Stream Restoration Projects Receive Duplicative State Funding and Inadequate Performance Management

A presentation to the Joint Legislative Program Evaluation Oversight Committee

March 11, 2019

Jim Horne, Principal Program Evaluator
Handouts

The Full Report

Today’s Slides

Two Handouts
Our Charge

Evaluate efficiency and effectiveness of the grant application process for stream restorations administered by DEQ’s Division of Water Resources under Natural Resources Conservation Service’s Environmental Quality Incentives Program (NRCS-EQIP)

Team included Jake Ford and Sean Hamel
Overview: Three Findings

1. State funding for Western Stream Initiative projects is duplicative, which challenges program transparency and has resulted in overpayment of grant funds

2. Performance of WRDG-EQIP grants is not actively monitored; available performance measures indicate diminishing results

3. WRDG-EQIP grant award calculations are imprecise and have the potential of overawarding funds
Overview: Three Recommendations

The General Assembly should

1. Consolidate grant resources for WSI projects into WRDG-EQIP or CWMTF

2. Direct WSI grant administrator to improve performance management of state grant funds

3. Direct State Auditor to perform audit of state funds for WSI projects
Background
What is Stream Restoration?

Stream restoration is the practice of restoring the natural function of the stream corridor and improving water quality by reducing sedimentation to streams from the streambank.
Stream Restoration Projects Have Four Components or Phases

1. Planning, Site Assessment, and Design
2. Permitting
3. Construction
4. Oversight and Administration
Before Stream Restoration

Photo Courtesy of DEQ
After Stream Restoration

Photo Courtesy of DEQ
Federal and State EQIP for Stream Restoration Projects Involves Several Components and Stakeholders

**Federal**
- USDA-NRCS Conservation Programs
  - Federal funds reimburse up to 75% of stream restoration construction costs for the Western Stream Initiative
- Farm Bill
- Healthy Forests Reserve Program (HFRP)
- Agricultural Conservation Easement Program (ACEP)
- Conservation Stewardship Program (CSP)
- Environmental Quality Incentives Program (EQIP)

**State**
- North Carolina Department of Environmental Quality (DEQ) Division of Water Resources (DWR)
- WRDG-EQIP Stream restoration funds match up to 100% of the federal reimbursement
- Water Resources Development Grant Program (WRDG)

**Fund Integrators**
- Clean Water Management Trust Fund (CWMTF)
  - Restortion
  - Acquisition
  - Innovative Stormwater
  - SWCDs serve as the Unit of Local Government and provide a local resolution to each WRDG-EQIP project

**Soil and Water Conservation District (SWCD)**
- General Navigation
- Water-Based Recreation
- Water Management
- Stream Restoration
- Feasibility/Engineering Studies
- Recreational Navigation
- Stream Restoration

**North Carolina Department of Natural and Cultural Resources**
- State Clean Water Management Trust funds provide regional funds for Western Stream Initiative projects

Report p. 5
NRCS-EQIP Obligated $21.7 Million in NC in 2017 for a Variety of Conservation Practices

- Confined Animal: 28%
- Western Stream Initiative: 14%
- Cropland: 14%
- Pastureland: 10%
- Other: 5%
- National Water Quality Initiative: 2%
- Seasonal High Tunnel: 4%
- On Farm Energy: 4%
- Socially Disadvantaged: 4%
- Forestry: 4%
- Long Leaf Pine: 4%
- Beginning Farmer: 7%
- On Farm Energy: 4%
- Seasonal High Tunnel: 4%
- National Water Quality Initiative: 2%
- Other: 5%
General Assembly Has Appropriated $8.5 Million to WRDG-EQIP Program Since It Began in 2013

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Millions</td>
<td>$1.5</td>
<td>$2.0</td>
<td>$1.0</td>
<td>$2.0</td>
<td>$2.0</td>
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</tbody>
</table>

Report p. 9
67 Projects Have Been Awarded Grants Since WRDG-EQIP Began
All of the WRDG-EQIP Projects Have Taken Place in 22 of the 31 WSI Counties

Report p.10
Resource Institute is an Integrator

• Non-profit corporation in Winston-Salem
• Petitioned NRCS-EQIP to establish federal funding for Western Stream Initiative in 2013
• Approached DEQ/NCGA in 2013 to establish a matching state fund for stream restorations
• Sole applicant for WRDG-EQIP grants prior to Fall 2016 grant cycle
• Awarded 65 of 67 WRDG-EQIP projects

