

**Stream Restoration Projects Receive Duplicative  
State Funding and Inadequate Performance  
Management**



**Final Report to the Joint Legislative  
Program Evaluation Oversight Committee**

**Report Number 2019-04**

**March 11, 2019**



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March 11, 2019

Senator Brent Jackson, Co-Chair, Joint Legislative Program Evaluation Oversight Committee  
Representative Craig Horn, Co-Chair, Joint Legislative Program Evaluation Oversight Committee

North Carolina General Assembly  
Legislative Building  
16 West Jones Street  
Raleigh, NC 27601

Honorable Co-Chairs:

The 2018 Work Plan of the Joint Legislative Program Evaluation Oversight Committee directed the Program Evaluation Division to evaluate the efficiency and effectiveness of the grant application process for stream restorations administered by the Division of Water Resources of the Department of Environmental Quality under the Natural Resources Conservation Service's (United States Department of Agriculture) Environmental Quality Incentives Program. This voluntary program provides grants for stream restorations conducted on agricultural or non-industrial forest lands.

I am pleased to report that the Department of Environmental Quality cooperated with us fully and was at all times courteous to our evaluators during the evaluation.

Sincerely,

A handwritten signature in black ink, appearing to read "John W. Turcotte".

John W. Turcotte  
Director



# PROGRAM EVALUATION DIVISION

## NORTH CAROLINA GENERAL ASSEMBLY

March 2019

Report No. 2019-04

# Stream Restoration Projects Receive Duplicative State Funding and Inadequate Performance Management

## Summary

As directed by the Joint Legislative Program Evaluation Oversight Committee, the Program Evaluation Division evaluated the efficiency and effectiveness of the grant application process for stream restorations administered by the Department of Environmental Quality's (DEQ's) Division of Water Resources under the Natural Resources Conservation Service's Environmental Quality Incentives Program (NRCS-EQIP).

**State funding for Western Stream Initiative (WSI) projects is duplicative, which challenges program transparency and has resulted in the overpayment of grant funds to the vendor.** Duplication occurred when two state sources—the Water Resources Development Grant (WRDG) program and the Clean Water Management Trust Fund (CWMTF)—provided funding for identical work activities within a single project. State and federal funding entities use different units of analysis for stream restoration projects. This discrepancy challenges transparency, causes administrative difficulties, and increases the State's risk of overpayment.

**DEQ is not actively managing the performance of WRDG-EQIP grants.** Data necessary to demonstrate the grant program's efficiency and effectiveness are not being tracked or reported. Of the data that are tracked, performance trends show diminishing returns for the State's investment in stream restoration. The number of grants administered and number of planned linear feet of restoration has declined. Also, the cost to DEQ per linear foot of stream restoration has increased since the program was implemented.

**WRDG-EQIP grant award calculations do not rely on historical project cost data, which results in imprecise awards and potential overawarding of funding.** Even though the WRDG-EQIP grant application requires stream restoration project cost estimates, poor data collection practices and a suboptimal grant award determination mechanism put the State at risk for overawarding funds.

### To address these findings, the General Assembly should

- minimize the risk of grant duplication by consolidating grant resources with either WRDG-EQIP or the CWMTF;
- direct the WSI Grant Administrator to improve performance management for state grant funds; and
- direct the State Auditor to perform an audit of state funds for WSI projects managed by Resource Institute to identify any additional overpayments and direct the appropriate state agency to recoup overpayments.

## Mandatory Evaluation Components

### Report No. 2019-04, Stream Restoration Projects Receive Duplicative State Funding and Inadequate Performance Management

N.C. Gen. § 120-36.14 requires the Program Evaluation Division to include certain components in each of its evaluation reports, unless exempted by the Joint Legislative Program Evaluation Oversight Committee. The table below fulfills this requirement and, when applicable, provides a reference to the page number(s) where the component is discussed in the report.

N.C. Gen. § 120-36.14 Specific Provision	Component	Program Evaluation Division Determination	Report Page
(b)(1)	Findings concerning the merits of the program or activity based on whether the program or activity		
(b)(1)(a)	Is efficient	<p>Overall, from Fiscal Years 2013–14 to 2016–17, the average cost per linear foot of Water Resources Development Grant-Environmental Quality Incentives Program (WRDG-EQIP) stream restoration projects has increased by 30%, demonstrating a potential reduction in efficiency.</p> <p>From Fiscal Year 2013–14 to 2014–15, the average cost per linear foot of WRDG-EQIP stream restoration increased by 17%, and from Fiscal Year 2014–15 to 2016–17, the cost per linear foot increased by 11%.</p>	22
(b)(1)(b)	Is effective	<p>The overall objective or measurable outcome of stream restoration is the reduction of sediment in rivers, streams, and bodies of water. However, the grant administrator at the Department of Environmental Quality (DEQ) does not track the reduction of sediment in rivers, streams, and bodies of water. As a result, the Program Evaluation Division could not determine the effectiveness of WRDG-EQIP stream restoration outcomes.</p> <p>Analysis of the performance data that was available shows that the number of grants administered and number of planned linear feet of restoration decreased by 58% and 41%, respectively, from Fiscal Year 2013–14 to 2017–18, demonstrating diminishing effectiveness of the program.</p>	22
(b)(1)(c)	Aligns with entity mission	The WRDG program provides grants for water conservation and recreation enhancement across the state. The WRDG program's purpose aligns with the Department of Environmental Quality's mission statement: providing science-based environmental stewardship for the health and prosperity of all North Carolinians.	8
(b)(1)(d)	Operates in accordance with law	The Program Evaluation Division did not detect any operational aspects of the WRDG-EQIP grant program that were not in accordance with state law. However, because DEQ is not actively managing the performance of WRDG-EQIP grants, the program is potentially less likely to detect and report instances of overpayment to and non-compliance by grantees.	19
(b)(1)(e)	Does not duplicate another program or activity	The Program Evaluation Division found duplication of funding. For the Western Stream Initiative, two different state sources have provided funding for identical work activities within a single project. Funds have come from both the Water Resources Development Grant (WRDG) program at the Department of Environmental Quality and from the Clean Water Management Trust Fund (CWMTF) at the Department of Natural and Cultural Resources. As a result, the State is at risk for overpayment.	13-18

(b)(1a)	Quantitative indicators used to determine whether the program or activity		
(b)(1a)(a)	Is efficient	Number of linear feet of stream restoration completed can serve as a proxy output or unit of production for sediment reduction. Using WRDG-EQIP grant costs and planned number of linear feet of stream restoration, the Program Evaluation Division analyzed the cost per linear foot of stream restored and determined this cost is increasing.	20
(b)(1a)(b)	Is effective	The program should but does not measure effectiveness based on a reduction of sediment in rivers, streams, and bodies of water compared to standard and historical baselines.	20
(b)(1b)	Cost of the program or activity broken out by activities performed	The Program Evaluation Division estimates that the total cost for DEQ to operate EQIP is \$20,691, including \$18,555 in state appropriations, \$1,526 in federal funding, and \$610 in receipts.	8
(b)(2)	Recommendations for making the program or activity more efficient or effective	Recommendation 2 states that the General Assembly should direct the grant administrator for the Western Stream Initiative to strengthen performance management of state grant funds. To ensure performance of Western Stream Initiative grants is being actively managed, the grant administrator should be directed to collect and report all data listed in Exhibit 11 of the report. All efforts to measure the effectiveness and efficiency of grants for the Western Stream Initiative should be included in an annual report to the General Assembly.	27
(b)(2a)	Recommendations for eliminating any duplication	<p>Recommendation 1 states that the General Assembly should minimize the risks of grant duplication by consolidating grant resources for the Western Stream Initiative into either WRDG-EQIP or the CWMTF.</p> <p>Should the General Assembly choose to move funding for the existing WRDG-EQIP program to CWMTF, it should direct CWMTF to eliminate the use of the regional grant model. The CWMTF should require applicants for Western Stream Initiative grants to apply for grant resources on a project-by-project basis.</p> <p>Should the General Assembly decide to move the CWMTF stream restoration grants for the Western Stream Initiative to the existing WRDG-EQIP program, it should direct WRDG-EQIP to eliminate the use of the current grant award mechanism and require that grant awards for the Western Stream Initiative projects be based on historical cost data.</p>	27
(b)(4)	Estimated costs or savings from implementing recommendations	None	N/A

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## Purpose and Scope

The Joint Legislative Program Evaluation Oversight Committee directed the Program Evaluation Division to undertake this evaluation as part of its 2018 Work Plan. This project evaluates the efficiency and effectiveness of the grant application process for stream restorations administered by the Division of Water Resources of the Department of Environmental Quality under the Natural Resources Conservation Service's (United States Department of Agriculture) Environmental Quality Incentives Program. This voluntary program provides grants for stream restorations conducted on agricultural or non-industrial forest lands.

Three research questions guided this evaluation.

1. What is the Environmental Quality Incentives Program (EQIP) grant application process for stream restorations administered by the Department of Environmental Quality?
2. Is the EQIP grant application process for stream restorations effective?
3. What opportunities exist to improve the efficiency of the EQIP grant application process for stream restorations?

The Program Evaluation Division collected data from several sources including

- analysis of stream restoration project data including grant applications, awards, payments, and invoices;
- analysis of stream restoration grant performance management data;
- interviews with management and staff from the following organizations:
  - Department of Environmental Quality,
  - Resource Institute,
  - Clean Water Management Trust Fund,
  - Natural Resources Conservation Service-Environmental Quality Incentives Program at the United States Department of Agriculture, and
  - Division of Soil and Water Conservation Division at the North Carolina Department of Agriculture and Consumer Services;
- survey of 22 local Soil and Water Conservation Districts in Western North Carolina that participated in WRDG-EQIP stream restoration projects;
- physical inspections and observation of three stream restoration project sites;
- review of laws governing the regulation and reporting requirements for North Carolina stream restoration EQIP projects; and
- review of professional literature and academic journals.

## Glossary

The following terms, defined below, will be used throughout this report.

- **CWMTF** – Clean Water Management Trust Fund
- **DEQ** – Department of Environmental Quality
- **NRCS-EQIP** – the Natural Resources Conservation Service’s Environmental Quality Incentives Program, a federal program managed by the United States Department of Agriculture
- **SWCD** – Soil and Water Conservation District
- **WRDG-EQIP** – the Water Resources Development Grant Environmental Quality Incentives Program, a state program managed by DEQ’s Division of Water Resources
- **WSI** – Western Stream Initiative

## Background

**Stream restoration involves the use of bioengineering practices, native material revetments, channel stability structures, and the restoration or management of riparian corridors to restore the natural function of the stream corridor and improve water quality by reducing sedimentation to streams from the streambank.**<sup>1</sup> Stream restoration can accomplish several goals and objectives including

- providing habitat enhancement for native or sport fishes;
- preventing streambank erosion to protect properties and infrastructure;
- restoring hydrologic function;<sup>2</sup>
- slowing the procession of head cutting in a watershed, protecting upland areas and infrastructure, and reducing sediment delivery to downstream reaches;<sup>3</sup>
- narrowing an overly-wide channel and decreasing the width/depth ratio of the stream;
- improving elements of water quality such as excessive temperature, nutrients, sediment, salts, and metals;
- removing non-native riparian vegetation and replacing it with more endemic species;
- reestablishing a sinuous channel from a channelized reach,<sup>4</sup> and
- establishing stream reaches capable of transporting the available sediment supply.

Stream restorations consist of four components: (1) Planning, Site Assessment, and Design; (2) Permitting; (3) Construction; and (4) Oversight and Administration. Exhibit 1 provides images of projects both before and after restoration.

<sup>1</sup> Revetments are sloping structures placed on banks or cliffs in such a way as to absorb the energy of incoming water.

<sup>2</sup> The hydrologic function is the continuous process by which water is circulated throughout the Earth and its atmosphere. The Earth’s water enters the atmosphere through evaporation from bodies of water and from ground surfaces. Plants and animals also add water vapor to the air by transpiration.

<sup>3</sup> A head cut is a physical feature found in a stream that occurs where there is an abrupt vertical drop in the streambed that causes the stream to lose access to its floodplain, thereby accelerating erosion.

<sup>4</sup> A sinuous stream channel is characterized by being winding with many curves, bends, and turns.



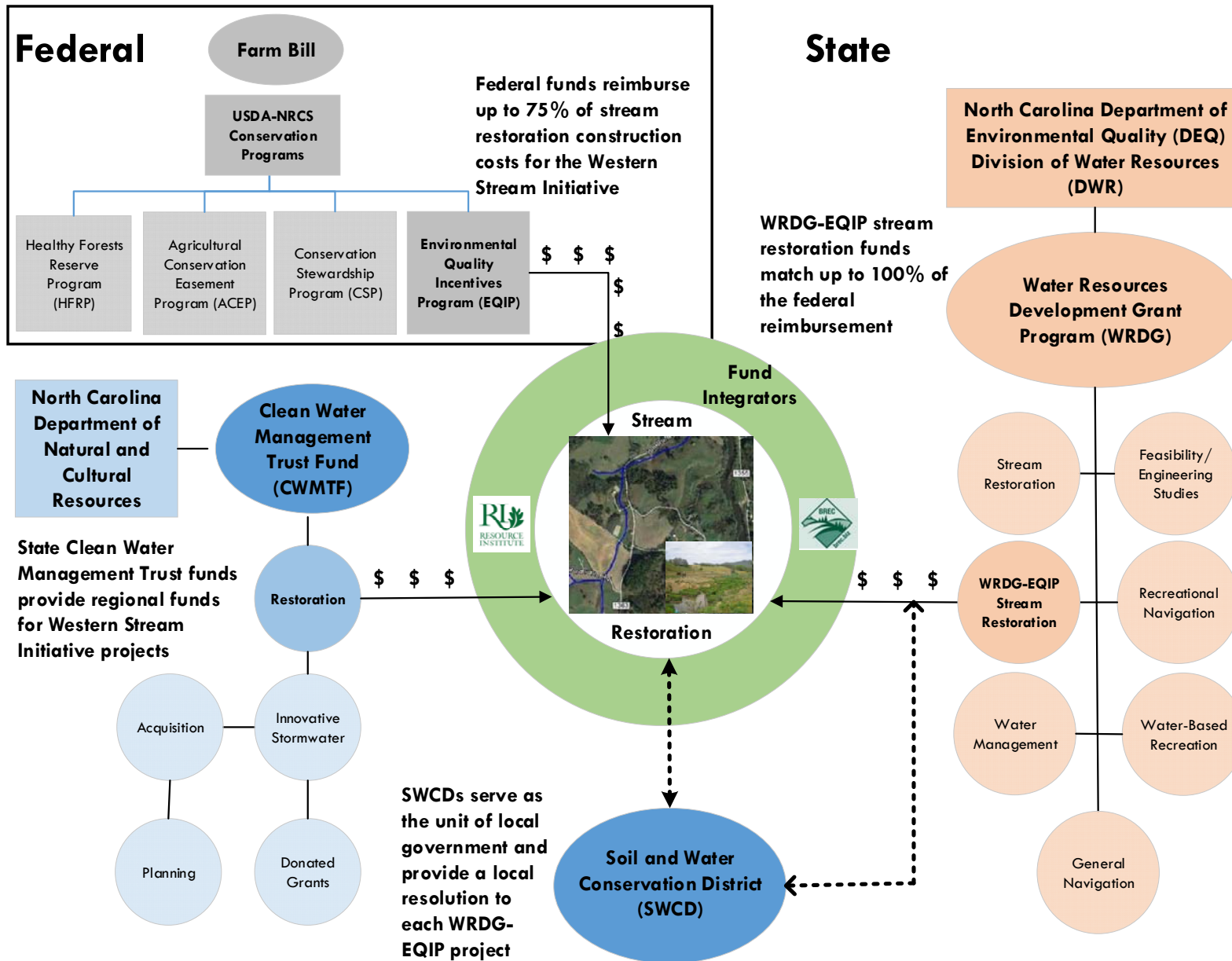
## Exhibit 1: Before and After Photos of Stream Restoration Projects



Source: Program Evaluation Division based on professional literature and academic journals.

