THE TENNESSEE STREAM MITIGATION PROGRAM

TENNESSEE STREAM TSMP MITIGATION PROGRAM

2011 TSMP In-Lieu Fee Status Report

Reporting Period: January 1, 2011 through December 31, 2011

US Army Corps of Engineers

Table of Contents

Executive Summary

Since its inception in 2003, the Tennessee Stream Mitigation Program (TSMP) has made great strides to provide mitigation to offset stream impacts permitted through §404/401 of the Clean Water Act. The TSMP is committed to providing meaningful mitigation on degraded streams to improve in-stream and riparian habitat and overall water quality. Employing principles of natural channel design and process-based methodologies, the TSMP continues to identify and develop restoration and enhancement projects across the state.

As outlined in federal guidance and the Memorandum of Agreement under which the TSMP was established, basic program requirements include: fiscal management, project identification, evaluation, development, design, implementation, monitoring, maintenance and long term management. The TSMP is required to submit an annual status report to the US Army Corps of Engineers (USACE) and the Tennessee Department of Environment and Conservation (TDEC) as well as the Interagency Review Team (IRT). At the request of the USACE, the format of these annual reports has been modified for public notice. As such, this report will provide detailed program information from January 1, 2011 through December 31, 2011.

Programmatic Accomplishments

Programmatic accomplishments during 2011 include:

- Accepted the compensatory mitigation responsibility for 2,292 mitigation credit units
- Completed fifth year annual monitoring for nine TSMP Restoration and/or Enhancement projects, fourth year annual monitoring for three TSMP Restoration projects, third year annual monitoring for one TSMP Restoration project, second year annual monitoring for five TSMP Restoration projects and first year monitoring for one TSMP Restoration project
- Provided oversight for the identification, evaluation, development, design and/or implementation of 49,386 linear feet of TSMP Restoration projects that generated approximately 31,158 mitigation credit units
- Coordinated and funded a statewide regional curve and bedload study effort with both state and federal agencies

Project-Related Accomplishments

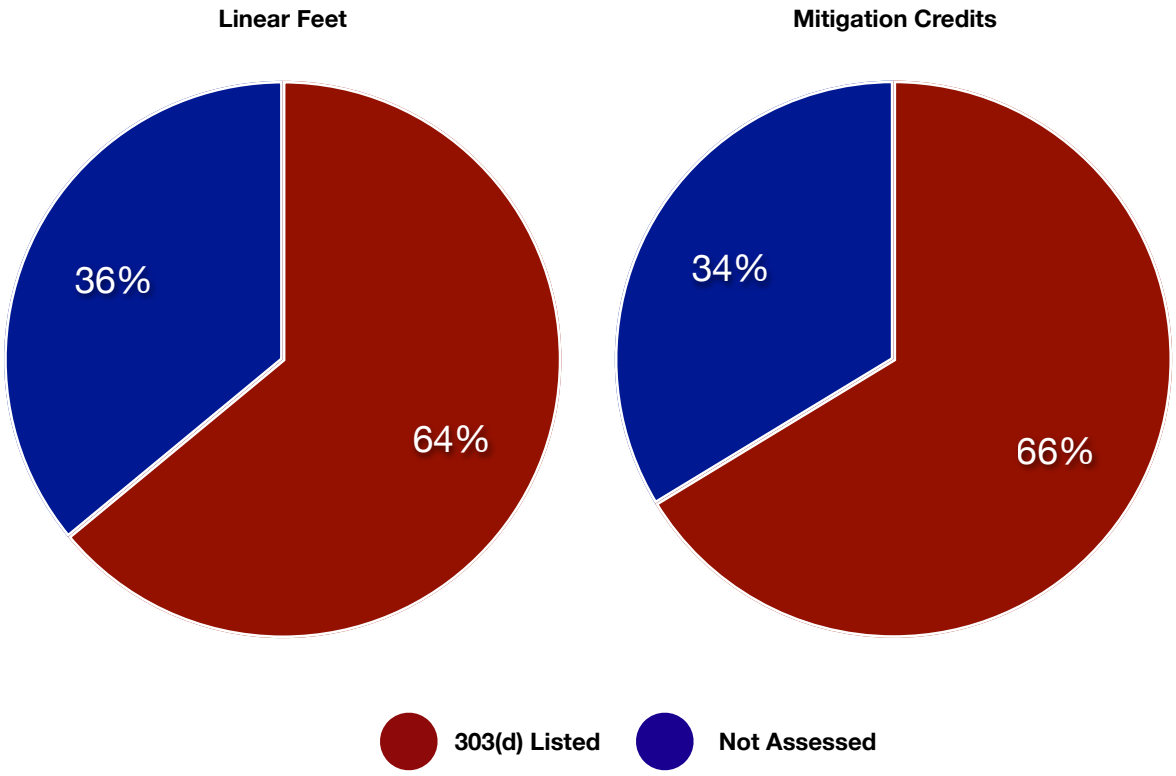
As of December 31, 2011, twenty-six active restoration/enhancement projects (see table below) were in some phase of development, design, implementation, monitoring or long term management. These projects, located in eighteen different river basins (8-Digit HUC), will result in the restoration/enhancement and perpetual protection of approximately 238,501 linear feet of stream generating approximately 140,729 mitigation credit units.

