

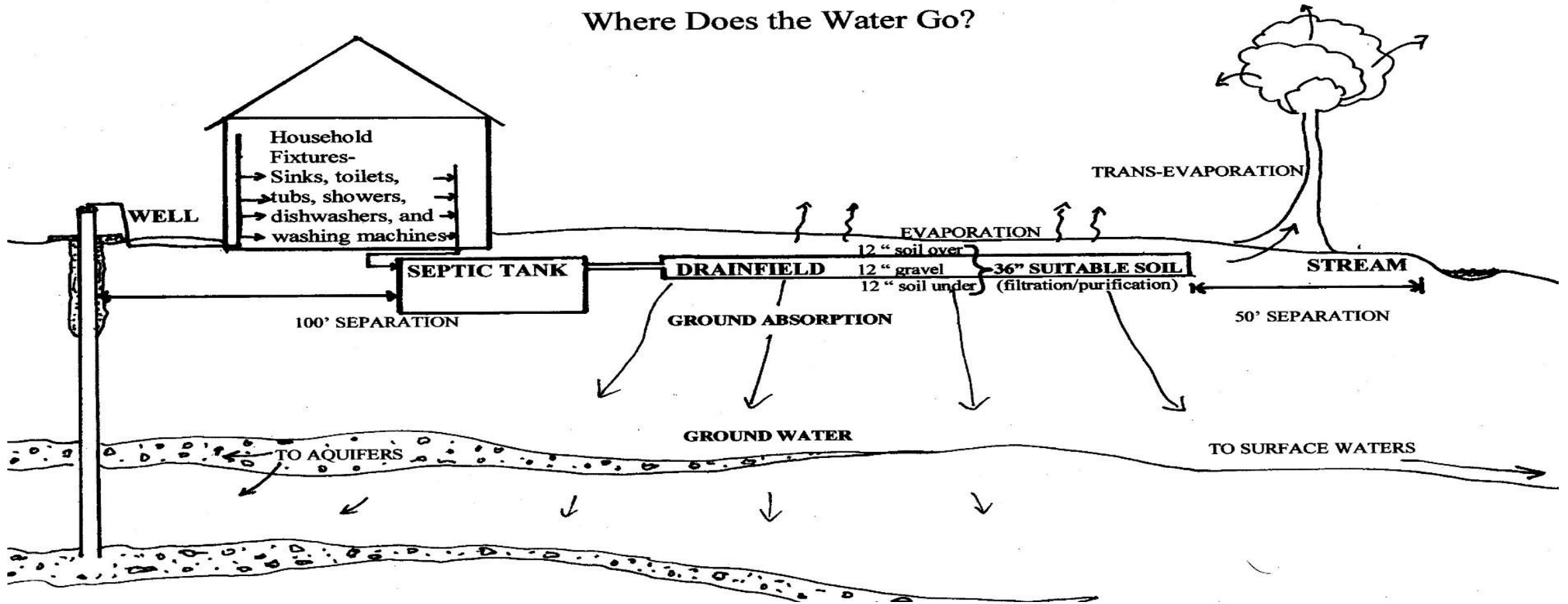
Septic Systems & Water Quality

Jessica Silver

BCHHS-Public Health-Environmental Health



Where Does the Water Go?



What Is A Septic System?

- Avoids the spread of disease by preventing human sewage from contaminating ground, surface, well water supplies
- When functioning properly, no fecal coliform bacteria or E. coli. is released into the environment



Septic System Regulations

- Septic Systems must be a minimum of:
 - 100 ft from a private or public water source
 - 5 ft from the building foundation
 - 10 ft from a property line
 - 10 ft from any water line
 - 50 ft from any lake or pond
- No maintenance inspections required



Why Do Septic Systems Fail?

- Too much water is introduced into the system
- System integrity has been compromised (ex. Driveway over system components, vegetation overgrowth, etc.)
- Lack of system maintenance
- Improper use (ex. Flushing wipes, grease, cleaning chemicals, etc.)
- Age of system- most systems are designed with a designated repair area