Exhibit 2 provides a summative overview of the numerous components and stakeholders involved in the federal and state Environmental Quality Incentives Program (EQIP) process for stream restoration projects.

Exhibit 2: The Federal and State Environmental Quality Incentives Program (EQIP) for Stream Restoration Projects Involves Several Components and Stakeholders



Source: Program Evaluation Division based on data from NRCS-EQIP, WRDG-EQIP, and the Clean Water Management Trust Fund.

**The United States Department of Agriculture's (USDA's) Natural Resources Conservation Service (NRCS) provides resources for stream restoration through the Environmental Quality Incentives Program (EQIP).** NRCS-EQIP is a voluntary federal financial and technical assistance program for farmers and landowners. This program provides resources for eligible landowners performing a variety of land and resource conservation practices including stream restoration. The Federal Agriculture Improvement and Reform Act of 1996 (also known as the Farm Bill) created NRCS-EQIP and NRCS-EQIP has been reauthorized in every subsequent Farm Bill.<sup>5</sup> Nationally, NRCS-EQIP funding totaled over \$1.25 billion in Fiscal Year 2016–17, \$21.7 million of which went towards NRCS-EQIP projects in North Carolina via a total of 717 NRCS-EQIP contracts.

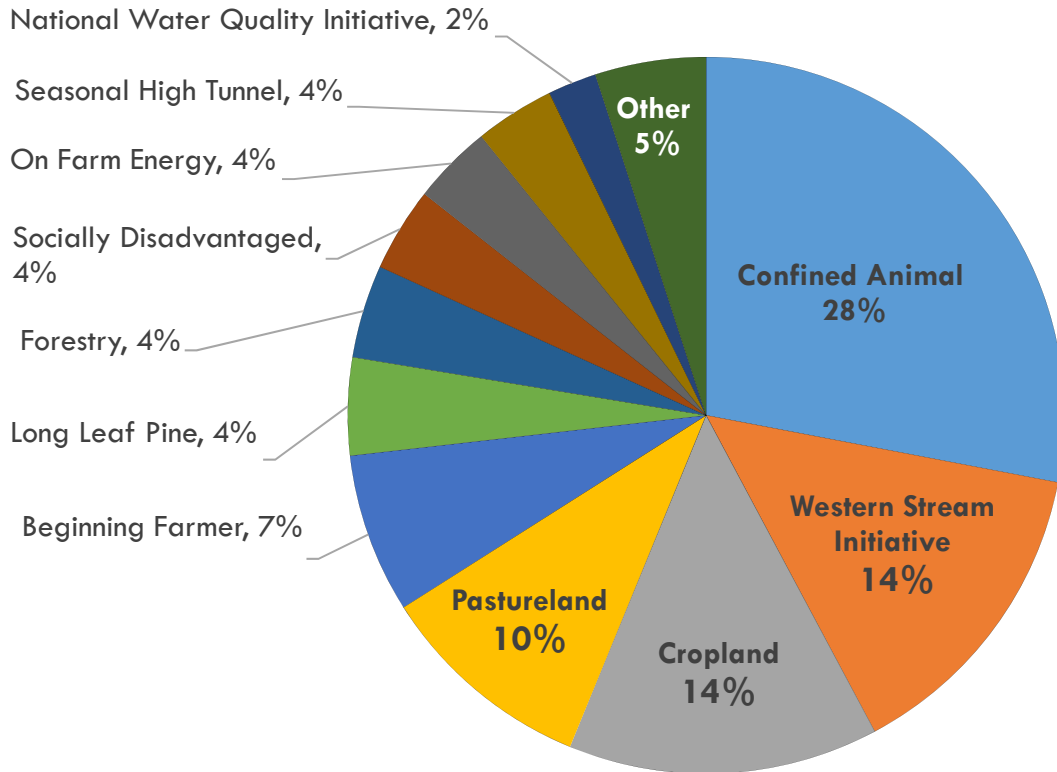
As shown in Exhibit 3, in North Carolina, NRCS implements EQIP for a series of land management, conservation, and restoration purposes. These purposes may be unique to each state. The exhibit shows the amount of funding by percentage for each purpose in North Carolina. Of particular interest in this report are EQIP funds for the Western Stream Initiative, which is unique to North Carolina. In North Carolina, two-thirds of NRCS-EQIP spending is concentrated in the following areas: Confined Animal Systems, Cropland, Pastureland, and the Western Stream Initiative. The Western Stream Initiative is the source of federal NRCS-EQIP funds used for stream restoration projects within 31 of the western counties in North Carolina.<sup>6</sup>

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<sup>5</sup> Public Law 104-127.

<sup>6</sup> The 31 western North Carolina counties are Alexander, Alleghany, Ashe, Avery, Buncombe, Burke, Caldwell, Catawba, Cherokee, Clay, Cleveland, Graham, Haywood, Henderson, Iredell, Jackson, Lincoln, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Stokes, Surry, Swain, Transylvania, Watauga, Wilkes, Yadkin, and Yancey.

### Exhibit 3: NRCS-EQIP Obligated \$21.7 Million in North Carolina in 2017 for a Variety of Conservation Practices



Note: The Other category includes six categories that each represent less than one percent of total funding. These six categories are AG Chemical Handling, Golden Winged Warbler, Micro-Irrigation, Northern Bobtail Quail, Organic, and Wildlife.

Source: Program Evaluation Division based on data provided by the North Carolina Office of the USDA NRCS-EQIP.

NRCS technical staff visit approved applicants and develop a framework for the intended conservation work to be completed on the property. This framework is called the conservation action plan. Each action plan identifies the relevant conservation practices needed to help the farmer better manage the natural resources on his or her property and must be approved by NRCS. An NRCS conservationist meets with the farmer to evaluate the soil, water, air, plant, and animal resources on the property and offers remedies to address and improve natural resource conditions. The remedies selected are recorded in the conservation action plan, which includes a schedule for installation. NRCS has established over 200 conservation practices and corresponding payment schedules based on best management practices designed to address a number of environmental and agricultural production concerns.<sup>7</sup>

NRCS then provides funding for up to 75% or 90% of the estimated construction costs of the stream restoration project. NRCS-EQIP pays grant dollars to landowners based on a pre-defined payment schedule after all

<sup>7</sup> Only about 10 of the 200 total NRCS conservation practices apply to stream restoration projects.

work has been completed. Aside from calculating this payment schedule on a regional basis, NRCS does not consider whether these payment rates are greater than or less than the actual costs incurred for each restoration practice on an individual project. NRCS does not require the applicant to provide invoices or other documentation to substantiate actual project costs. The total federal award is recorded on the NRCS-CPA-1155 form, referred to as the Conservation Plan and Schedule of Operations. Generally, approximately 75% is paid to landowners; however, 90% can be paid to historically underserved landowners, such as minorities, beginning farmers/ranchers, and socially disadvantaged farmers/ranchers. To reiterate, this federal funding only covers a portion of construction costs.

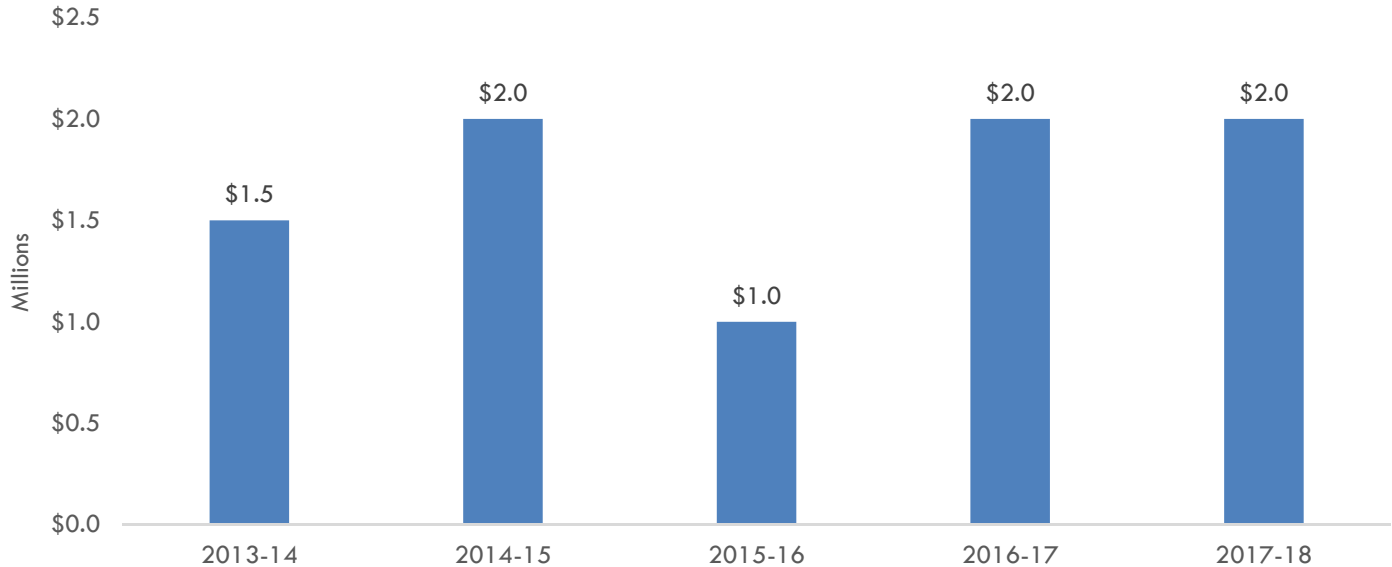
**In 2013, the State of North Carolina established a dedicated source of funds to support NRCS-EQIP stream restoration projects by appropriating \$1.5 million to the Department of Environmental Quality's Division of Water Resources for the Water Resources Development Grant (WRDG) program.**<sup>8</sup> The WRDG program provides grants for water conservation and recreation enhancement across the state, seeking to capitalize on existing federal funds to increase the potential work completed.<sup>9</sup> Since NRCS-EQIP provides up to 75% of the estimated construction costs, WRDG-EQIP is designed to provide funding for the remaining components of stream restoration projects not covered by NRCS-EQIP funds. By statute and rule, DEQ may pay up to 100% of nonfederal costs. Hence, WRDG-EQIP serves as an incentive for farmers to apply for NRCS-EQIP, as state funds will decrease the financial liability on the individual landowner. As shown in Exhibit 4, a total of \$8.5 million has been appropriated to WRDG-EQIP since the General Assembly established the program in 2013. Five DEQ management and staff members work on the grants in a partial capacity along with their other duties. The Program Evaluation Division estimates that the total cost for DEQ to operate EQIP is \$20,691, including \$18,555 in state appropriations, \$1,526 in federal funding, and \$610 in receipts.

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<sup>8</sup> The WRDG grant program includes seven eligible project types: general navigation, recreational navigation, water management, stream restoration, water-based recreation, feasibility/engineering studies, and the EQIP stream restoration program, which provides funding specifically and exclusively for stream restoration projects already receiving federal NRCS funding.

<sup>9</sup> The purpose of the WRDG program aligns with the Department of Environmental Quality's mission statement: providing science-based environmental stewardship for the health and prosperity of all North Carolinians.

## Exhibit 4: North Carolina's General Assembly Has Appropriated a Total of \$8.5 Million to the WRDG-EQIP Program Since It Began in 2013



Source: Program Evaluation Division based on review of N.C. Session Laws.

Since its inception, the cost-share structure of the WRDG-EQIP program has undergone several legislative and state agency modifications.

- For Fiscal Years 2013–14 and 2014–15 projects, the State paid up to 50% of nonfederal costs and maintained a 75-25 cost share (federal/state) of total stream restoration project costs.<sup>10</sup>
- In 2016, the State modified the law to retroactively increase its share to cover up to 100% of nonfederal costs rather than up to 50% of nonfederal costs.<sup>11</sup>
- For Fiscal Years 2016–17 and 2017–18 projects, DEQ modified its maximum grant award contribution to a 65-35 cost share (federal/state).
- For Fiscal Year 2018–19 projects, DEQ lowered its maximum grant award contribution to a 50-50 cost share (federal/state).

