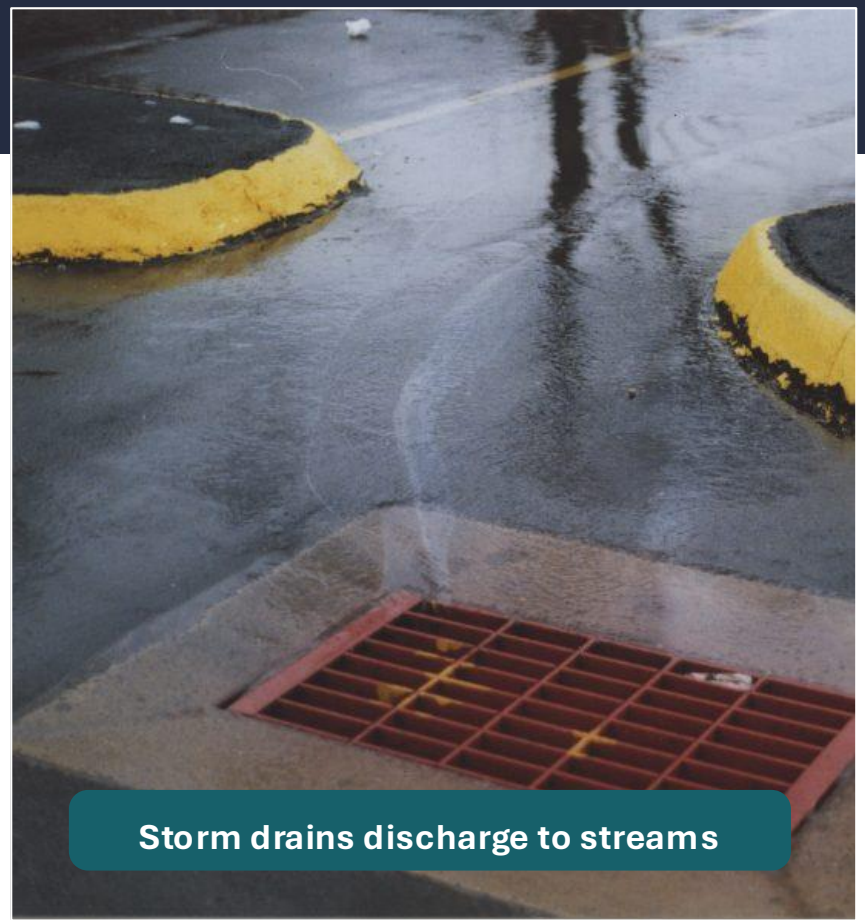
Work related to ditches, culverts, bridges, borrow pits, road widening, stockpiling, and routine maintenance may need state issued permits for compliance.

WHERE WATER, ROADS, AND BRIDGES MEET

Every road system is also a drainage system. Counties and cities must manage stream crossings, bridges, culverts, ditches, floodplains, and stormwater runoff to keep roads open, protect bridges, reduce flooding, and safeguard water quality.

Takeaway: stormwater management is part of the job

STORMWATER IS USUALLY NONPOINT POLLUTION



Storm drains discharge to streams

Point source

A visible “end-of-pipe” discharge such as a municipal or industrial wastewater outlet.

Nonpoint source

Runoff moving over land and picking up sediment, oil, litter, bacteria, and other pollutants.

For county highways, the usual suspects are not mysterious:

- Sediment from grading, ditch work, and exposed slopes
- Oil, fuel, and vehicle residue from yards and roads
- Runoff from impervious surfaces and compacted shoulders
- Construction disturbance, borrow pits, culvert and bridge work

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FEDERAL WATER QUALITY PROGRAMS

Most highway practices cluster around discharge, erosion, and work in or near waters.

Section 402	Stormwater + NPDES permits
Section 404	Wetlands / waters permits
Section 303(d)	Impaired waters + TMDLs
Section 319	Nonpoint pollution grants / controls

Field translation: before disturbing soil, changing drainage, touching a stream, or replacing a crossing, ask which permit lane you are in.