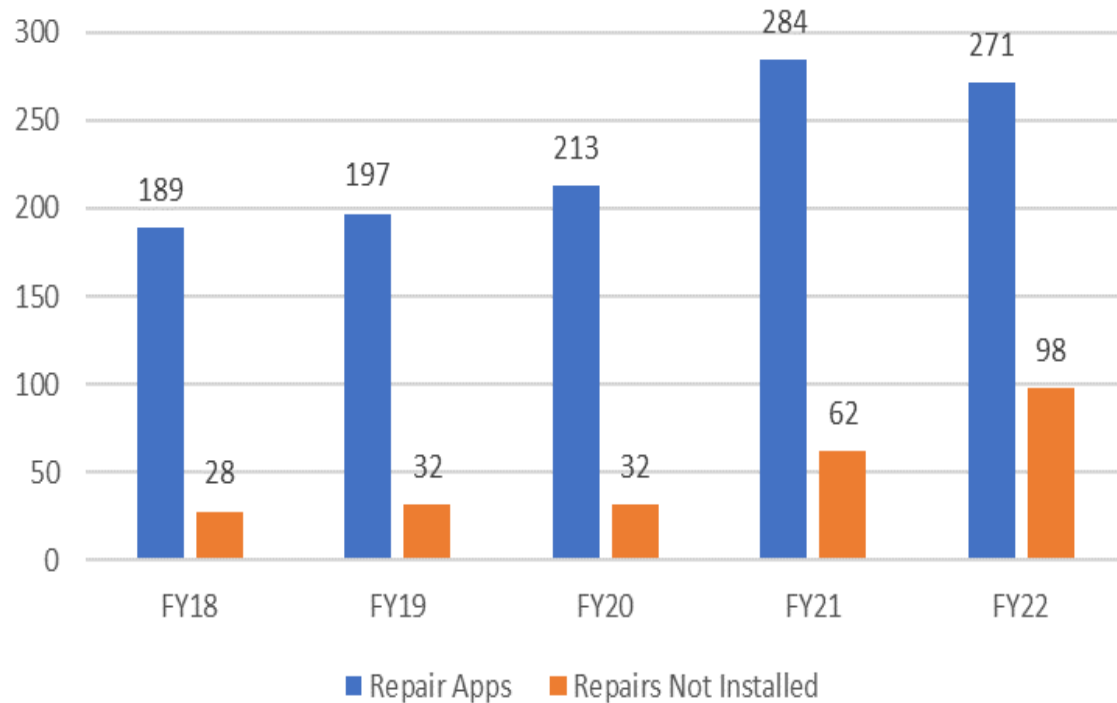
What happens when septic systems fail?

- Sewage comes up on the ground surface, or goes into any stream, creek or lake, or contaminates the ground water (well water supply)
- Sewage backs up into the building
- Sewage straight piped/discharged on the ground
- Fecal coliform bacteria and E. coli contaminate surface water and drinking water, exposing people and animals to disease.



Why Are Repairs Not Completed?

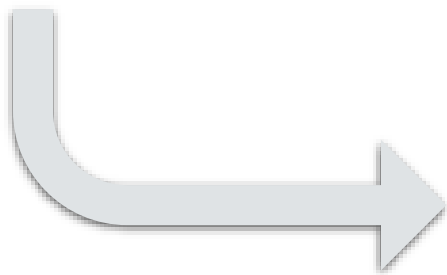
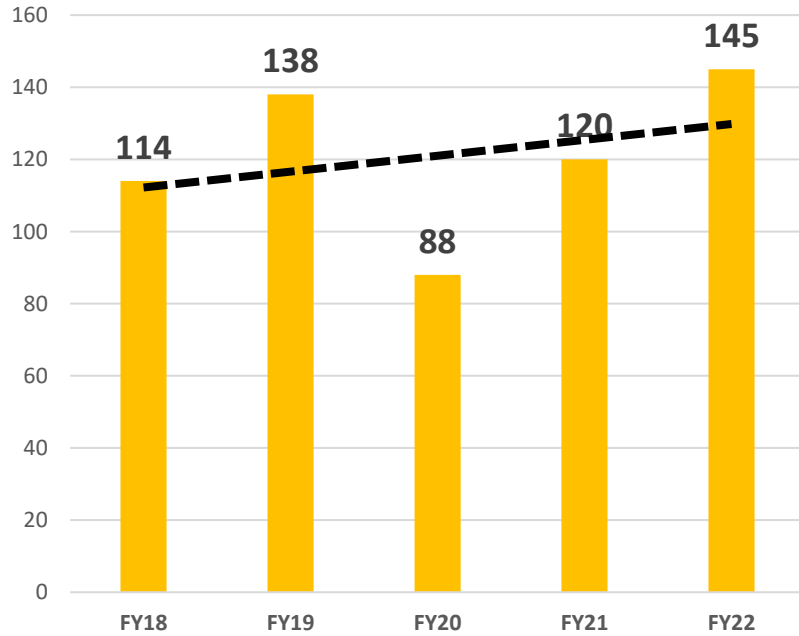
Repair Applications and Pending Installations



- Costs of repairs range from \$500-\$21,000
- Workload demands on inspectors and contractors
- Supply chain issues
- Lengthy process to pursue legally required mitigation through courts