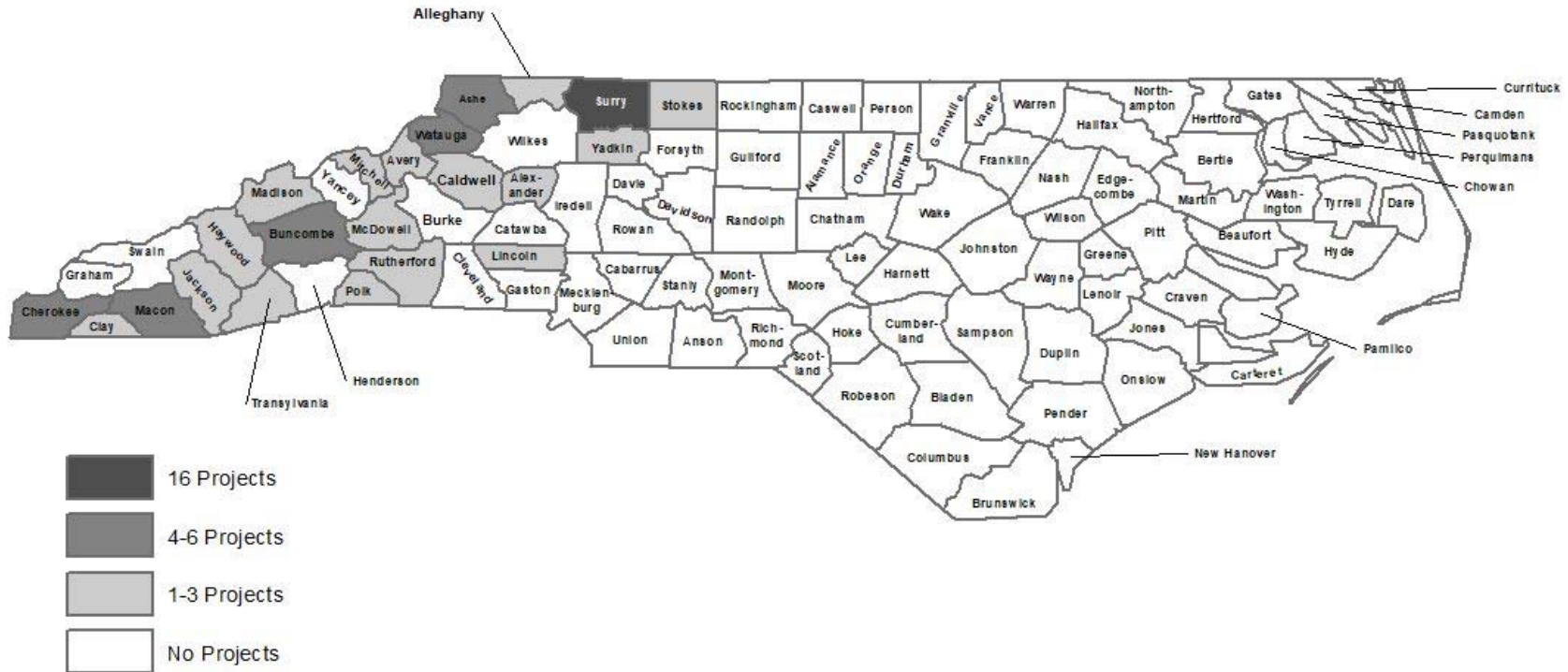
As shown in Exhibit 5, WRDG-EQIP funding is concentrated in the Western part of North Carolina. Although the Western Stream Initiative was designed to assist with NRCS-EQIP stream restoration projects in 31 western counties, since the program's inception, it has only accomplished work in 22 (71%) targeted counties, through a total of 67 projects.<sup>12</sup>

<sup>10</sup> The N.C. General Assembly placed a 50% matching limit of nonfederal costs on WRDG funds during the 2011 legislative session.

<sup>11</sup> N.C. Sess. Law 2016-94, Section 37.2.(e).

<sup>12</sup> There is no requirement for all counties to have WRDG-EQIP funded projects. DEQ selects projects based on applications to the WRDG-EQIP program. The applicant determines the location of projects.

Exhibit 5: Since the State's WRDG-EQIP Program Began, Stream Restoration Projects Have Taken Place in 22 of 31 Western Stream Initiative Counties



Source: Program Evaluation Division based on data from the Department of Environmental Quality.



**The local Soil and Water Conservation Districts (SWCDs) have a role in the WRDG-EQIP grant program.** Under N.C. Gen. Stat. Chapter 139, SWCDs are units of local government that work closely with county, state, and federal governments and both public and private organizations in a non-regulatory capacity to carry out a comprehensive conservation program that protects and improves the county's natural resources while assisting private landowners with conservation practices.

For WRDG-EQIP grants, SWCDs sponsor projects and provide approval to perform projects but do not have an active role in administering projects. From 2013 to 2017, SWCDs served as the unit of local government responsible for sponsoring any stream restoration project being funded by WRDG-EQIP. Any vendor applying for WRDG-EQIP funds was required to receive a resolution from the local SWCD. Additionally, WRDG-EQIP funds were required to be dispersed directly to SWCDs, which would then in turn be dispensed to the landowner or vendor working on behalf of the landowner. Session Law 2017-57 amended this administrative configuration, allowing nongovernmental entities to apply as co-applicants for WRDG-EQIP funding along with SWCDs. Periodic payments are now sent directly to the vendor instead of to the SWCDs upon receipt of a request signed by the SWCD and the vendor.

**The Clean Water Management Trust Fund (CWMTF) also funds grants for stream restoration under the Western Stream Initiative.** The CWMTF was established by the General Assembly in 1996. It is a non-regulatory state organization providing funds to protect and restore North Carolina land and water resources. As discussed further in Finding 1, the CWMTF has awarded grants for stream restoration under the Western Stream Initiative, which also receives state funding from the WRDG-EQIP program.

**Resource Institute (RI) is a nonprofit corporation that focuses on enhancing and restoring streams, rivers, and wetlands and serves as the main vendor for WRDG-EQIP projects.** The nonprofit is included in the scope of this project because the concept for the Western Stream Initiative originated with Resource Institute and because it has been the recipient of 96% of WRDG-EQIP funding for Western Stream Initiative stream restoration projects.

In 2013, Resource Institute petitioned NRCS-EQIP to establish the Western North Carolina Stream Initiative to encourage additional stream restoration projects in Western North Carolina. Resource Institute also approached Department of Environmental Quality officials to establish a matching state fund. The Institute serves as the integrator in the stream restoration process by aggregating resources from federal, state, and local sources.

Resource Institute recruits potential landowners to apply for NRCS-EQIP funds for stream restoration projects on their land and acts as their proxy during the NRCS-EQIP process, directly receiving the federal resources. The nonprofit tries to aggregate contiguous landowners into larger projects, increasing potential funding needs but also achieving economies of scale for fixed costs while improving contiguous stream corridors.

During the construction phase of the stream restoration project, Resource Institute serves as the prime contractor, finding subcontractors to handle



various phases of the project. Resource Institute maintains a vetted and USDA-NRCS-approved list of contractors and selects contractors based on availability and relative need for each project.

Resource Institute serves as the primary recipient of WRDG-EQIP grant funds. Since the establishment of the program, 67 WRDG-EQIP grants have been awarded. Resource Institute was awarded 65 of these projects. Prior to the Fall 2016 award cycle, Resource Institute was the sole applicant for WRDG-EQIP grants. A listing of all WRDG-EQIP projects is included in Appendix A of this report.

**In November 2015, the WRDG Program Manager retired and DEQ asked its Office of General Counsel to evaluate the State EQIP grant program for compliance before hiring a new program manager.** The retiring program manager left minimal electronic records associated with the NRCS grants. During the review process, DEQ decided to cease issuing further grants until the review was completed and problems were resolved. DEQ also asked its Office of Internal Audit to provide technical assistance throughout the evaluation. Payment for ongoing/existing grants was halted subject to direction by session law.

Internal evaluation identified the following issues:

- risk of conflicts of interest,
- awarding of grants without contracts,
- grant increases without authorization,
- lack of clarity about who is the appropriate grantee,
- issues with determination of the state/federal match,
- requirement of 10% payment retainage until project closes, and
- need for partial payment during project implementation.

In December 2017, DEQ representatives stated that all of the above identified issues had been resolved through programmatic and legislative changes. DEQ has issued new grant guidelines and procedures that are intended to further address these concerns and other program risks.<sup>13</sup> In this evaluation, the Program Evaluation Division will examine the efficiency and effectiveness of the WRDG-EQIP grant program after these programmatic adjustments and changes.

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<sup>13</sup> The Office of State Budget and Management Office of Internal Audit performed a limited consultant review of the WRDG-EQIP program, including the revised WRDG-EQIP Guidelines, in July 2018 at the request of DEQ. No weaknesses were noted.

## Findings

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

To summarize the finding below, funds for Western Stream Initiative projects are considered duplicative because two state sources—the Water Resources Development Grant (WRDG) program and the Clean Water Management Trust Fund (CWMTF)—provided funding for identical work activities within a single project. Using a sample, the Program Evaluation Division found the vendor, Resource Institute, submitted 51 invoices for the same work as justification for reimbursement from WRDG-EQIP and the CWMTF without notifying each agency of its intent to receive reimbursement from the other, resulting in an overpayment of \$20,816. Overall lack of transparency for WRDG-EQIP-funded Western Stream Initiative projects contributes to the State’s risk of overpaying. The project unit of analysis is different across federal and state funding entities, further challenging transparency and creating administrative difficulties.

**Funding for Western Stream Initiative projects is duplicative.** Funding duplication exists when two state sources provide funding for identical work activities within a single project. For funding duplication to exist in this case, duplicative grant resources would need to be dedicated not simply to stream restoration but specifically to projects carried out under the Western Stream Initiative.

As shown in Exhibit 6, the Program Evaluation Division found that the Clean Water Management Trust Fund (CWMTF) has awarded the Resource Institute more than \$2.5 million since 2013 in grants for stream restoration under the Western Stream Initiative, which, as discussed in the Background, also receives state funding from the WRDG-EQIP program.

### **Exhibit 6: Resource Institute Has Received Over \$2.5 Million in CWMTF Regional Grants Since 2013 for Stream Restoration Projects**

<b>Fiscal Year</b>	<b>Project Name</b>	<b>Award Amount</b>
2013-14	Resource Institute-Western North Carolina Stream Restoration Initiative-2013	\$ 375,000
2014-15	Resource Institute-Western North Carolina Stream Restoration Initiative-2014	400,000
2015-16	Resource Institute-Western North Carolina Stream Restoration Initiative-2015	400,000
2016-17	Resource Institute-Western North Carolina Stream Restoration Initiative-2016	450,000
2017-18	Resource Institute-Western North Carolina Stream Restoration Initiative-2017	500,000
2018-19	Resource Institute-Western North Carolina Stream Restoration Initiative-2018	425,000
<b>Total</b>		<b>\$ 2,550,000</b>

Source: Program Evaluation Division based on data from the Clean Water Management Trust Fund.

Unlike resources provided by the NRCS-EQIP and WRDG-EQIP grants, funds from the CWMTF are not applied for or designated for specific projects. Instead, the CWMTF provides a regional grant for the Western Stream Initiative. This regional grant is used to fund multiple stream restoration projects throughout the western counties of the state. For projects receiving WRDG-EQIP funds, CWMTF resources are limited to project areas where streams are of high resource value or are on the State's list of impaired waters. For such targeted project areas, CWMTF funds are intended to be used for project design that is relatively complex or where other funding is insufficient. The Program Evaluation Division found that 13 of a sample of 25 WRDG-EQIP projects funded in the Fiscal Year 2014–15 cycle were also funded with CWMTF grant resources. This duplication places the State at risk of overpayment of state funds.

**A lack of transparency surrounding Western Stream Initiative project funding led to instances in which the same project received duplicative funding from different state sources.** The Program Evaluation Division identified instances in which two state sources provided funding for identical work activities within the same Western Stream Initiative project. To properly track state resources and to protect against misuse of funds, a clear knowledge of all state funding agencies involved in a project is essential. Interviews with grant administrators show DEQ and the CWMTF were unknowingly contributing resources to identical stream restoration projects. Neither agency was fully aware of the other's involvement, the extent of that involvement, or what particular services and resources the other agency provided.

As a representative from DEQ stated in an interview with the Program Evaluation Division:

*"It was my understanding that CWMTF isn't for specific projects but instead for larger, area-wide initiatives. Since Clean Water is allocated to a certain amount to a general area, it would be hard to understand what specific amount is attributed to each project."*

The WRDG-EQIP grant manager and officials at DEQ were unaware of the extent of investment by the CWMTF in stream restoration projects funded by the WRDG-EQIP. Current WRDG-EQIP guidelines implemented in Fall 2018 now require applicants to list nonfederal sources of funding. However, no notification of alternative state funding sources was required for previous stream restoration projects.

The CWMTF uses a scoring and project ranking metric for applicants that takes into account both the cumulative matching funds the applicant brings to the project and the cost of the project per linear foot. A project being costlier could affect an applicant's potential score from the CWMTF. However, Resource Institute did not disclose WRDG-EQIP funds in applications to the CWMTF. Had these WRDG-EQIP funds been disclosed, as the CWMTF grant manager told the Program Evaluation Division,

*"It would actually be a more expensive project than we are understanding, and the score would have changed. The ultimate amount available for the grantee would have been reduced had we known of the other, undisclosed state funds."*

The CWMTF grant manager was clear that listing other sources of state funds is necessary because the CWMTF wants a full picture of project funding. Understatement of state funds resulted in Resource Institute receiving more than would have been allotted if WRDG-EQIP funds had been disclosed.

**There is a risk of paying twice for the same services when identical invoices are submitted to multiple funding sources for reimbursement on the same project.** This risk is elevated when the funding sources have no knowledge of the other entity's financial participation in a particular project. The Program Evaluation Division found 13 projects that received both WRDG-EQIP and CWMTF resources for stream restoration. Details about the 13 projects are shown in Exhibit 7.

### Exhibit 7: WRDG-EQIP and CWMTF Both Provided Funding for 13 Projects Without Each Other's Knowledge in Fiscal Year 2014–15

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

Source: Program Evaluation Division based on data from WRDG-EQIP and the Clean Water Management Trust Fund.