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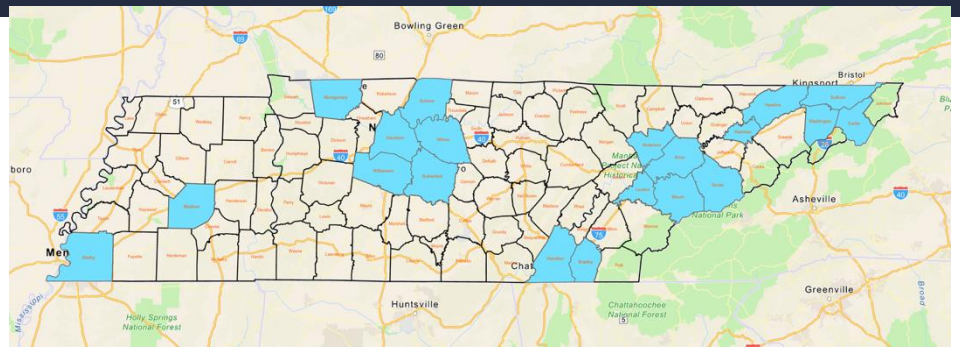
NPDES AND MS4: ARE YOU PART OF A MS4?



MS4 = Municipal Separate Storm Sewer System

Separate storm sewers **collect rainfall runoff**—not sanitary sewage.

- Runoff is **typically untreated** before reaching streams.
- Named MS4 operators must obtain NPDES permit coverage and implement a stormwater plan.
- Local MS4 programs **may inspect highway facilities and projects.**

If your county or city is named, but named counties are regulated through both state and local inspection for work inside the MS4 Jurisdiction

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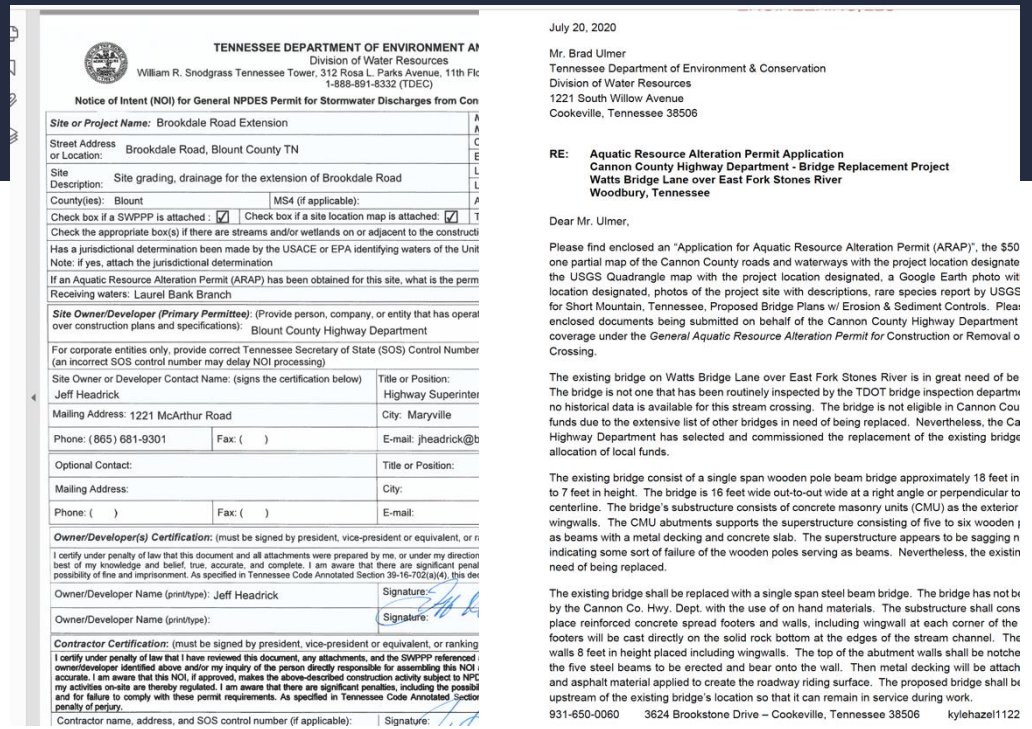
CONSTRUCTION ACTIVITY: THE ONE-ACRE TRIPWIRE



TENNESSEE DEPARTMENT OF ENVIRONMENT AN
Division of Water Resources
William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Flo
1-888-891-8332 (TDEC)

Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Con

Site or Project Name: Brookdale Road Extension	
Street Address or Location: Brookdale Road, Blount County TN	
Site Description: Site grading, drainage for the extension of Brookdale Road	
County(ies): Blount	MS4 (if applicable):
Check box if a SWPPP is attached : ☑	Check box if a site location map is attached: ☑
Check the appropriate box(s) if there are streams and/or wetlands on or adjacent to the constructi	
Has a jurisdictional determination been made by the USACE or EPA identifying waters of the Unit Note: if yes, attach the jurisdictional determination	
If an Aquatic Resource Alteration Permit (ARAP) has been obtained for this site, what is the perm	
Receiving waters: Laurel Bank Branch	
Site Owner/Developer (Primary Permittee): (Provide person, company, or entity that has operat over construction plans and specifications): Blount County Highway Department	
For corporate entities only, provide correct Tennessee Secretary of State (SOS) Control Number (an incorrect SOS control number may delay NOI processing)	
Site Owner or Developer Contact Name: (signs the certification below) Jeff Headrick	Title or Position: Highway Superinter
Mailing Address: 1221 McArthur Road	City: Maryville
Phone: (865) 681-9301 / Fax: ( )	E-mail: jheadrick@b
Optional Contact:	Title or Position:
Mailing Address:	City:
Phone: ( ) / Fax: ( )	E-mail:

Owner/Developer(s) Certification: (must be signed by president, vice-president or equivalent, or r

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penal possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this de

Owner/Developer Name (print/type): Jeff Headrick	Signature:
Owner/Developer Name (print/type):	Signature:

Contractor Certification: (must be signed by president, vice-president or equivalent, or ranking

I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPD my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibi and for failure to comply with these permit requirements. As specified in Tennessee Code Annotated Sectio penalty of perjury.

Contractor name, address, and SOS control number (if applicable):	Signature:

July 20, 2020

Mr. Brad Ulmer
Tennessee Department of Environment & Conservation
Division of Water Resources
1221 South Willow Avenue
Cookeville, Tennessee 38506

RE: Aquatic Resource Alteration Permit Application
Cannon County Highway Department - Bridge Replacement Project
Watts Bridge Lane over East Fork Stones River
Woodbury, Tennessee

Dear Mr. Ulmer,

Please find enclosed an "Application for Aquatic Resource Alteration Permit (ARAP)", the $50 one partial map of the Cannon County roads and waterways with the project location designate the USGS Quadrangle map with the project location designated, a Google Earth photo wit location designated, photos of the project site with descriptions, rare species report by USGS for Short Mountain, Tennessee, Proposed Bridge Plans w/ Erosion & Sediment Controls. Plea enclosed documents being submitted on behalf of the Cannon County Highway Department coverage under the *General Aquatic Resource Alteration Permit for* Construction or Removal o Crossing.

The existing bridge on Watts Bridge Lane over East Fork Stones River is in great need of be The bridge is not one that has been routinely inspected by the TDOT bridge inspection departm no historical data is available for this stream crossing. The bridge is not eligible in Cannon Cou funds due to the extensive list of other bridges in need of being replaced. Nevertheless, the Ca Highway Department has selected and commissioned the replacement of the existing bridge allocation of local funds.

The existing bridge consist of a single span wooden pole beam bridge approximately 18 feet in to 7 feet in height. The bridge is 16 feet wide out-to-out wide at a right angle or perpendicular to centerline. The bridge's substructure consists of concrete masonry units (CMU) as the exterior wingwalls. The CMU abutments supports the superstructure consisting of five to six wooden as beams with a metal decking and concrete slab. The superstructure appears to be sagging n indicating some sort of failure of the wooden poles serving as beams. Nevertheless, the existin need of being replaced.

The existing bridge shall be replaced with a single span steel beam bridge. The bridge has not be by the Cannon Co. Hwy. Dept. with the use of on hand materials. The substructure shall cons place reinforced concrete spread footers and walls, including wingwall at each corner of the footers will be cast directly on the solid rock bottom at the edges of the stream channel. The walls 8 feet in height placed including wingwalls. The top of the abutment walls shall be notche the five steel beams to be erected and bear onto the wall. Then metal decking will be attach and asphalt material applied to create the roadway riding surface. The proposed bridge shall be upstream of the existing bridge's location so that it can remain in service during work.

931-650-0060 3624 Brookstone Drive – Cookeville, Tennessee 38506 kylehazel1122

Paperwork matters because the permit conditions become the playbook for the field crew.

Permit coverage is generally needed when:

- **Clearing, grubbing, grading, or excavation disturbs 1 acre or more.**
- A smaller activity is part of a larger common plan over 1 acre.
- Roads, utility lines, buildings, borrow pits, and similar land-clearing work can qualify.

Typical package

NOI / NOC • SWPPP • fees • general or individual permit coverage

SWPPP: WHERE THE PLAN MEETS THE MUD

A good SWPPP answers four practical questions:

1. Where will runoff go?
2. How will sediment be kept onsite?
3. Who inspects and maintains controls?
4. What records prove it was done?