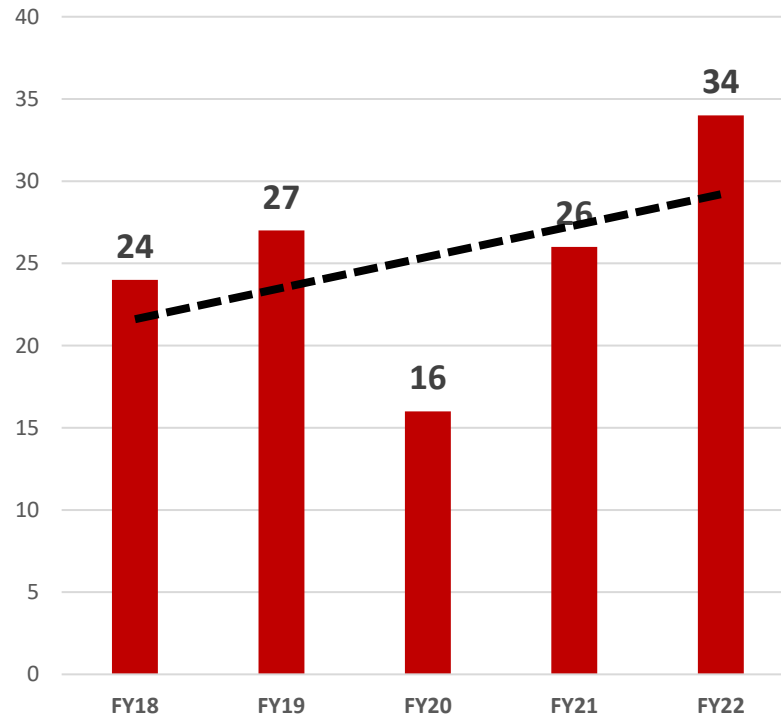


Complaints Received

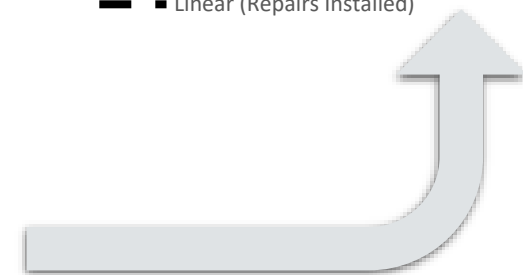
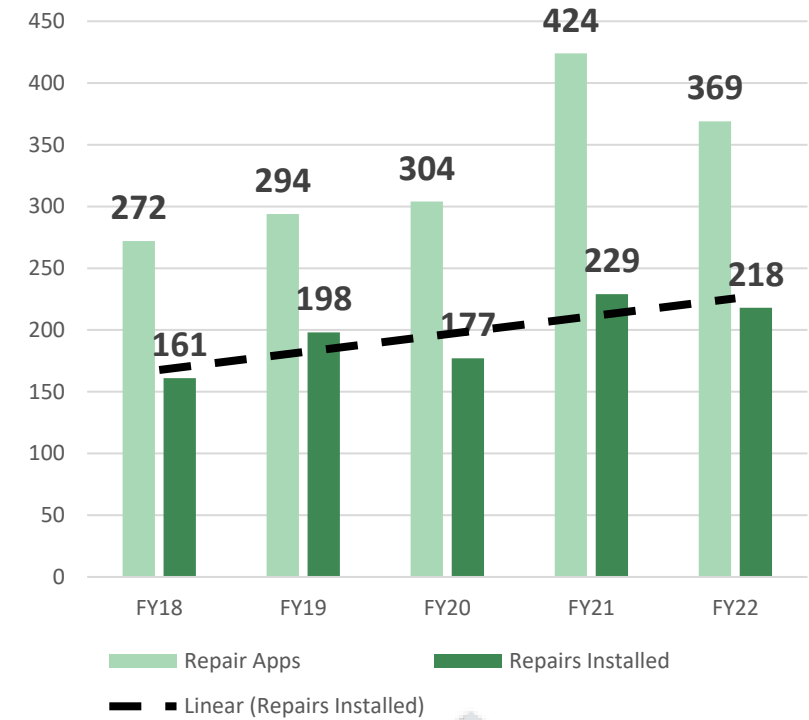


Trends

Notice of Violation Issued



Repair Applications and Completion



What are we doing to reduce septic system failures?