**From a sample of 13 Western Stream Initiative projects that received duplicative state funding, the Program Evaluation Division found Resource Institute submitted 51 identical invoices for non-construction services to the WRDG-EQIP program and the CWMTF for reimbursement.** Five of these 13 projects were supported by some of the same invoices that were submitted by Resource Institute to both WRDG-EQIP and the CWMTF. Payments to Resource Institute that were supported by some of these duplicative invoices resulted in a total overpayment of \$20,816 to Resource Institute by the State. Details showing the breakdown of these individual projects and their resulting impact is shown in Exhibit 8.

## Exhibit 8: Having Two Sources of Funding for the Same Project Has Led to \$20,816 in Overpayment by the State for Non-Construction Services

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

Source: Program Evaluation Division based on data from WRDG-EQIP and the Clean Water Management Trust Fund.

As the exhibit shows, the State has overpaid for two stream restoration projects.<sup>14</sup> When two state agencies, unaware of each other's involvement, separately provide grants for the same project, inconsistent and inaccurate funding levels can result.

Resource Institute stated that overpayments were a result of disagreements with DEQ over reimbursement amounts prior to the Appropriations Act of 2017, amended by the Technical Corrections Act of 2017, which issued the following directive to DEQ:

*"Funds appropriated during the 2015-17 biennium and remaining balance of funds appropriated prior to the 2015-2017 fiscal biennium for Environmental Quality Incentives Program projects shall be paid out to each of the original grantees for the full grant award amount, except that the Secretary may retain ten percent (10%) of the State share of funding until the Natural Resources Conservation Service of the United States Department of Agriculture has provided a final practice approval for the project."*<sup>15,16</sup>

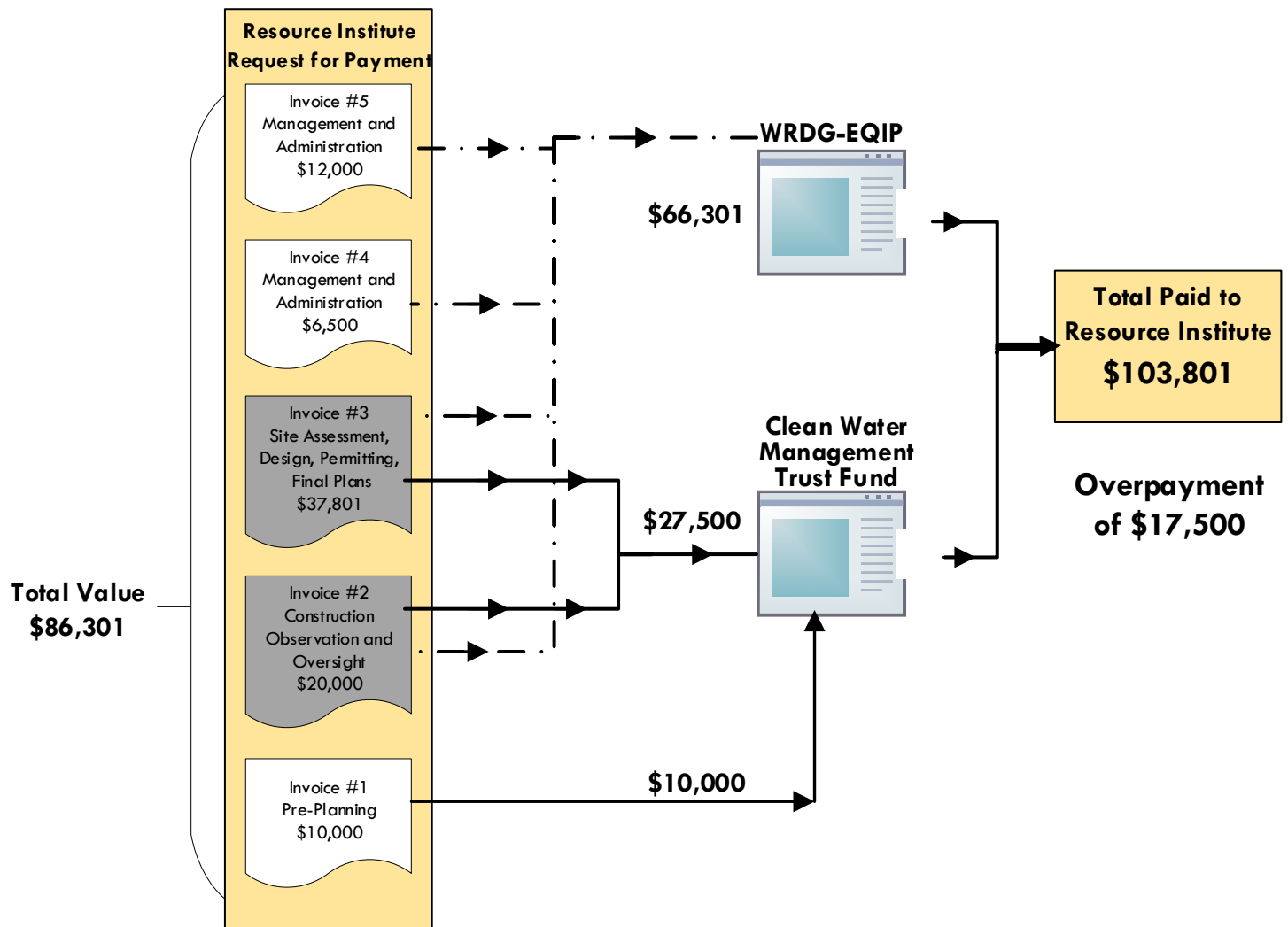
Resource Institute submitted invoices to the CWMTF when it thought it was not going to be paid by DEQ (i.e., prior to the passage of the Appropriations Act of 2017, which was effective July 1, 2017). Resource Institute considered the DEQ funds to be a pass-through to subrecipients. This legislation resolved the disagreement between DEQ and Resource Institute regarding the proper amount of the payments. DEQ was directed to pay Resource Institute the amount that was indicated on the WRDG-EQIP award letters. Exhibit 9 provides an example of how submitting the same invoices to two different funding sources for the same project resulted in an overpayment of funds. As shown in the exhibit, the invoices totaled \$86,301. However, the vendor received a total of \$103,801 from the two sources, which represented an overpayment of \$17,500.

<sup>14</sup> Resource Institute provided documentation for three additional stream restoration projects where some of the same invoices were submitted to both WRDG-EQIP and the CWMTF. These three projects supported a total "underpayment" of \$12,149 and Resource Institute wanted this amount applied against the \$20,816 overpayment for a net overpayment of \$8,667. However, in accordance with state law, the Department of Environmental Quality is not required to pay 100% of the non-federal cost of stream restoration projects. Appendix B to this report shows details of the three underfunded projects.

<sup>15</sup> N.C. Sess. Law 2017-57, Section 36.3.(g).

<sup>16</sup> N.C. Sess. Law 2017-212, Section 4.10.(a).

## Exhibit 9: An Example of Duplicative Funding in Which North Carolina Paid \$17,500 More than the Total Cost of Non-Construction Invoices for the Big Rock Creek Project in Mitchell County



Notes: Dashed lines indicate invoices submitted to WRDG-EQIP; solid lines indicate invoices submitted to the CWMTF. Invoice #2 and Invoice #3 were submitted to both WRDG-EQIP and the CWMTF.

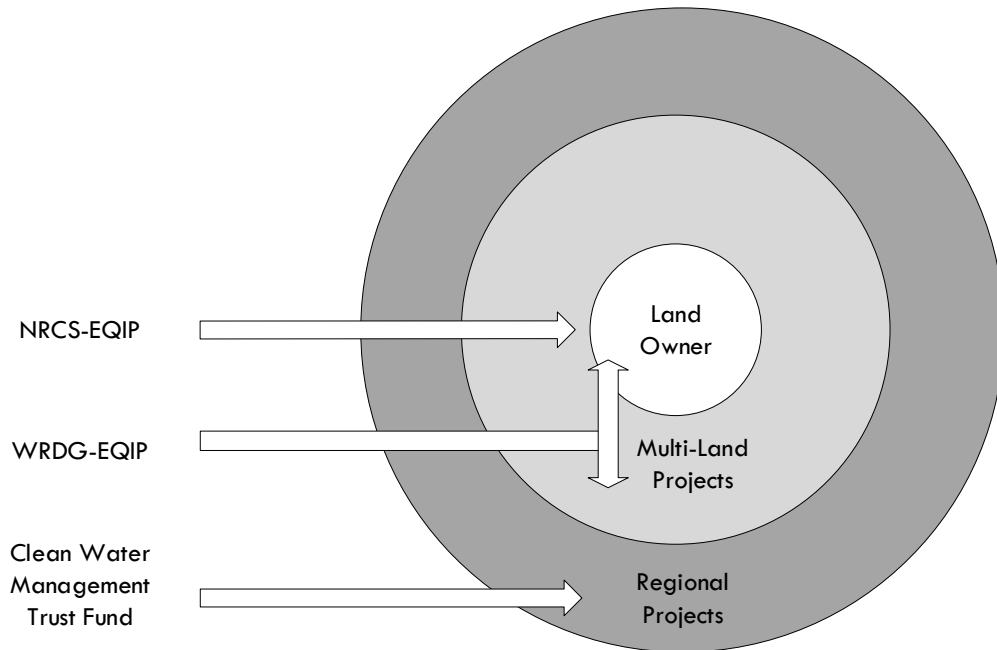
Source: Program Evaluation Division based on data from WRDG-EQIP and the Clean Water Management Trust Fund.

**The project unit of analysis is different across federal and state funding entities, further challenging transparency and creating administrative difficulties.** Recipients of NRCS-EQIP, WRDG-EQIP, and CWMTF grants and funds differ in terms of specificity. As a result, the project unit of analysis for grantees of each type of fund also differs, making it difficult to clearly define and compare stream restoration projects.

- Through the NRCS-EQIP, the individual landowner is the recipient of funds. The landowner signs a Memorandum of Understanding or Memorandum of Agreement with a fund integrator, such as Resource Institute, resulting in the NRCS-EQIP funds being sent directly to the integrator. The NRCS-EQIP award is always tied to the individual tract of land, never aggregated into multiple landowner projects.

- The WRDG-EQIP allocates funds either to an individual landowner or an aggregated grouping of several contiguous landowners on the same stretch of stream. Sometimes projects are defined as multiple landowner projects because of environmental and financial reasons. Of the 49 completed WRDG-EQIP projects, 9 have been multiple landowner projects. Pooling landowners together into larger project areas introduces cost savings through economies of scale, as costs associated with the transportation of equipment, labor, and materials to a stream restoration site are reduced. However, a multiple landowner WRDG-EQIP grant introduces transparency problems as project costs are billed for the collective group of landowners rather than for individual tracts of land. This aggregation makes it difficult to prove a certain quantity of work was produced on an individual tract of land.
- The CWMTF has awarded a regional grant to Resource Institute for the Western Stream Initiative in each of the past six years. For CWMTF stream restoration grants, no specific landowner or project is identified prior to the grant application and award phase.<sup>17</sup> The vendor determines how to apply funds without the grantor’s knowledge. Only after the fact does the State know where funds are applied. Exhibit 10 illustrates the varying levels of recipient specificity for the three types of stream restoration funds.

**Exhibit 10: Stream Restoration Grants Are Awarded with Different Levels of Recipient Specificity**



Note: CWMTF-funded projects within the region must meet conditions of being High Quality Waters, Native Trout Waters, or be on the State’s list of impaired streams.

Source: Program Evaluation Division based on data from NRCS-EQIP, WRDG-EQIP, and the Clean Water Management Trust Fund.

<sup>17</sup> This caveat is only true for Western Stream Initiative projects within the CWMTF. The CWMTF does fund specific landowners, and Resource Institute has received stream restoration projects for specific landowners.

**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.**

This evaluation sought to assess the administration and implementation of WRDG-EQIP stream restoration grants. However, the existence of appropriate documentation to fully assess WRDG-EQIP performance was hampered by a lack of relevant data. In a 2009 report, the Program Evaluation Division noted the State's limited oversight of grants in general due to a lack of adequate reporting requirements.<sup>18</sup> Current administrative practices still do not promote active or sufficient performance management of state grant dollars. Further, the Program Evaluation Division's analysis of the data that is available for WRDG-EQIP stream restoration projects demonstrates diminishing performance.

**The Department of Environmental Quality's Division of Water Resources has not actively managed the performance of WRDG-EQIP grants.** Active grant performance management involves not only identifying performance measures and reporting requirements for the grantee but also ensuring regular monitoring and tracking by the grant-making agency. Grant guidelines and contracts serve as the mechanisms for grant management and should outline specific performance measures and reporting requirements, thereby establishing a framework for accountability.

The Program Evaluation Division did not detect any operational aspects of the WRDG-EQIP grant program that were not in accordance with state law. However, because DEQ is not actively managing the performance of WRDG-EQIP grants, the program is potentially less likely to detect and report instances of overpayment to and non-compliance by grantees.

The Program Evaluation Division's review of WRDG-EQIP policies and guidelines shows an absence of grant performance management requirements. Although grant guidelines mandate collecting specific project information that could be used as part of a performance management framework, the guidelines are missing any requirement for monitoring and reporting grant performance measures.

Absent a formalized framework for WRDG-EQIP grant performance management, the Program Evaluation Division identified several measures that DEQ would need to track in order to adequately assess the performance of WRDG-EQIP grants. Grant performance measures reflect indicators of efficiency and effectiveness. Whereas efficiency relates to costs (time, funds, personnel) to implement or execute a given grant process, effectiveness relates to the output or outcome of a given grant—in this case to implement stream restoration practices. Such performance indicators should be project-based and reflect the output or outcomes of implementing each grant. Exhibit 11 outlines the two categories of grant performance measures—grant administration and implementation. As the exhibit shows, DEQ does not actively manage key performance indicators for WRDG-EQIP grants.

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<sup>18</sup> Program Evaluation Division. (2009, December). Accountability Gaps Limit State Oversight of \$694 Million in Grants to Non-Profit Organizations. Report to the Joint Legislative Program Evaluation Oversight Committee. Raleigh, NC: General Assembly.