County highway reality: inspections, repairs, and logs are usually where compliance succeeds or fails.

ARAP: WORK INTO OR NEXT TO WATERS OF THE STATE


STREAM PROTECTION PRACTI

7.43 TEMPORARY STREAM CROSSING

Definition A temporary stream crossing is a temporary stru
stream or watercourse for use by construction equi

When does ARAP enter the conversation?

- Any alteration, modification, or impact within or adjacent to waters of the state.
- Includes wetlands, sinkholes, and blue-line stream areas.
- Approval is required before work with potential to damage or degrade waters.

Road and bridge projects often require Aquatic Resource Alteration Permits when construction or maintenance affects streams, wetlands, or other state waters.

ARAP: Aquatic Resource Alteration Permit

PERMITS FOR ROAD CROSSINGS AND MAINTENANCE: CIRCUMSTANCES MATTER

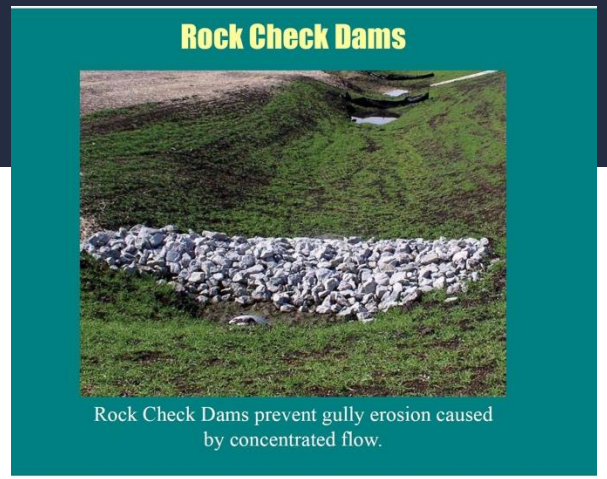
Minor road crossings

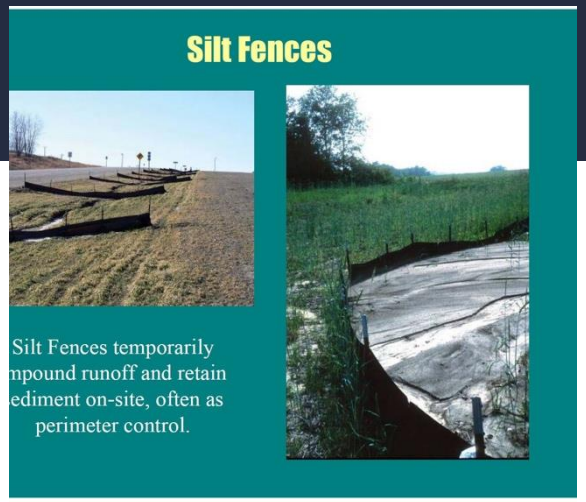
- Applies to existing, currently serviceable structures or fills.
- Can not increase pipe or culvert length under this coverage.
- Capacity or diameter may increase only if it avoids widening or destabilization.
- Dewatering must minimize sediment release downstream

Maintenance activities

- Bridge, culvert, pipe, or ford work may be covered.
- Impacts over 200 ft in the same waterbody are not covered.
- Avoid undersizing, overwidening, impounding, or creating aquatic barriers.
- Culvert bottoms should sit below streambed elevation.

FIELD CHECKLIST FOR HIGHWAY OFFICIALS





- ✓ Ask the permit question before dirt moves.
- ✓ Check acreage disturbance and common-plan status.
- ✓ Verify streams, wetlands, sinkholes, and blue-line waters.
- ✓ Install BMPs before work begins; inspect after storms.
- ✓ Keep records: inspections, repairs, training, incidents, photos.
- ✓ Use GIS/UAV data to document drainage, crossings, and project conditions.

When in doubt: pause, document, and call before the water gets muddy.

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COULD A DRONE HELP WITH THIS?

A practical decision guide for county highway departments

Can aerial information provide additional insight into road and bridge planning and problem-solving?