Report pp. 11-12
Findings

Photo Courtesy of DEQ
Finding 1

State funding for WSI projects is duplicative, which challenges program transparency and has resulted in overpayment of grant funds

Report p. 13
Resource Institute Has Received Over $2.5 Million in CWMTF Regional Grants for WSI Stream Restorations

<table>
<thead>
<tr>
<th>Grant Year</th>
<th>Project Name</th>
<th>Award Amount</th>
</tr>
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<tbody>
<tr>
<td>2013</td>
<td>Resource Institute-Western Stream Restoration Initiative</td>
<td>$375,000</td>
</tr>
<tr>
<td>2014</td>
<td>Resource Institute-Western Stream Restoration Initiative</td>
<td>400,000</td>
</tr>
<tr>
<td>2015</td>
<td>Resource Institute-Western Stream Restoration Initiative</td>
<td>400,000</td>
</tr>
<tr>
<td>2016</td>
<td>Resource Institute-Western Stream Restoration Initiative</td>
<td>450,000</td>
</tr>
<tr>
<td>2017</td>
<td>Resource Institute-Western Stream Restoration Initiative</td>
<td>500,000</td>
</tr>
<tr>
<td>2018</td>
<td>Resource Institute-Western Stream Restoration Initiative</td>
<td>425,000</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>$2,550,000</strong></td>
</tr>
</tbody>
</table>
WRDG-EQIP and CWMTF Both Provided Funding for 13 Projects in FY 2014–15

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Project Sponsor</th>
<th>WRDG-EQIP Dollars Paid</th>
<th>CWMTF Dollars Paid</th>
<th>Number of Identical Invoices Submitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beaver Creek</td>
<td>New River SWCD (Ashe)</td>
<td>$58,762</td>
<td>$19,000</td>
<td>2</td>
</tr>
<tr>
<td>North Toe River</td>
<td>Avery County SWCD</td>
<td>43,613</td>
<td>58,802</td>
<td>0</td>
</tr>
<tr>
<td>Big Sandymush Creek</td>
<td>Buncombe County SWCD</td>
<td>62,740</td>
<td>1,173</td>
<td>0</td>
</tr>
<tr>
<td>Little Brasstown Creek</td>
<td>Cherokee County SWCD</td>
<td>64,674</td>
<td>93,870</td>
<td>4</td>
</tr>
<tr>
<td>Brasstown Creek</td>
<td>Clay County SWCD</td>
<td>11,678</td>
<td>15,249</td>
<td>0</td>
</tr>
<tr>
<td>Dotson Branch</td>
<td>Haywood County SWCD</td>
<td>350,893</td>
<td>137,173</td>
<td>39</td>
</tr>
<tr>
<td>Cove &amp; Tessentee Creeks</td>
<td>Macon County SWCD</td>
<td>50,991</td>
<td>54,621</td>
<td>2</td>
</tr>
<tr>
<td>Big Rock Creek</td>
<td>Mitchell County SWCD</td>
<td>66,301</td>
<td>37,500</td>
<td>2</td>
</tr>
<tr>
<td>Cleghorn Creek</td>
<td>Rutherford County SWCD</td>
<td>44,326</td>
<td>51,382</td>
<td>0</td>
</tr>
<tr>
<td>Big Creek</td>
<td>Stokes County SWCD</td>
<td>94,410</td>
<td>39,843</td>
<td>0</td>
</tr>
<tr>
<td>Little Fisher River</td>
<td>Surry County SWCD</td>
<td>114,728</td>
<td>57,557</td>
<td>0</td>
</tr>
<tr>
<td>Tributary of Little Fisher</td>
<td>Surry County SWCD</td>
<td>54,667</td>
<td>37,251</td>
<td>0</td>
</tr>
<tr>
<td>Swisher Creek</td>
<td>Yadkin County SWCD</td>
<td>76,981</td>
<td>17,000</td>
<td>2</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td></td>
<td><strong>$1,094,764</strong></td>
<td><strong>$620,421</strong></td>
<td><strong>51</strong></td>
</tr>
</tbody>
</table>
Having Two Sources of State Funding for Same Projects Has Led to $20,816 in Overpayment