Project	8 - Digit HUC
Beasley Creek	08010210
Cole Creek	08010209
Crooked Creek	06040001
Middle Fork Creek	08010205

Project	8 - Digit HUC
North Fork Mud Creek	06040005
Pond Creek	08010204
UT Wolf River	08010210
Burrough's Hollow	05130106
Green Valley	05130108
Pavilion Branch	05130202
Leiper's Fork	05130204
Mill Creek	05130202
Murfrees Fork	05130204
Robinson Creek	06030003
Sevenmile Creek	05130202
Sugar Creek	06040003
Turnbull Creek	05130204
West Harpeth River	05130204
West Piney River	06040003
Yanahli	06040002
Flat Fork	06010208
Friar's Branch	06020001
Kyle's Ford	06010205
Marble Springs	06010201
Roseberry Creek	06010104
Third Creek	06010201

The TSMP gives preference to potential projects on 303(d) listed streams, especially streams with impairments to physical habitat. Where possible, the TSMP develops projects to offset or mitigate for impairments such as habitat alteration from channelization, siltation due to excessive bank erosion, pathogens or organic enrichment from unrestricted livestock access, or nitrates from degraded riparian buffers. The TSMP strives to identify and develop projects that have the greatest ecological benefit and impact on water quality.

Of the twenty-six active TSMP projects, nineteen of these projects are located on 303(d) streams or in 303(d) watersheds. Approximately 152,647 linear feet or 64% of the total linear feet of restoration/enhancement projects occur in 303(d) watersheds while 85,854 linear feet or 36% of the total linear feet occur in non-assessed 303(d) watersheds. These figures represent 93,333 mitigation credits or 66% of total mitigation credits in 303(d) watersheds while 47,396 mitigation credits or 34% of total mitigation credits were generated in non-assessed watersheds. These statistics are represented graphically below.



2011 Status Summary

Program History

In August 2002, the TSMP was established as Tennessee's first in-lieu-fee program. Administered by the Tennessee Wildlife Resources Foundation (TWRF), a 501(c)(3) non-profit, the TSMP is one mitigation alternative for impacts associated with §404/401 water quality permits. At the discretion of the USACE and TDEC , permittees may purchase credits from a mitigation bank, purchase mitigation through an established in-lieu-fee program or provide their own on-site or near-site mitigation. The TSMP accepts the responsibility for providing compensatory mitigation at the rate of $200.00 per credit foot.

The TSMP's goal is to provide meaningful compensatory mitigation through the restoration and/or enhancement of degraded streams. By combining relatively small, incremental impacts within a geographic area, the TSMP can fund large-scale restoration/enhancement projects to improve in-stream and riparian habitat.

TSMP Partnerships

The TSMP has developed strategic partnerships with state and federal resources agencies, non-profit environmental organizations, and local municipalities to facilitate the identification, development, and implementation of mitigation projects. Through partnerships, the TSMP can provide funding for on-going watershed initiatives through stream restoration. TSMP partners are important stakeholders with a vested interest in a project. Partners typically assist with landowner coordination/negotiation as well as community education and outreach. By partnering, the TSMP and other groups are able to leverage resources that enable all involved organizations to achieve programmatic goals while producing results that benefit both the landowners and the environment. Also, during 2011, the TSMP facilitated the development of strategic partnerships with both state and federal agencies to continue the development of regional curves in Tennessee.

TSMP Permitted Impacts Summary

During 2011, the TSMP accepted the mitigation responsibility for 2,292 credits. As of December 31, 2011, the TSMP had accepted the liability for 176,867 credits and had produced 140,729 credits through IRT approved projects. This represents an 80% mitigation rate for all credits sold versus credits produced since the inception of the TSMP.

TSMP Financial Status

As of December 31, 2011, total assets equaled $10,462,780.24 while accrued liabilities totaled $739,117.19 giving the mitigation fund an end of year equity balance of $9,723,663.05. The mitigation fund received deposits totaling $458,400.00 while reflecting an accounts receivable balance of $3,380,900.00. The program account also earned a total of $23,428.44 from interest bearing accounts as mandated by our MOA. Total accrued expenditures for 2011 equaled $4,037,263.91 of which $3,531,822.40 were project related expenditures and the remaining $505,441.51 were general and administrative expenditures. Detailed 2011 accrued project expenditures can be seen in the table below.