## Exhibit 11: DEQ Does Not Actively Manage Key Performance Indicators of WRDG-EQIP Grants

Key Performance Indicator	Description	Actively Managed
<b>Measures of Grant Administration Efficiency and Effectiveness</b>		
<b>Time to issue grant application approval/denial</b>	Number of days it takes DEQ administrators to review and issue determinations on grant applications	○
<b>Request for payment processing time</b>	Number of days it takes DEQ administrators to process requests for payment from approved grant applicants	○
<b>Cost per grant administered</b>	Full-Time Equivalents expended to administer each grant placed in the field	○
<b>Number of applicants reviewed and approved/denied</b>	Ratio of applicants to approvals and to denials	○
<b>Number of grants administered</b>	Number of grants administered each year	●
<b>Total WRDG-EQIP grant dollars administered</b>	Number of grants for a given year considered alongside total grant dollars administered, which allows for a measure of the size of the average grant, enabling DEQ to determine if grants are getting larger or smaller in general over time	●
<b>Project construction cost</b>	Total cost of construction for a stream restoration project from all funding sources	○
<b>Project permitting cost</b>	Total cost of permitting for a stream restoration project from all funding sources	○
<b>Project site assessment, design, and engineering costs</b>	Total cost of project site assessment, design, and engineering for a stream restoration project from all funding sources	○
<b>Project management and administration</b>	Total cost of project management and administration for a stream restoration project from all funding sources	○
<b>Project cost</b>	Total cost of a stream restoration project from all funding sources	○
<b>Measures of Grant Implementation Efficiency and Effectiveness</b>		
<b>Linear feet restored</b>	Early outcome measures of how many linear feet of stream were restored with grant dollars	◐
<b>Cost/linear foot of restored stream</b>	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	◐
<b>Sediment reduction</b>	A measure of the extent to which a project has reduced sediment load along and just below the restored portion	○
● = Actively Managed    ◐ = Partially Managed    ○ = Not Managed		

Note: Actively managed performance indicators have data that are tracked and formally reported. Partially managed performance indicators are tracked or have the ability to be tracked but are not formally reported. Performance indicators that are not managed are not tracked or formally reported.

Source: Program Evaluation Division based on data and reporting on WRDG-EQIP grants provided by the Department of Environmental Quality.

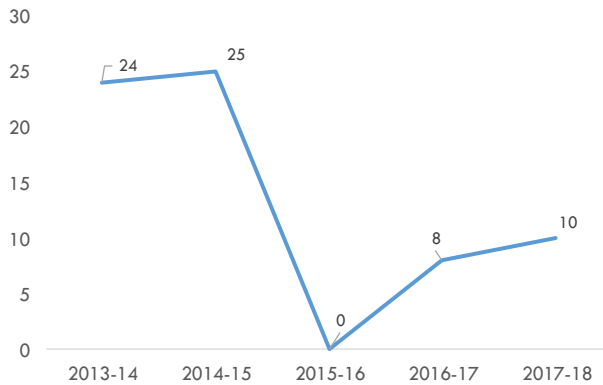
Presently, number of grants administered and total grant dollars administered are the only performance indicators being fully monitored, which means they are not only being tracked but also formally reported. Two other performance indicators are partially tracked. Even though the number of linear feet restored is tracked, this performance indicator is not part of any formal reporting mechanism. Likewise, although data for cost per linear foot are tracked, this indicator is not calculated or reported. The remainder of the performance indicators are not being actively managed at all due to a lack of data tracking. Without collecting necessary grant performance metrics, DEQ cannot accurately assess or report on the grant program's performance.

DEQ recently modified its grant application and request for payment procedures, which will allow it to collect more granular performance and cost accounting data for each stream restoration project. For example, applications for WRDG-EQIP stream restoration projects require grant recipients to provide invoices demonstrating actual project costs for each project cost component. Capturing more complete cost data will allow DEQ to benchmark stream restoration project costs and ensure adequate program cost monitoring. In addition, DEQ has adopted the use of a relational database for project tracking. Though each of these efforts will allow for better grant performance management, they had not yet been implemented at the time of this evaluation, and therefore improvements from these administrative changes have yet to be realized.

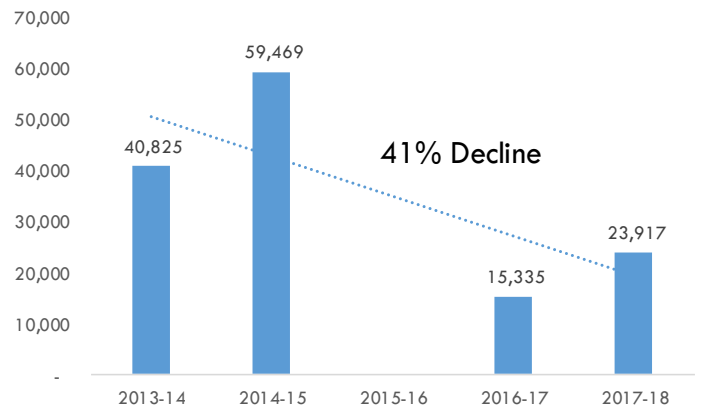
**Performance of WRDG-EQIP grants has diminished over time.** The overview of useful grant performance measures presented in Exhibit 11 shows that much of the data necessary to adequately analyze WRDG-EQIP grant performance are not tracked, and therefore the Program Evaluation Division was unable to analyze the full scope of WRDG-EQIP grant performance. However, analysis of available data as presented in Exhibit 12 shows that the number of grants administered and number of planned linear feet of restoration have both declined over the past five years. In addition, cost to DEQ per linear foot of stream restoration has increased.

## Exhibit 12: Number of Grants and Planned Linear Feet of Restoration Have Declined Since Fiscal Year 2013–14

Number of WRDG-EQIP Stream Restoration Projects



Planned Linear Feet of Stream Restoration



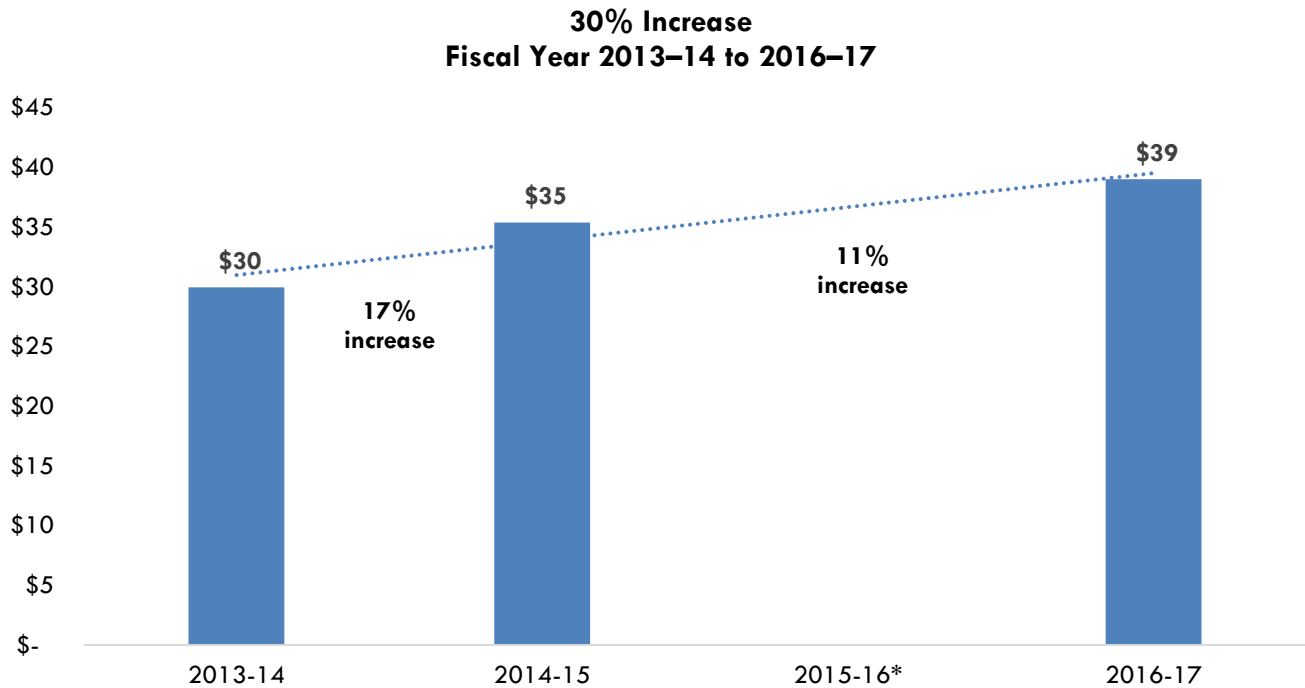
Note: The WRDG-EQIP grant program was suspended during Fiscal Year 2015–16, and as a result there was no program data available for analysis.

Source: Program Evaluation Division based on data provided by WRDG-EQIP.

**Cost per linear foot for WRDG-EQIP stream restoration is increasing, demonstrating a potential reduction in efficiency.** Cost control is an inherent objective in grant administration. Delivering outputs and outcomes that minimize costs represents the most efficient means of meeting an objective. The overall objective or measurable outcome of stream restoration is the reduction of sediment in rivers, streams, and bodies of water. However, as Exhibit 11 showed, reduction in sediment load is not being tracked by the grant administrator, DEQ. As a result, the Program Evaluation Division could not determine the efficiency of WRDG-EQIP stream restoration outcomes.

Number of linear feet of stream restoration completed can serve as a proxy for sediment reduction. Using WRDG-EQIP grant costs and planned number of linear feet of stream restoration, the Program Evaluation Division was able to analyze cost per linear foot of stream restored. As Exhibit 13 shows, cost per linear foot of stream restoration is increasing. From Fiscal Year 2013–14 to 2014–15, the average cost per linear foot of WRDG-EQIP stream restoration increased by 18% and from Fiscal Year 2014–15 to 2016–17, the cost per linear foot increased by 10%. Overall, from Fiscal Years 2013–14 to 2016–17, the average cost per linear foot increased by 30%, demonstrating a potential reduction in the efficiency of WRDG-EQIP stream restoration grant funds.

### Exhibit 13: Average Cost Per Linear Foot for WRDG-EQIP Stream Restoration Increased by 30% from Fiscal Year 2013–14 to 2016–17



Note: The WRDG-EQIP grant program was suspended during Fiscal Year 2015-16 and as a result there was no program data available for analysis.

Source: Program Evaluation Division based on data provided by WRDG-EQIP.

The Program Evaluation Division acknowledges that other factors may also contribute to an increase in the average cost per linear foot, and that such an increase may not be a direct indicator of decreased efficiency. However, in this case, average cost per linear foot was the best available metric to measure efficiency.

In summary, the Department of Environmental Quality is not actively managing the performance of the WRDG-EQIP grant program. The majority of data necessary to demonstrate the grant program's efficiency and effectiveness are not being tracked or reported. Of the data that are being tracked, performance trends show diminishing returns on the State's investment in stream restoration through the program. The number of grants administered and number of planned linear feet of restoration have declined since the beginning of the grant program; meanwhile, the cost per linear foot of stream restoration has increased.

**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.**

Minimizing the State's exposure to financial risks in grant administration ensures proper stewardship of state resources. In order to accomplish this

objective, WRDG-EQIP must fully understand the costs of grant projects and make grant award calculations based on proposed project costs. When neither of these factors are known, financial risks are elevated. Despite recent modifications to WRDG-EQIP guidelines, the current grant award calculation mechanism still places the State at risk of overawarding grant funds for stream restoration projects.

**Even though the WRDG-EQIP grant application process requires stream restoration project cost estimates, these estimates are not used to determine the size of the grant award.** Recorded project cost data provides a comparison for future projects to inform grant managers of reasonable estimates. Given a stream's linear footage and geographic features, historic project cost data would provide grant administrators with context for what future stream restoration projects with similar characteristics may cost. Collecting useful project data would entail tracking the cost of stream restorations by the activities performed to complete the work, which would include but not be limited to the costs of

- planning, site assessment, and design;
- permitting;
- construction; and
- oversight and administration.

However, DEQ does not maintain historic data on the costs of these four primary stream restoration activities. The data currently collected by WRDG-EQIP administrators lacks a level of detail necessary to accurately access future costs by activity. Historically, as discussed in Finding 2, DEQ has only maintained records on the total amount awarded to the recipient and the total amount paid out. Invoices used as justification for payment were sent to WRDG-EQIP administrators but contained little detail on the specific work completed beyond general categories such as project management and site assessment. As a result, WRDG-EQIP possesses neither total project costs nor specific component costs for past projects that could be used to inform future stream restoration projects. Recent changes to guidelines require that applications provide project cost estimates and subsequent detailed invoices for stream restoration activities. However, these new requirements have not been in effect long enough for useful cost data on grant administration to be compiled.

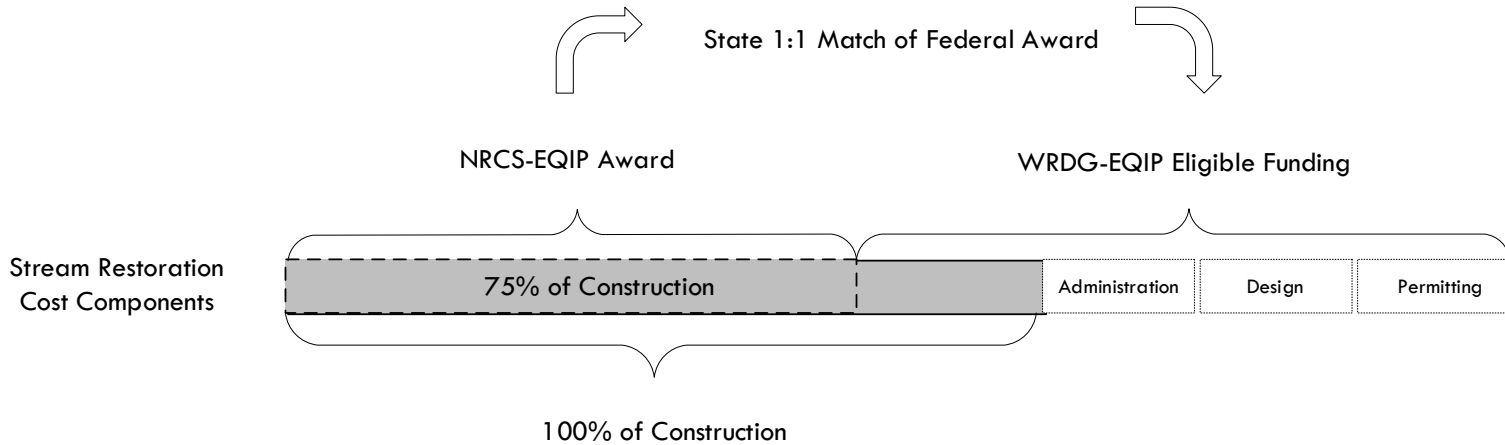
Although WRDG-EQIP guidelines require applicants to provide project cost estimates for each stream restoration activity, the current mechanism for making award calculations does not rely on these estimates. Ideally, project cost estimates could be used as a reference during the project's later stages to help determine if additional funding is necessary or too much has been disbursed.