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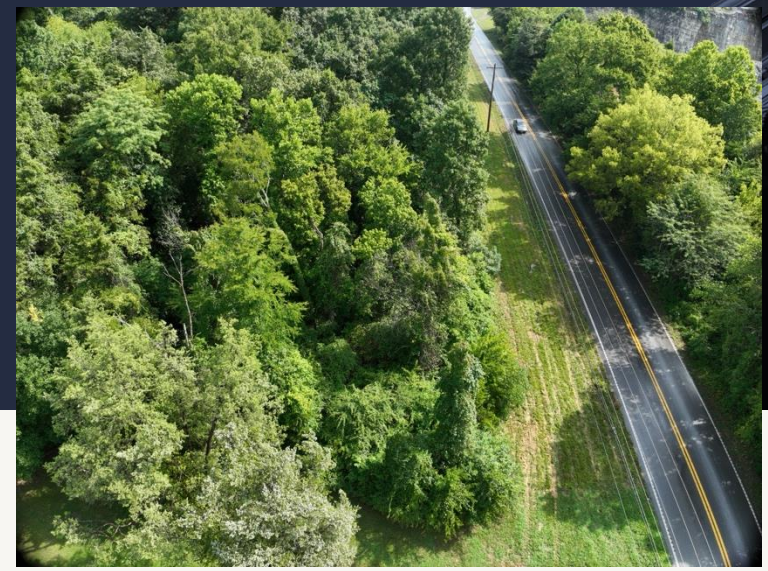
THE QUESTION IS OFTEN “SHOULD WE BUY A DRONE?”

But should be:

WILL AERIAL INFORMATION CHANGE WHAT WE CAN SEE, MEASURE, DOCUMENT, EXPLAINE OR DECIDE?



SEE Understand context from above

REACH View hard or unsafe places

MEASURE Estimate dimensions, area, elevation, volume

RECORD Create a dated condition record

EXPLAIN Show decision-makers the problem

The drone is not the story.
The decision is the story.

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FIVE QUESTIONS BEFORE TURNING TO UAV'S

1. Is the problem easier to understand from above?
2. Is the location difficult, dangerous, or time-consuming to access?
3. Do we need measurements rather than just pictures?
4. Would documenting change over time be valuable?
5. Will the information support a maintenance, safety, funding, or communication decision?

If the answer is "no" to all five…

a drone may simply be an expensive flying camera.

Good technology still needs a useful job.

WHERE HIGHWAY DEPARTMENTS SEE THE MOST VALUE

Emergency & damage response

Weather events, washouts, debris, landslides, bridge approaches

Drainage & erosion

Culverts, ditches, stream crossings, outfalls, sediment movement

Materials & quantities

Stockpiles, excavation, fill placement, disturbed acreage

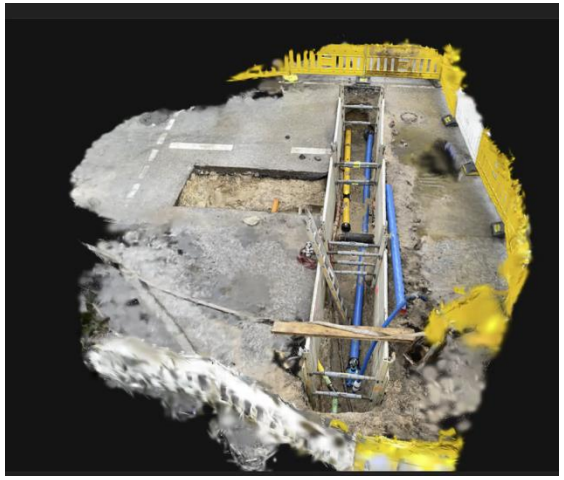
Construction & maintenance

Progress records, staging areas, paving, guardrail corridors

Infrastructure context

Facilities, yards, corridors, bridges, asset inventories

3D Site Models



START WITH THE QUESTIONS YOU NEED ANSWERED

Highway question	Potential drone contribution
What happened/or will happen?	Overview imagery and damage documentation
How large is the area in question?	Distance, area, or volume measurements
Will terrain or water drainage impact this?	Terrain, drainage, and elevation context
Is the condition changing?	Repeat flights and comparison
Is the work progressing over time?	Dated construction documentation
What needs explaining?	Maps, annotated images, and 3D views
Is it safe to enter?	Initial remote observation