Project Name	Work Performed 2011	2011 Expenditures	Expenditures to Date
Beasley Creek	Design/Implementation	$870,353.07	$874,171.00
Cole Creek	Monitoring	$8,934.35	$482,287.90
Crooked Creek	Monitoring	$14,862.26	$1,013,157.67
Middle Fork Creek	Design/Implementation	$869,534.88	$873,349.25
North Fork Mud Creek	Maintenance	$76,843.78	$2,317,073.68
Pond Creek	Monitoring	$8,456.40	$391,652.01
UT Wolf River	Monitoring	$14,469.71	$1,847,130.42
Burrough's Hollow	Monitoring/Maintenance	$56,652.39	$207,488.73
Green Valley	Design/Implementation	$427,857.08	$430,039.73
Pavilion Branch	Monitoring	$10,362.50	$678,512.78
Leiper's Fork	Monitoring/Maintenance	$73,490.63	$1,444,885.48
Mill Creek	Monitoring	$14,293.09	$230,520.57
Murfrees Fork	Monitoring/Maintenance	$119,932.58	$1,274,602.70

Project Name	Work Performed 2011	2011 Expenditures	Expenditures to Date
Robinson Creek	Monitoring	$12,322.94	$576,733.60
Sevenmile Creek	Monitoring	$5,068.25	$276,430.06
Sugar Creek	Maintenance	$444,444.23	$1,722,695.53
Turnbull Creek	Maintenance	$8,041.00	$340,089.72
West Harpeth River	Monitoring	$12,556.04	$1,758,065.02
West Piney	Design/Implementation	$199,063.12	$199,063.12
Flat Fork	Monitoring	$27,104.05	$2,767,856.17
Friar's Branch	Implementation/Monitoring	$96,983.78	$1,182,653.81
Kyle's Ford	Monitoring	$15,437.45	$895,320.36
Marble Springs	Monitoring	$9,701.79	$479,703.99
Roseberry Creek	Monitoring	$7,469.60	$359,815.17
Third Creek	Monitoring	$37,165.32	$1,185,544.91
Yanahli	Monitoring	$7,153.97	$164,234.92

Project Selection Process

A substantial amount of time is allocated to project identification, evaluation and development. In accordance with the MOA, the TSMP must evaluate impacts and identify suitable mitigation projects based upon the following criteria:

- Preference to the same Level III Ecoregion (Griffith, G.E., et.al., 1997), 6 digit HUC, or, ideally, same 8 digit HUC as the impacts.
- Generally locate projects on streams within one stream order as the impact streams.
- The ratio of urban to rural streams impacted should be generally replicated in project locations.
- All other factors being equal, priority should be given to 303(d) streams for which stream mitigation efforts may provide a means to alleviate the causes or sources of water quality and/or habitat impairment.

When evaluating a potential mitigation site, the TSMP completes a habitat assessment based upon EPA's Rapid Bio-Assessment Protocol (RBP) as well as a morphological assessment to evaluate valley type, stream type, channel stability and stage of channel evolution. These assessments help to determine if enhancement or restoration measures are necessary. A concept plan is then developed for landowner review. Participating landowners must be willing to convey a perpetual conservation easement. If the landowner agrees to the approach outlined in the concept plan and the required easement boundary, then a scope, fee estimate, and construction budget is developed for IRT approval. Under the TSMP's streamlined procedures, the entire process from identification to construction can now be completed in twelve to eighteen months depending on the type and complexity of the project.

Status of TSMP Projects

As of December 31, 2011, the TSMP had twenty-six active approved projects that were in some phase of development, design, implementation or monitoring. An overview of each approved active project can be found below.

Project Name	8 Digit HUC	Treatment type(s)	Project Length	Mitigation Credit Units
*Beasley Creek	08010210	Restoration	16,209	10,806
Cole Creek	08010209	Restoration, Enhancement I	4,564	2,262
Crooked Creek	06040001	Restoration	11,986	8,556
*Middle Fork Creek	08010205	Restoration	8,534	7,307
*North Fork Mud Creek	06040005	Restoration	17,950	9,905
Pond Creek	08010204	Restoration	1,997	2,153
UT Wolf River	08010210	Restoration	9,471	6,823
Burrough's Hollow	05130106	Restoration	940	661
*Green Valley	05130108	Restoration	6,020	4,488
Pavilion Branch	05130202	Restoration	5,510	5,400
Leiper's Fork	05130204	Restoration	12,274	7,416
Mill Creek	05130202	Restoration	2,385	1,325
Murfrees Fork	05130204	Restoration	9,901	7,258
Robinson Creek	06030003	Restoration	5,028	3,363
Sevenmile Creek	05130202	Enhancement II	3,900	1,300
*Sugar Creek	06040003	Restoration	9,727	5,556
Turnbull Creek	05130204	Enhancement II	4,430	1,476
West Harpeth River	05130204	Restoration	15,435	9,150
*West Piney River	06040003	Restoration	19,936	10,174
Yanahli	06040002	Enhancement 1	20,426	4,179
Flat Fork	06010208	Restoration	12,940	11,469
Friar's Branch	06020001	Restoration	7,310	5,242
Kyle's Ford	06010205	Restoration	18,234	5,476
Marble Springs	06010201	Restoration	3,059	2,076
Roseberry Creek	06010104	Restoration	2,384	1,505
Third Creek	06010201	Restoration	7,951	5,403

* Credits are estimates until as-built survey is complete.