<table>
<thead>
<tr>
<th>County</th>
<th>Project</th>
<th>Total Invoices</th>
<th>WRDG-EQIP Paid</th>
<th>CWMTF Paid</th>
<th>Total Paid</th>
<th>Amount Paid More Than Invoices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macon</td>
<td>Cove/Tessentee</td>
<td>$102,296</td>
<td>$50,991</td>
<td>$54,621</td>
<td>$105,612</td>
<td>$3,316</td>
</tr>
<tr>
<td>Mitchell</td>
<td>Big Rock Creek</td>
<td>86,301</td>
<td>66,301</td>
<td>37,500</td>
<td>103,801</td>
<td>17,500</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>$188,597</td>
<td>$117,292</td>
<td>$92,121</td>
<td>$209,413</td>
<td>$20,816</td>
</tr>
</tbody>
</table>

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Example of Duplicative Funding
Big Rock Creek Project – Mitchell County

Resource Institute Request for Payment

Invoice #5
Management and Administration $12,000

Invoice #4
Management and Administration $6,500

Invoice #3
Site Assessment, Design, Permitting, Final Plans $37,801

Invoice #2
Construction Observation and Oversight $20,000

Invoice #1
Pre-Planning $10,000

WRDG-EQIP

$66,301

Clean Water Management Trust Fund

$27,500

Total Paid to Resource Institute $103,801

Overpayment of $17,500

Total Value $86,301

$10,000

$10,000

$66,301

$27,500
WSI Stream Restoration Grants Are Awarded with Different Levels of Recipient Specificity

- NRCS-EQIP
- WRDG-EQIP
- Clean Water Management Trust Fund

Land Owner -> Multi-Land Projects

Multi-Land Projects -> Regional Projects
Finding 2

DEQ’s Division of Water Resources does not actively monitor the performance of WRDG-EQIP grants; available grant performance measures show diminishing results
DEQ Does Not Actively Manage Key Performance Indicators of WRDG-EQIP Grants

<table>
<thead>
<tr>
<th>Key Performance Indicator</th>
<th>Description</th>
<th>Actively Managed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time to issue grant</td>
<td>Number of days it takes DEQ administrators to review and issue determinations</td>
<td>O</td>
</tr>
<tr>
<td>application approval/denial</td>
<td>on grant applications</td>
<td></td>
</tr>
<tr>
<td>Request for payment</td>
<td>Number of days it takes DEQ administrators to process requests for payment</td>
<td>O</td>
</tr>
<tr>
<td>processing time</td>
<td>from approved grant applicants</td>
<td></td>
</tr>
<tr>
<td>Cost per grant administered</td>
<td>Full-Time Equivalent expended to administer each grant placed in the field</td>
<td>O</td>
</tr>
<tr>
<td>Number of applicants</td>
<td>Ratio of applicants to approvals and to denials</td>
<td>O</td>
</tr>
<tr>
<td>reviewed and approved/denied</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of grants</td>
<td>Number of grants administered each year</td>
<td>●</td>
</tr>
<tr>
<td>administered</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total WRDG-EQIP</td>
<td>Number of grants for a given year considered alongside total grant dollars</td>
<td>●</td>
</tr>
<tr>
<td>grant dollars administered</td>
<td>administered, which allows for a measure of the size of the average grant,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>enabling DEQ to determine if grants are getting larger or smaller in general</td>
<td></td>
</tr>
<tr>
<td></td>
<td>over time</td>
<td></td>
</tr>
<tr>
<td>Project construction cost</td>
<td>Total cost of construction for a stream restoration project from all funding</td>
<td>O</td>
</tr>
<tr>
<td>Project permitting cost</td>
<td>Total cost of permitting for a stream restoration project from all funding</td>
<td>O</td>
</tr>
<tr>
<td>Project site assessment,</td>
<td>Total cost of project site assessment, design, and engineering for a</td>
<td>O</td>
</tr>
<tr>
<td>design, and engineering</td>
<td>stream restoration project from all funding sources</td>
<td></td>
</tr>
<tr>
<td>costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project management and</td>
<td>Total cost of project management and administration for a stream</td>
<td>O</td>
</tr>
<tr>
<td>administration</td>
<td>restoration project from all funding sources</td>
<td></td>
</tr>
<tr>
<td>Project cost</td>
<td>Total cost of a stream restoration project from all sources of funding</td>
<td>O</td>
</tr>
</tbody>
</table>