Septic System Repair Program

Overview	Eligibility Criteria	Application Selection
<ul style="list-style-type: none">• \$75,000 included in the FY23 budget to address failing septic systems• Program will fund 100% of septic repair cost• Using FY22 data, there are 98 repairs and 20 notices of violations that may benefit from this program	<ul style="list-style-type: none">• Property (land and home) is owner-occupied, 12 months out of the year• Income does not exceed 80% of Area Median Income• Liquid reserve amount does not exceed 50% of income• Bids from 3 contractors have been solicited• Once EH verifies repair work is complete, Permits & Inspection will pay the contractor• Owner must occupy home for 3 years after repair installation; County will have a diminishing lien secured by a Deed of Trust	<ul style="list-style-type: none">• Property has a history of septic issues• Failure is contaminating water supply• Cost of repair• Quantity of wastewater surfacing• Location of failure

Water Quality Goal Setting

Sample Goal:

- Improve water quality in the French Broad River by reducing
 1. Fecal coliform by X% by X (year) and
 2. Sedimentation by X% by X (year)

Possible Actions for reducing fecal coliform:

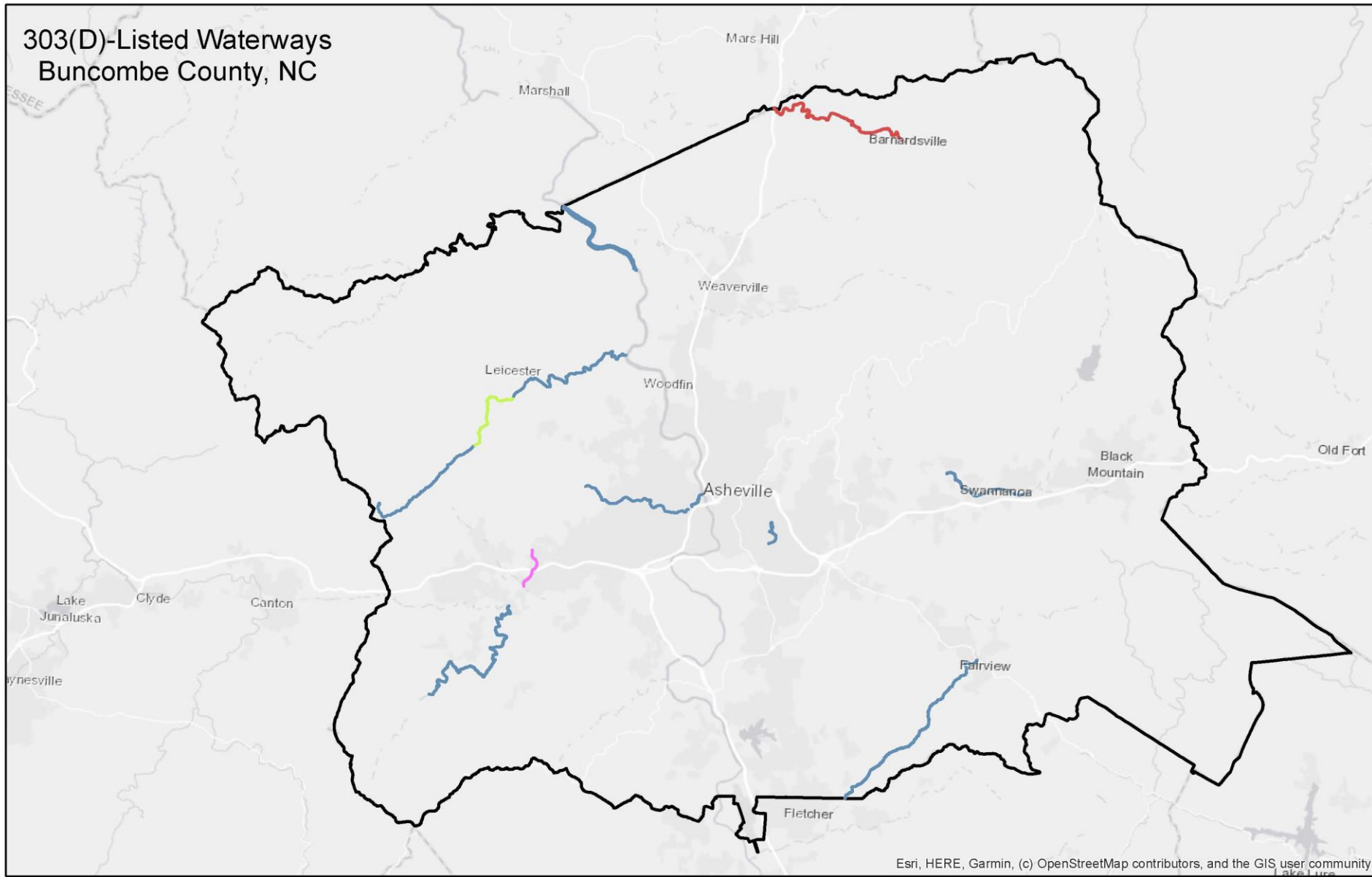
- Implement septic system repair program
- Establish riparian buffers (work with partner agencies)

Possible Actions for reducing sedimentation:

- Establish riparian buffers
- Increase erosion control and stormwater permit inspections
- Annual debris removal and streambank stabilization projects







303(D)-Listed Waterways Buncombe County, NC



Sample Map Layer

Parameter(s)

-  Benthos
-  Benthos, Fish Community
-  Fecal Coliform
-  Turbidity