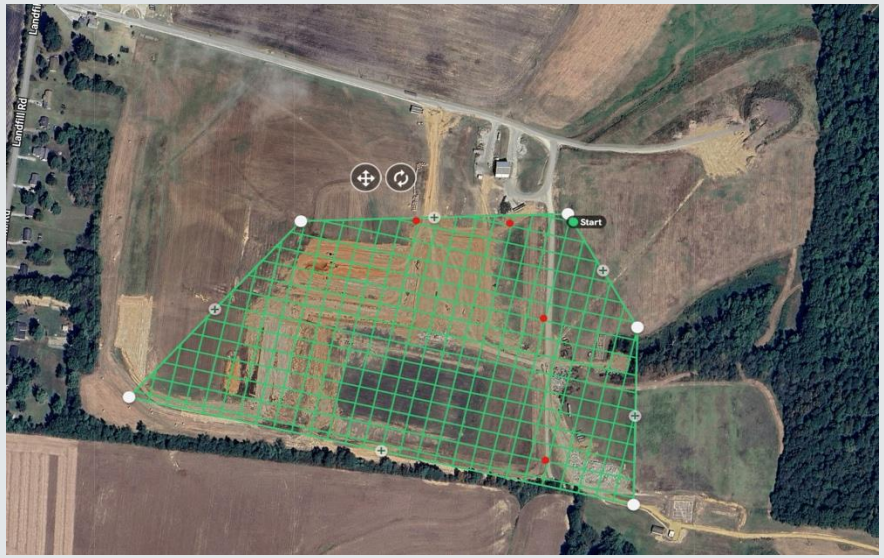
WHEN A PHOTOGRAPH IS ENOUGH AND WHEN IT IS NOT...

Aerial photographs may be enough when…

- General context is needed
- Damage or progress must be documented quickly
- The audience simply needs to see the site
- Precise measurements are unnecessary

Mapping/modeling may be needed when…

- Quantities or dimensions matter
- Elevation and drainage matter
- Conditions must be compared over time
- Outputs must align with GIS, survey, or design data



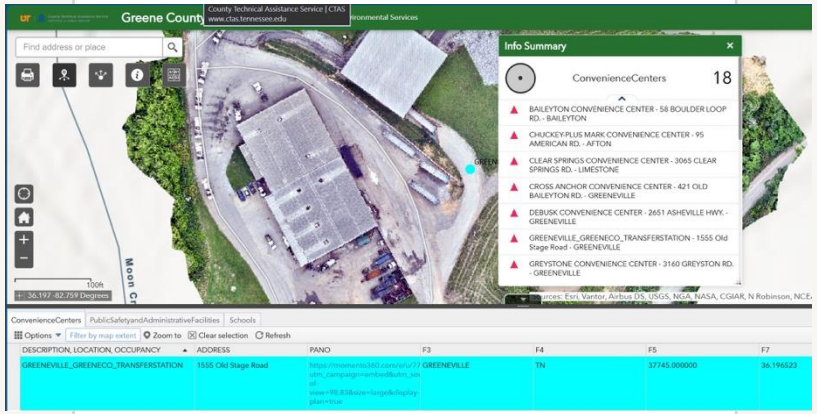
THREE WAYS CTAS CAN HELP YOU...

1 Request a simple flight

Photos, video, rapid documentation, public communication

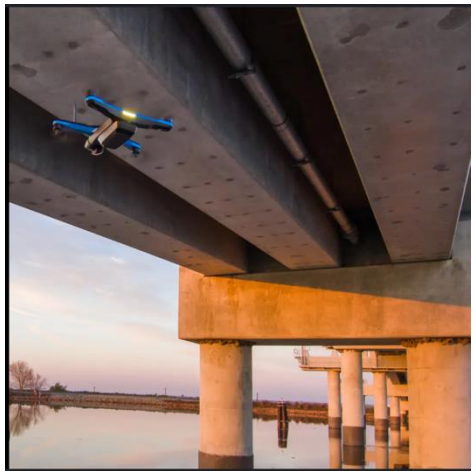
2 Request a mapping project

Orthomosaic, terrain, contours, volume, GIS-ready products



3 Build an internal program

Recurring demand, trained staff, equipment, software, data management



KNOW THE LIMITS BEFORE RELYING ON THE OUTPUT

Weather & visibility	Wind, rain, shadows, vegetation, leaf-on conditions
Rules & access	Airspace, FAA requirements, property access, privacy
Data burden	Processing time, storage, software, coordinate systems
Accuracy limits	Mapping-grade information is not automatically a survey
Professional judgment	Drones inform decisions; they do not replace engineers, surveyors, or inspectors

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HIGHWAY DEPARTMENT DRONE TEST

1. What specific question are we trying to answer?
2. What decision will the information support?
3. Would an aerial view reveal something we cannot easily see from the ground?
4. Do we need photographs, measurements, mapping, or repeated monitoring?
5. How accurate does the information need to be?
6. Who will interpret, store, and maintain the results?
7. Is a drone safer, faster, or more economical than the alternative?

The goal is to make better decisions about roads, bridges, drainage, materials, and public resources.

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