| Measures of Grant         | Description                                                                 | Actively Managed |
| Implementation Efficiency  | Efficiency and Effectiveness                                               |                  |
| Linear feet restored      | Early outcome measures of how many linear feet of stream were restored with  | ●                |
|                           | grant dollars                                                               |                  |
| Cost/liner foot of restored stream | Cost of the restoration (per grant dollar expended) divided by linear feet of stream restored, this calculation translates the grant project into a per-unit cost that can be compared across projects | O                |
| Sediment reduction        | A measure of the extent to which a project has reduced sediment load along  | O                |
|                           | and just below the restored portion                                          |                  |

- ● = Actively Managed
- □ = Partially Managed
- O = Not Managed
Number of Grants Has Declined Since WRDG-EQIP Began in 2013

58% Decline
Number of Planned Linear Feet of Restoration Has Declined Since WRDG-EQIP Began in 2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Restored Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>40,825</td>
</tr>
<tr>
<td>2014-15</td>
<td>59,469</td>
</tr>
<tr>
<td>2015-16</td>
<td>15,335</td>
</tr>
<tr>
<td>2016-17</td>
<td>23,917</td>
</tr>
</tbody>
</table>

41% Decline
Average Cost Per Linear Foot for WRDG-EQIP Grants Has Increased by 30% Since 2013

30% Increase
FY 2014 to 2017

$30
$35
$39

17% Increase
11% Increase

2013-14
2014-15
2015-16
2016-17
Finding 3

WRDG-EQIP grant award calculations do not rely on historical project cost data, which results in imprecise awards and potential overawarding of funding for stream restoration

Report p. 23
Since Its Inception, Cost-Share Structure of WRDG-EQIP Program Has Changed

Cost Share (Federal/State)

- FY 2013–14 and 2014–15 75-25
- FY 2018–19 50-50

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Example of How $130,000 Stream Restoration Project Can Be Awarded $150,000 in State/Federal Funding

- Construction Cost: $100,000
- Estimated 75% Construction Cost: $75,000 (NRCS-EQIP Award)
- Overaward: $20,000

Funding Streams
- $75,000 NRCS-EQIP Award
- $75,000 WRDG-EQIP Award

WRDG-EQIP Maximum Award Matches NRCS-EQIP Amount
Recommendations
Recommendation 1

The General Assembly should minimize the risks of grant duplication by consolidating grant resources for the Western Stream Initiative into either the Water Resources Development Grant (WRDG-EQIP) program or the Clean Water Management Trust Fund.
Recommendation 1 (Cont’d.)

• All efforts to eliminate duplication and to improve administration of state grants should be reported to the Joint Legislative Oversight Committee on Agriculture and Natural and Economic Resources
Recommendation 2

The General Assembly should direct the grant administrator for the Western Stream Initiative to improve performance management of state grant funds
Recommendation 2 (Cont’d.)

• Grant administrator should collect and report all data listed in Exhibit 11 of this report

• First report for FY 2019–20 data should be submitted to the Joint Legislative Oversight Committee on Agriculture and Natural and Economic Resources by November 1, 2020
Recommendation 3

The General Assembly should direct the State Auditor to perform an audit of state funds for projects managed by Resource Institute for the Western Stream Initiative.
Recommendation 3 (Cont’d.)

The General Assembly should

• Direct the State Auditor to identify any additional overpayment of state funds

• Direct the appropriate state agency to recoup any overpayment identified in this report and by the State Auditor
Summary: Findings

1. State funding for WSI projects is duplicative, which challenges program transparency and has resulted in overpayment of grant funds.

2. Performance of WRDG-EQIP grants is not actively monitored; diminishing results.

3. WRDG-EQIP grant award calculations are imprecise and have the potential of overawarding funds.
Summary: Recommendations

The General Assembly should

1. Consolidate grant resources for WSI projects into WRDG-EQIP or CWMTF

2. Direct WSI grant administrator to improve performance management of state grant funds

3. Direct State Auditor to perform audit of state funds for WSI projects
Report available online at
www.ncleg.net/PED/Reports/reports.html