**Although the State revised the way it calculates the maximum award for WRDG-EQIP, a structural deficiency in the equation places the State at risk of making grant awards that may overaward funding for stream restoration projects.** Several changes to the WRDG-EQIP funding calculation have been made since 2013. These revisions increased the State's cost share percentage in the determination of the maximum grant award. Although this change increased DEQ's financial exposure per

project, compensating controls including actual cost reimbursement have been introduced to mitigate the potential risk of overpayment.

As Exhibit 14 illustrates, the maximum grant award for WRDG-EQIP cannot exceed a 1:1 match to the federal NRCS-EQIP award amount. State law stipulates that DEQ may make WRDG-EQIP grants in amounts not to exceed 100% of the nonfederal costs of projects that are part of the Environmental Quality Incentives Program.<sup>19</sup>

**Exhibit 14: WRDG-EQIP Match to NRCS-EQIP**



Source: Program Evaluation Division based on data from NRCS-EQIP and WRDG-EQIP.

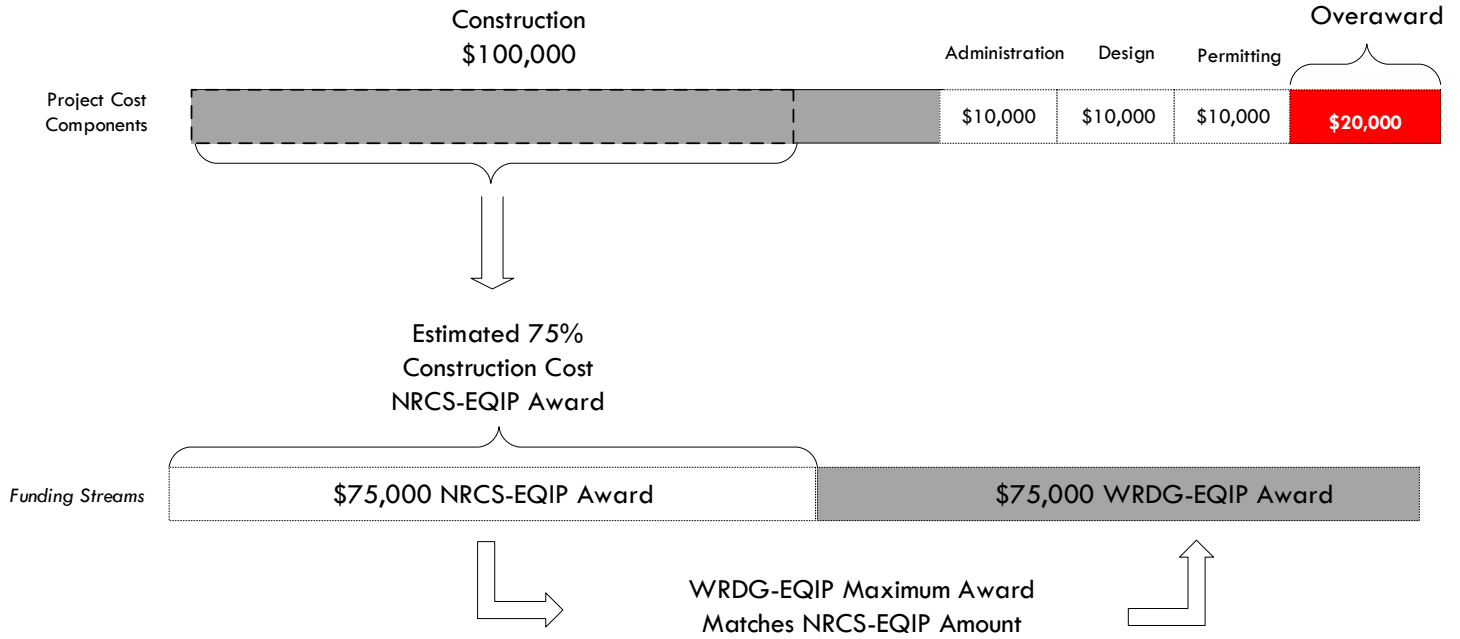
The structural deficiency of WRDG-EQIP arises from the one-to-one match with the NRCS-EQIP award. The State is at risk for awarding more funds than needed to complete a stream restoration project when the sum of funds provided by WRDG-EQIP and NRCS-EQIP exceed total project costs.

Exhibit 15 provides an example of how the grant calculation mechanism risks excessive awarding of state resources. In the example, the total project cost is \$130,000, with construction representing \$100,000 of that cost. Administration, design, permitting, and all other costs constitute the remaining \$30,000. In this scenario, NRCS-EQIP would cover the estimated 75% of construction costs, which would be \$75,000. Being set at a 100% match to the NRCS-EQIP amount, the WRDG-EQIP maximum award would therefore also be \$75,000. Thus, the total funding award in this example would be \$150,000, which would be \$20,000 more than the \$130,000 total project cost.<sup>20</sup>

<sup>19</sup> N.C. Gen. Stat. § 143-215-71.

<sup>20</sup> The new actual cost method utilized by WRDG-EQIP would limit the total reimbursement to \$130,000 upon receipt of detailed invoices. However, it should be noted that the vendor may not bill \$130,000 as the actual costs. The vendor could bill \$140,000 or \$150,000 or any amount up to the maximum amount. By awarding the maximum amount, the vendor is incentivized to bill up to the maximum award amount. No historical data exists to benchmark the legitimacy of the actual costs submitted by the vendor.

### Exhibit 15: A \$130,000 Stream Restoration Project Can Be Awarded \$150,000 in State and Federal Funding



Source: Program Evaluation Division calculation based on data from the NRCS-EQIP and WRDG-EQIP.

Examining the ratio of total non-construction costs (administration, design, and permitting) to the total WRDG-EQIP award helps determine whether the State is at risk for overawarding grant funds for a project. Specifically, if the sum of non-construction costs (administration, design, and permitting) is less than two-thirds of the WRDG-EQIP grant award, the State is at risk of overawarding funds for stream restoration projects.

A fuller assessment of the Program Evaluation Division’s calculations can be found in Appendix C, which provides a technical breakdown of WRDG-EQIP and NRCS-EQIP funding components and the demonstrated risk to the State of overawarding funds.

In summary, imprecise actual historical cost data for determining WRDG-EQIP grant awards places the State at risk of overawarding funding for stream restoration projects. Even though the WRDG-EQIP grant application process requires stream restoration project cost estimates, poor historical data collection practices and a suboptimal grant award determination mechanism put the State at risk of overawarding funds.

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## 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 (CWMTF).**

Finding 1 shows that funds for Western Stream Initiative projects are duplicative because funds come from two different state sources—WRDG-EQIP and the CWMTF. Duplication is inefficient, challenges program transparency, and exposes the State to greater risk of overpayment.

To minimize the risk of duplication, the General Assembly should consolidate all funding for stream restoration projects within one of these two sources. Should the General Assembly choose to move all funding for the existing WRDG-EQIP program to the CWMTF, it should direct the CWMTF to eliminate the use of the regional grant model. The CWMTF should require applicants for Western Stream Initiative grants to apply for grant resources on a project-by-project basis.

Should the General Assembly choose to move CWMTF stream restoration grants for the Western Stream Initiative to the existing WRDG-EQIP program, it should direct WRDG-EQIP to eliminate the use of the current grant award mechanism and require that grant awards for the Western Stream Initiative be based on historical project cost data.

All efforts to eliminate the duplication of funding and improve administration of state grants for the Western Stream Initiative should be completed and reported to the Joint Legislative Oversight Committee on Agriculture and Natural and Economic Resources by September 30, 2019.

**Recommendation 2. The General Assembly should direct the grant administrator for the Western Stream Initiative to improve performance management of state grant funds.**

Finding 2 shows the Department of Environment Quality is not actively managing the performance of WRDG-EQIP grants. The majority of the data necessary to demonstrate the grant program's efficiency and effectiveness are neither tracked nor reported. To ensure performance of Western Stream Initiative grants is being actively managed, the grant administrator should be directed to collect and report all data listed in Exhibit 11 of this report. All efforts to measure the effectiveness and efficiency of grants for the Western Stream Initiative should be included in an annual report to the General Assembly. The first report for Fiscal Year 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 to identify any additional overpayment of state funds, and direct the appropriate state agency to recoup any overpayment.**

Finding 1 shows the vendor for EQIP, Resource Institute, submitted 51 invoices for the same work as justification for reimbursement from WRDG-EQIP and the CWMTF, resulting in an overpayment of \$20,816. However, the invoices used to determine this level of overpayment of state funds were based on a sample of projects. To ensure the State identifies any and all overpaid funds, the General Assembly should direct the State Auditor to conduct an audit of all state funds paid to Resource Institute for the Western Stream Initiative. In addition, the General Assembly should direct the appropriate state agency to recoup all state funds overpaid to Resource Institute for Western Stream Initiative projects identified in this report and by the State Auditor.

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## Appendices

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Appendix A: List of All Water Resources Development Grants—Environmental Quality Incentives Program (WRDG-EQIP)

Appendix B: Details of Three Stream Restoration Projects Paid \$12,149 Less Than Total Invoices

Appendix C: Scenario in Which the State Will Overaward for Stream Restoration Projects

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## Agency Response

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A draft of this report was submitted to the Department of Environmental Quality for review and response. PED's response to DEQ's response is provided following the appendices, beginning on page 35. DEQ's response begins on page 37.

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## Program Evaluation Division Contact and Acknowledgments

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For more information on this report, please contact the lead evaluator, Jim Horne at [Jim.Horne@ncleg.net](mailto:Jim.Horne@ncleg.net).

Staff members who made key contributions to this report include Jacob Ford and Sean Hamel. John W. Turcotte is the director of the Program Evaluation Division.

## Appendix A: List of All Water Resources Development Grants—Environmental Quality Incentives Program (WRDG-EQIP)

Fiscal Year	County	Project Name	Linear Feet Restored	Project Status a/o 8/15/2018	Cost Share	WRDG-EQIP Award	Total Paid by DEQ a/o 11/20/18	Administrator	Project Sponsor	Co-Applicant if applicable
2013-14	Alexander	Muddy Creek	1,440	Completed	75-25	\$ 63,455	\$ 63,455	Resource Institute	Alexander SWCD	N/A
2013-14	Alleghany	Potato Creek	1,050	Completed	75-25	52,607	52,607	Resource Institute	Alleghany SWCD	N/A
2013-14	Alleghany	Brush Creek	2,100	Completed	75-25	84,746	84,746	Resource Institute	Alleghany SWCD	N/A
2013-14	Avery	North Toe River	1,937	Completed	75-25	49,030	49,030	Resource Institute	Avery SWCD	N/A
2013-14	Buncombe	Newfound Creek	1,553	Completed	75-25	31,573	31,573	Resource Institute	Buncombe SWCD	N/A
2013-14	Buncombe	Newfound Creek	1,709	Completed	75-25	28,857	28,857	Resource Institute	Buncombe SWCD	N/A
2013-14	Buncombe	Newfound Creek	881	Completed	75-25	31,199	31,199	Resource Institute	Buncombe SWCD	N/A
2013-14	Cherokee	Hiwassee River	650	Completed	75-25	15,679	15,679	Resource Institute	Cherokee SWCD	N/A
2013-14	Lincoln	Hoyle Creek	2,285	Completed	75-25	88,829	88,829	Resource Institute	Lincoln SWCD	N/A
2013-14	Macon	Coweeta Creek	1,700	Completed	75-25	43,002	43,002	Resource Institute	Macon SWCD	N/A
2013-14	Macon	Coweeta Creek	1,700	Completed	75-25	41,609	41,609	Resource Institute	Macon SWCD	N/A
2013-14	Macon	Lake Emory/ Little Tennessee	1,000	Completed	75-25	28,806	28,806	Resource Institute	Macon SWCD	N/A
2013-14	Macon	Upper Cartoogechaye	3,500	Completed	75-25	77,408	77,408	Resource Institute	Macon SWCD	N/A
2013-14	McDowell	Crooked Creek	1,646	Completed	75-25	49,687	49,687	Resource Institute	McDowell SWCD	N/A
2013-14	McDowell	Crooked Creek	1,254	Completed	75-25	40,012	40,012	Resource Institute	McDowell SWCD	N/A
2013-14	Polk	Upper North Pacolet River	1,300	Completed	75-25	49,661	49,661	Resource Institute	Polk SWCD	N/A
2013-14	Surry	Little Fisher River	3,200	Completed	75-25	32,315	32,315	Resource Institute	Surry SWCD	N/A
2013-14	Surry	Little Fisher River	3,200	Completed	75-25	78,612	78,612	Resource Institute	Surry SWCD	N/A
2013-14	Surry	Big Creek	1,500	Completed	75-25	62,796	62,796	Resource Institute	Surry SWCD	N/A

Appendix A (Cont'd.): List of All Water Resources Development Grants—Environmental Quality Incentives Program (WRDG-EQIP)

Fiscal Year	County	Project Name	Linear Feet Restored	Project Status a/o 8/15/2018	Cost Share	WRDG-EQIP Award	Total Paid by DEQ a/o 11/20/18	Administrator	Project Sponsor	Co-Applicant if applicable
2013-14	Surry	Little Fisher River	700	Completed	75-25	14,363	14,363	Resource Institute	Surry SWCD	N/A
2013-14	Surry	Little Fisher River	1,000	Completed	75-25	31,810	31,810	Resource Institute	Surry SWCD	N/A
2013-14	Surry	Little Fisher River	1,000	Completed	75-25	31,811	31,811	Resource Institute	Surry SWCD	N/A
2013-14	Watauga	Cove Creek	1,750	Completed	75-25	63,054	63,054	Resource Institute	Watauga SWCD	N/A
2013-14	Yadkin	Cranberry Creek	2,770	Completed	75-25	81,643	81,643	Resource Institute	Yadkin SWCD	N/A
2014-15	Ashe	Beaver Creek	2,000	Completed	75-25	58,762	58,762	Resource Institute	New River SWCD (Ashe)	N/A
2014-15	Ashe	Old Fields Creek	1,000	Completed	75-25	40,141	40,141	Resource Institute	New River SWCD (Ashe)	N/A
2014-15	Avery	North Toe River	1,300	Completed	75-25	43,613	43,613	Resource Institute	Avery SWCD	N/A
2014-15	Buncombe	Big Sandymush Creek	4,000	Completed	75-25	62,740	62,740	Resource Institute	Buncombe SWCD	N/A
2014-15	Buncombe	Little Pole Creek	4,000	Completed	75-25	67,991	67,991	Resource Institute	Buncombe SWCD	N/A
2014-15	Caldwell	Lower Creek	2,700	Completed	75-25	99,516	99,516	Resource Institute	Caldwell SWCD	N/A
2014-15	Cherokee	Little Brasstown Creek	1,780	Completed	75-25	64,674	64,674	Resource Institute	Cherokee SWCD	N/A
2014-15	Cherokee	Peachtree Creek	3,380	Incomplete	75-25	92,579	-	Resource Institute	Cherokee SWCD	N/A
2014-15	Clay	Brasstown Creek	450	Completed	75-25	11,678	11,678	Resource Institute	Clay SWCD	N/A
2014-15	Haywood	Hyatt Creek	1,000	Completed	75-25	43,190	43,190	Resource Institute	Haywood SWCD	N/A
2014-15	Haywood	Dotson Branch	8,570	Completed	75-25	350,893	350,893	Resource Institute	Haywood SWCD	N/A
2014-15	Macon	Poplar Cove & Tessentee Creeks	1,700	Completed	75-25	50,991	50,991	Resource Institute	Macon SWCD	N/A
2014-15	Macon	Cartoogechaye Creek	1,400	Completed	75-25	57,110	57,110	Resource Institute	Macon SWCD	N/A
2014-15	Mitchell	Big Rock Creek	1,200	Completed	75-25	66,301	66,301	Resource Institute	Mitchell SWCD	N/A

Appendix A (Cont'd.): List of All Water Resources Development Grants—Environmental Quality Incentives Program (WRDG-EQIP)

Fiscal Year	County	Project Name	Linear Feet Restored	Project Status a/o 8/15/18	Cost Share	WRDG-EQIP Award	Total Paid by DEQ a/o 11/20/18	Administrator	Project Sponsor	Co-Applicant if applicable
2014-15	Rutherford	Cleghorn Creek	1,350	Completed	75-25	44,326	44,326	Resource Institute	Rutherford SWCD	N/A
2014-15	Stokes	Big Creek	2,500	Completed	75-25	94,410	94,410	Resource Institute	Stokes SWCD	N/A
2014-15	Surry	Beaver Dam Creek	5,119	Completed	75-25	152,559	152,559	Resource Institute	Surry SWCD	N/A
2014-15	Surry	Candiff Creek	890	Completed	75-25	\$ 32,403	\$ 32,403	Resource Institute	Surry SWCD	N/A
2014-15	Surry	Jackson Creek	2,841	Completed	75-25	94,624	94,624	Resource Institute	Surry SWCD	N/A
2014-15	Surry	Little Fisher River	2,684	Completed	75-25	114,728	114,728	Resource Institute	Surry SWCD	N/A
2014-15	Surry	Ring Creek	2,005	Completed	75-25	76,246	76,246	Resource Institute	Surry SWCD	N/A
2014-15	Surry	King Creek	4,000	Completed	75-25	63,363	63,363	Resource Institute	Surry SWCD	N/A
2014-15	Surry	Tributary of Little Fisher	1,100	Completed	75-25	54,667	54,667	Resource Institute	Surry SWCD	N/A
2014-15	Transylvania	East Fork French Broad	1,000	Completed	75-25	36,141	36,141	Resource Institute	Transylvania SWCD	N/A
2014-15	Yadkin	Swisher Creek	1,500	Completed	75-25	76,981	76,981	Resource Institute	Yadkin SWCD	N/A
2016-17	Jackson	Scotts Creek	3,100	In-Progress	65-35	96,631	43,714	Resource Institute	Jackson SWCD	Resource Institute
2016-17	Madison	Little Ivey Creek	1,800	In-Progress	65-35	56,197	-	Resource Institute	Madison SWCD	Resource Institute
2016-17	Mitchell	Cane Creek	1,800	In-Progress	65-35	115,455	75,159	Resource Institute	Mitchell SWCD	Resource Institute
2016-17	Stokes	South Crooked Creek	2,200	In-Progress	65-35	198,555	-	Resource Institute	Stokes SWCD	Resource Institute
2016-17	Surry	South Fork Mitchell River	1,300	In-Progress	65-35	60,368	29,772	Resource Institute	Surry SWCD	Resource Institute
2016-17	Watauga	Cove Creek	2,400	In-Progress	65-35	149,807	103,176	Resource Institute	Watauga SWCD	Resource Institute
2016-17	Watauga	Stony Fork Creek	1,235	Completed	65-35	87,500	87,500	BREC	Watauga SWCD	BREC
2016-17	Yadkin	Swan Creek	1,500	In-Progress	65-35	122,660	-	Resource Institute	Yadkin SWCD	Resource Institute

Appendix A (Cont'd.): List of All Water Resources Development Grants - Environmental Quality Incentives Program (WRDG-EQIP)

Fiscal Year	County	Project Name	Linear Feet Restored	Project Status a/o 8/15/18	Cost Share	WRDG-EQIP Award	Total Paid by DEQ a/o 11/20/18	Administrator	Project Sponsor	Co-Applicant if applicable
2017-18	Ashe	Call Creek	3,800	In-Progress	65-35	242,308	-	Resource Institute	New River SWCD (Ashe)	Resource Institute
2017-18	Ashe	North Fork New River	3,000	In-Progress	65-35	199,231	-	Resource Institute	New River SWCD (Ashe)	Resource Institute
2017-18	Avery	Elk River	1,400	In-Progress	65-35	80,769	-	Resource Institute	Avery SWCD	Resource Institute
2017-18	Cherokee	Little Brasstown Creek	1,300	In-Progress	65-35	110,368	-	Resource Institute	Cherokee SWCD	Resource Institute
2017-18	Cherokee	Valley River	1,517	In-Progress	65-35	25,168	-	Resource Institute	Cherokee SWCD	Resource Institute
2017-18	Jackson	Cullowhee Creek	3,000	In-Progress	65-35	132,383	-	Resource Institute	Jackson SWCD	Resource Institute
2017-18	Surry	Fisher River	2,700	In-Progress	65-35	93,731	-	Resource Institute	Surry SWCD	Resource Institute
2017-18	Surry	Hodges Creek	2,700	In-Progress	65-35	207,308	-	Resource Institute	Surry SWCD	Resource Institute
2017-18	Watauga	Meat Camp Creek	2,000	In-Progress	65-35	140,000	-	BREC	Watauga SWCD	BREC
2017-18	Watauga	South Fork New River	2,500	In-Progress	65-35	148,871	-	Resource Institute	Watauga SWCD	Resource Institute
<b>Totals</b>						<b>\$ 5,390,501</b>	<b>\$ 3,369,933</b>			

Note: The McDowell County-North Fork Catawba River project was awarded a WRDG-EQIP grant of \$34,489 that was initially paid in full despite no federal payment being made. Subsequently, the owner passed away and the project was cancelled prior to completion. During the initial DEQ Office of Internal Auditor technical assistance and payment reconciliation, the full project amount of \$34,489 was recouped by short-paying the contractor's subsequent reimbursement request for other projects.

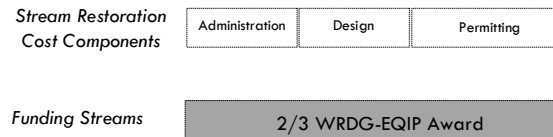
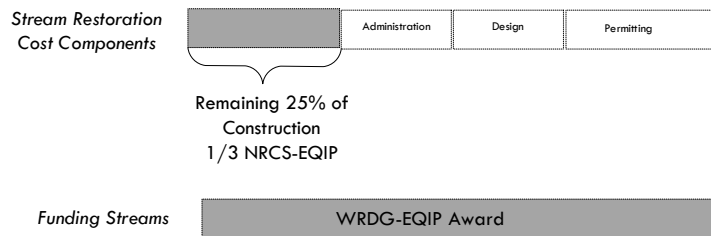
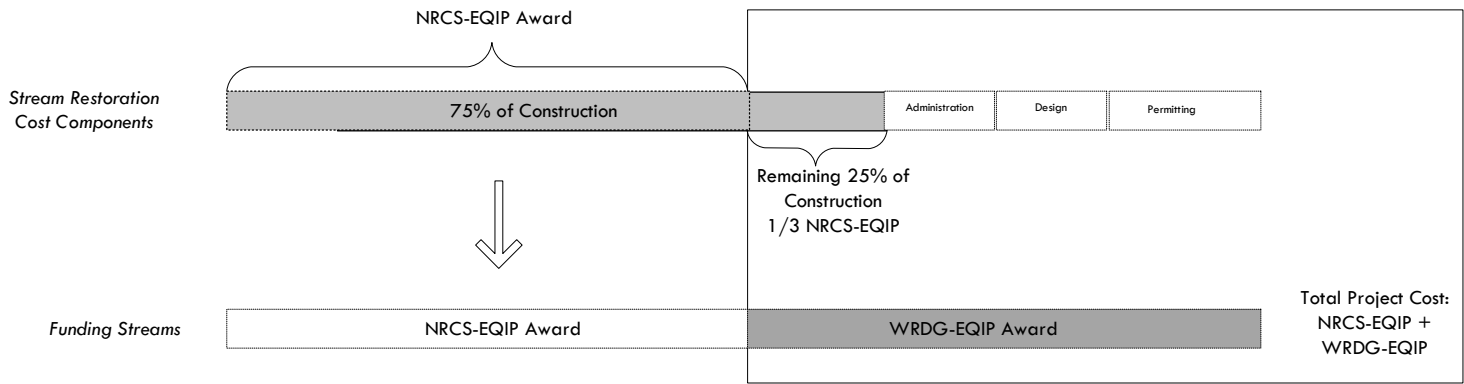
Source: Program Evaluation Division based on data from the Department of Environmental Quality.

## Appendix B: Details for Three Stream Restoration Projects Paid \$12,149 Less Than Total Invoices

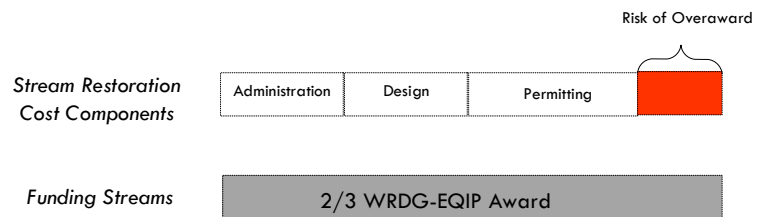
County	Project	Total Invoices	WRDG-EQIP Grant Award	WRDG-EQIP Paid	CWMTF Paid	Total Paid	Amount Paid Less Than Invoices
Ashe	Beaver Creek	\$ 78,762	\$ 58,762	\$ 58,762	\$ 19,000	\$ 77,762	\$ (1,000)
Cherokee	Little Brasstown	111,673	64,674	64,674	36,850	101,524	(10,149)
Yadkin	Swisher Creek	94,981	76,981	76,981	17,000	93,981	(1,000)
<b>Totals</b>		<b>\$ 285,416</b>	<b>\$ 200,417</b>	<b>\$ 200,417</b>	<b>\$ 72,850</b>	<b>\$ 273,267</b>	<b>\$ (12,149)</b>

Source: Program Evaluation Division based on data from WRDG-EQIP and the Clean Water Management Trust Fund.

## Appendix C: Scenario in Which the State Will Overaward for Stream Restoration Projects



State will **overaward** stream restoration projects when two-thirds of the WRDG-EQIP award is greater than Administration, Design, and Permitting Costs



Source: Program Evaluation Division calculation based on data from the NRCS-EQIP and WRDG-EQIP.

## Program Evaluation Division's Comments on the Department of Environmental Quality's Response

As part of the Program Evaluation Division's (PED) protocol, agencies have the opportunity to respond to evaluation reports. This response is included as part of the report. The Department of Environmental Quality (DEQ) took issue with some conclusions made by PED in its report, *Stream Restoration Projects Receive Duplicative State Funding and Inadequate Performance Management*, and with the accuracy of some of the report data. In turn, PED contends that some of the points raised by DEQ mischaracterize and misconstrue our report. As a result, PED finds it is necessary to inform and correct statements made by DEQ in its formal response. A careful read of the PED report reveals that the comments submitted by DEQ misinterpret the evaluation's results.

**PED staff worked extensively with DEQ during the 30-day review process and the concerns expressed in the department's final response were not conveyed during this review process.**

DEQ states on page 38:

*DEQ disagrees with the recommendation of consolidating grant resources for the Western Stream Initiative into either the WRDG-EQIP program or the CWMTF as administrative enhancements to the grant process will address and require vendors to disclose funding sources.*

**PED Disagrees.** N.C. Gen. Stat. § 120-36.14(b)(1)(e) requires PED to identify if a program or activity that is subject to evaluation is duplicative. This report found duplication occurred when two state sources—the Water Resources Development Grant (WRDG) program and the Clean Water Management Trust Fund (CWMTF)—provided funding for identical work activities within a single project. The logical remedy to this duplication is to consolidate funding for Western Stream Initiative projects in one administrative entity. DEQ contends this consolidation would stifle the benefit of having separate funding streams with different goals. DEQ suggests WRDG-EQIP funding is designed to provide funding for projects during the construction phase and CWMTF funding is designed to provide supplemental funding after project completion. However, the data collected during this project do not support this assertion. The 2015-419 Summary of Funds Requested sheet for Western Stream Initiative projects shows that \$380,000 of the \$400,000 awarded to Resource Institute by the CWMTF was expended on construction, design, and permitting phases. These work activities are all synonymous with the construction phase. DEQ suggests this duplication is necessary because CWMTF grants can provide supplemental funding when WRDG-EQIP funds are insufficient to cover 100% of the non-federal cost. This assertion is inconsistent given the department's response to Finding 3 that states that the award formula is designed to overaward so as to avoid a funding shortfall. PED questions the need to have it both ways, i.e., overawarding the grant to avoid a shortfall and also asserting that it is necessary to have duplicative funding in order to avoid a shortfall.

DEQ states on page 39:

*DEQ does not agree that the increased cost per linear foot is a metric which can be reasonably correlated to "an overall reduction in efficiency".*

**PED Disagrees.** DEQ suggests that PED correlates increasing cost per linear foot to "an overall reduction in efficiency" as a direct quote from the report. A review of the PED report demonstrates no such language was ever used in the background, findings, or recommendations. What the report does state on page 22 is **Cost per linear foot for WRDG-EQIP stream restoration is increasing, demonstrating a potential reduction in efficiency.** This statement reflects the mandatory reporting requirement of PED as stated in N.C. Gen. Stat. § 120-36.14(b)(1)(a) directing the division to make some determination of a program's efficiency. Efficiency measures are used to monitor the relationship between an amount produced and the resources used and are created by comparing input and outcome/output variables.



The overall objective or measurable outcome of stream restoration is the reduction of sediment in rivers, streams, and bodies of water. However, reduction in sediment load is not being tracked by the DEQ grant administrator. Page 22 of the PED report states, *As a result, the Program Evaluation Division could not determine the efficiency of WRDG-EQIP stream restoration outcomes.* The number of linear feet of stream restoration completed can serve as a proxy for sediment reduction. Using WRDG-EQIP grant costs and planned number of linear feet of stream restoration, PED was able to analyze cost per linear foot of stream restored. Overall, from Fiscal Years 2013–14 to 2016–17, the average cost per linear foot increased by 30%, demonstrating a potential reduction in the efficiency of WRDG-EQIP stream restoration grant funds.

Although the NRCS payment rate for stream stabilization may have increased by 44% from FY 2018 to 2019 as suggested in the DEQ response, this time frame is not congruent with the evaluation timeframe and cannot be relied upon as an alternative explanation for the unit cost growth. Furthermore, the report goes on to acknowledge other factors may also contribute to an increase in the average cost per linear foot, and that such an increase may not be a direct indicator of decreased efficiency. However, given the context of the finding and the lack of performance measure tracking, the average cost per linear foot was the best available metric to measure efficiency.

DEQ states on page 40:

*The report raises a speculative concern that the overawarding of WRDG-EQIP funds incentivizes vendors to bill more than actual costs. The intentional overbilling described in PED's hypothetical scenario is fraud.*

**PED Disagrees.** In its response to Finding 3, DEQ suggests the PED report constructs a hypothetical scenario in which vendors bill up to the maximum award amount regardless of the work performed. A review of the finding shows no such suggestion of potential fraud as indicated by the DEQ response. The finding was developed to call attention to an imprecise method for grant award determination that places the State at risk for overawarding funds—an imprecise method which the Department acknowledges and concurs with in its response. Although the Department claims to have the appropriate controls in place to mitigate against vendor malfeasance, these controls had not been in place long enough to determine the effectiveness of administrative practices to reduce the potential for overpayment.

ROY COOPER  
Governor

MICHAEL S. REGAN  
Secretary

LINDA CULPEPPER  
Director



March 4, 2019

John W. Turcotte, Director  
Program Evaluation Division  
300 N. Salisbury Street, Suite 100  
Raleigh, NC 27603-5925

Dear Mr. Turcotte:

Thank you for providing the Department of Environmental Quality (DEQ) with the opportunity to review and respond to the Program Evaluation Division's (PED) Report No. 2019-04 - a review of the Water Resources Development Grant Environmental Quality Incentives Program (WRDG-EQIP Program). DEQ agrees state funding for the Western Stream Initiative has been duplicative, and that administrative review changes have and should continue to be put in place to prevent future occurrences. To assess past duplication and vendor participation, the DEQ agrees with the recommendation to require an audit of the vendor. Moving forward, DEQ is committed to the administrative and programmatic improvements recommended and already implemented, but cautions against funding consolidation and the use of some performance measures without a contextual understanding of the impact to the program.

Prior to PED's review of the WRDG-EQIP Program, DEQ initiated its own internal review of the program beginning in November 2015 after the retirement of the previous program administrator. This internal review was conducted by DEQ's Office of the General Counsel with subsequent technical assistance provided by DEQ's Office of Internal Audit. DEQ's internal review resulted in significant improvements to the program through programmatic improvements and statutory changes, many of which are noted in the PED report. These programmatic improvements resolved issues associated with a) conflicts of interest, b) WRDG-EQIP grant contracts, c) authorization of grant award increases, d) grantee identification, e) clarifying supplemental funding requirements, f) 10% retainage until project closeout, g) partial payments during project construction, h) invoice documentation requirements and i) recoupment of approximately \$35,000 for a cancelled project.

DEQ would like to offer the following comments to the findings and recommendations in the report.

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

DEQ appreciates PED's efforts, which identified the overpayment of grant funds to the vendor, as the agency was unaware of the degree of investment being provided by the CWMTF to stream restoration projects previously funded by the WRDG-EQIP.

DEQ agrees that state funding for the Western Stream Initiative has been duplicative, which challenges program transparency, creating opportunity for the overpayment of grant funds as revealed by the PED report. However, the duplicative funding and the overpayment would have likely not occurred if: a) the vendor had properly disclosed WRDG-EQIP funds in applications to the CWMTF; b) the vendor did not submit identical invoices to WRDG-EQIP and CWMTF; or c) the vendor had not allocated CWMTF



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regional grant funds to individual WSI projects previously funded by WRDG-EQIP. Any of these steps taken by the vendor would have likely prevented the overpayment of grant funds from occurring.

DEQ would like to note that the agency did not overpay WRDG-EQIP grant funds. DEQ only paid the full grant award amounts as required per the Appropriations Act of 2017<sup>1</sup>, and later amended by the Technical Corrections Act of 2017<sup>2</sup>.

*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 (CWMTF).*

DEQ disagrees with the recommendation of consolidating grant resources for the Western Stream Initiative into either the WRDG-EQIP program or the CWMTF as administrative enhancements to the grant process will address and require vendors to disclose funding sources. However, if the General Assembly chose to consolidate grant resources at DEQ, the following considerations should be noted:

- DEQ may need to acquire additional staff resources if the General Assembly decided to consolidate grant resources for EQIP projects to be administered through the WRDG. DEQ currently has one staff person to manage EQIP projects, as well as four other categories of eligible WRDG projects. EQIP projects are geographically focused in western North Carolina while the other four WRDG categories are distributed statewide.
- Consolidation could result in the loss of some of the benefits of having two state funding sources with different funding goals:
  - WRDG-EQIP grants provide supplemental funding for stream restoration projects during project construction while the CWMTF grants provide supplemental funding after project completion.
  - WRDG-EQIP grants provide supplemental funding for individual stream restoration projects while the CWMTF grants provide supplemental funding on a regional basis. In addition, the Natural Resources Conservation Service's (NRCS) Western Stream Initiative includes additional projects that do not receive funds from either WRDG-EQIP or CWMTF.
  - CWMTF funds could be applied to a project also funded by WRDG-EQIP program when the WRDG-EQIP funds are insufficient to cover 100% of nonfederal costs.

Additionally, it should be noted that the WRDG was originally established by the General Assembly in the 1970s to provide grants to local governments for stream restoration (non-EQIP), water management, water-based recreation and navigation (dredging) projects on a statewide basis. EQIP grants associated with the Western NC Stream Initiative became a part of the WRDG in 2013.

*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 agrees that DWR was not fully monitoring the performance of WRDG-EQIP grants. DEQ management is already considering implementation of many of the performance measures recommended in the report. In addition, DEQ has already implemented multiple programmatic improvements and controls over the past three years including, but not limited to, new grant contracts and a more accurate actual-cost reimbursement method.

It is important to note that WRDG-EQIP projects are first vetted by NRCS, a United States Department of Agriculture agency, and apply for state funds to supplement these federally approved projects. DEQ has

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<sup>1</sup> Session Law 2017-57, Section 36.3.(g).

<sup>2</sup> Session Law 2017-212, Section 4.10.(a)

and continues to conduct pre- and post-construction site visits in addition to utilizing an extensive application review process to ensure that funded projects fulfill the legislative intent of the WRDG-EQIP program and that the implemented conservation practices are completed according to NRCS standards.

DEQ agrees that the agency's cost per linear foot has increased since program implementation. However, DEQ does not agree that the increased cost per linear foot is a metric which can be reasonably correlated to "an overall reduction in efficiency." The increased cost per linear foot is a direct result of the agency's modifications to the cost share percentage used to determine the maximum grant award amount. These cost share modifications demonstrate DEQ's attempts to better fulfill the legislative intent of the WRDG-EQIP Program and reimburse a greater portion of the nonfederal costs. As a result, DEQ believes the increased cost per linear foot more accurately reflects the actual cost per linear foot.

DEQ would like to note that the PED review did not include an evaluation of, or comparison to, the NRCS-EQIP (Federal) increase in cost per linear foot. Most of the NRCS-EQIP stream restoration regional average practice payment rates have seen a significant increase just from FY2018 to FY2019. For example, the NRCS payment rate for the 584 Channel Bed Stabilization conservation practice increased by approximately 44% per unit from FY2018 to FY2019. This lack of consideration of changes in average regional costs, as calculated by NRCS, omits important context when considering DEQ's changes to cost per linear foot.

*Recommendation 2: The General Assembly should direct the grant administrator for the Western Stream Initiative to improve performance management of state grant funds.*

DEQ welcomes additional direction by the General Assembly. If directing the grant administrator for the Western Stream Initiative to improve performance management of state grant funds, the General Assembly should consider the distinction between the administrative<sup>3</sup> performance measures and the environmental<sup>4</sup> performance measures identified in the report. DEQ management is already considering implementation of many of the recommended administrative performance measures including monitoring of project costs and grant processing efficiency.

The environmental performance measures identified in the report, however, may not be appropriate since WRDG-EQIP funds are only awarded for conservation practices on NRCS-designated Federal projects as indicated in the above response. NRCS makes the initial determination as to which projects are likely to result in net environmental benefits with conservation practices historically proven to be effective. DEQ does not evaluate any projects for WRDG-EQIP grant funding that are not already preapproved by NRCS. The legislative intent of DEQ's role in these Federal projects is merely to supplement the Federal funding to reduce the financial burden on landowners, not to measure the effectiveness of a Federal project administered by NRCS. DEQ looks forward to continuing its supportive role by working with stakeholders, including NRCS, on these stream restoration efforts.

*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.*

DEQ agrees that 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. However, DEQ does not concur that this potential overawarding rises to the level of concern espoused by PED. Instead, the potential for overawarding projects is a known and acceptable risk for DEQ and better aligns with the legislative intent of the WRDG-EQIP program when used in conjunction with DEQ's actual cost reimbursement method. Per NCGS §143-215.71, DEQ may pay up to 100% of nonfederal costs. This language clearly indicates the legislative intent to pay as much of the nonfederal costs as possible. The expectation of the WRDG-EQIP program is that, due to the uncertainties inherent in the NRCS final payment<sup>5</sup>, the State will overaward grants in order to better avoid a funding shortfall. The WRDG-EQIP

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<sup>3</sup> Referred to as Grant Administration performance measures in the PED report.

<sup>4</sup> Referred to as Grant Implementation performance measures in the PED report.

<sup>5</sup> NRCS payments make no consideration for actual costs incurred on a project.

program will only pay out the maximum grant award amount if actual invoiced costs meet or exceed this amount. The WRDG-EQIP program expects that most, if not all, grants will result in some grant funds being left over upon project completion. These remaining funds can then be reallocated to other projects in subsequent grant cycles, if approved as a carryforward by the General Assembly.

It is important to note that the only way to prevent “overawarding” these projects would be to award WRDG-EQIP grants after project completion, which is contrary to the stated intent of the General Assembly<sup>6</sup> to allow periodic payments during project construction.

The report raises a speculative concern that the overawarding of WRDG-EQIP funds incentivizes vendors to bill more than actual costs. The intentional overbilling described in PED’s hypothetical scenario is fraud<sup>7</sup>. The risk of fraud is present for any contracted service or transaction and is not incentivized merely by setting a maximum grant award which, in some cases, may be more than the actual costs incurred to implement the conservation practices on the project. In addition, simply submitting invoices does not guarantee reimbursement – all claimed costs incurred must be approved by DWR. As stated in the Guidelines and contract, the total of all submitted invoices which are subsequently approved by DWR shall constitute the actual project cost.

*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 to identify any additional overpayment of state funds, and direct the appropriate state agency to recoup any overpayment.*

DEQ agrees with PED’s recommendation that the General Assembly should direct the State Auditor to perform an audit of state funds for projects managed by Resource Institute to identify any additional overpayment of state funds, and direct the appropriate state agency to recoup any overpayment.

In conclusion, we appreciate the opportunity to comment on this report and look forward to working with PED and the General Assembly and continue to improve the WRDG-EQIP Program.

Sincerely,



Linda Culpepper, Director  
Division of Water Resources

cc: Jim Horne, PED  
Joy Hicks, DEQ  
Sheila Holman, DEQ  
Rex Whaley, DEQ  
Landon Perry, DEQ  
Doug Ansel, DEQ  
Amin Davis, DEQ

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<sup>6</sup> NCGS 143-215.72(d)(2).

<sup>7</sup> See Footnote #20, Page 25 in PED Report 2019-04.