



west virginia department of environmental protection

Division of Mining and Reclamation (DMR)
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Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
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December 27, 2016

The Honorable William P. Cole III, Chair
The Honorable Tim Armstead, Chair
Joint Committee on Government and Finance
1900 Kanawha Boulevard, East
Charleston, West Virginia 25305

Dear President Cole and Speaker Armstead:

Enclosed is a compilation of receipts and expenditures from the Stream Restoration Fund (SRF) for fiscal years 1999 through 2016, as required by WV Code §22-11-7a(2)(D). Expenditures for each fiscal year have been itemized. The following is activity for fiscal year 2016:

- **Expenditures:**

During fiscal year 2016 \$253,261 was deposited into the SRF and \$290,203 was expended from the fund. Expenditures consisted of \$15,000 for monitoring on the Buffalo Creek Watershed in Logan county; \$88,000 for monitoring on South Fork of Cherry River (Plum Creek) in Greenbrier county; a reimbursement of \$427,983 was received for the Little Coal River project in Boone and Lincoln counties due to actual costs being less than estimated; \$614,739 for remediation and construction of Nonpoint Source Remediation projects in Harrison, Monongalia, Preston, Raleigh, and Upshur counties; and \$447 for miscellaneous expenses.

- **Acres of Streams Reclaimed:**

A total of 23.25 miles of streams impacted by abandoned mine drainage were reclaimed in the following watersheds:

Buffalo Creek, Logan County	8 miles (40 acres)
South Fork of the Cherry River, Greenbrier County	0.25 miles (0.81 acres)
Little Coal River, Boone/Lincoln Counties	15 miles (245 acres)

Promoting a healthy environment.

A total of 29.35 miles of streams impacted by abandoned mine drainage were reclaimed in the following watersheds:

Lambert Run	9 acres
West Run	0.7 acres
Herods Run (project switched to Swamp Run in the same watershed)	1 acres
Muddy Creek	10.7 acres
Sovern Run	3.45 acres
North Fork Greens Run	4.5 acres

Invasive species treatment along 350 feet of Winding Gulf in Raleigh County stabilized this previously funded natural stream restoration project. Approximately 1 acre of stream has effectively been reclaimed through the Winding Gulf project.

- **Effectiveness of Stream Restoration:**

Phase 3 of the Buffalo Creek Stream Restoration Project was completed in 2015. This project has restored 8 miles (40 acres) of the stream devastated by the 1972 collapse of the Buffalo Creek Mine impoundment. The project included the construction of 192 log and boulder structures and the planting of thousands of trees and shrubs. Structures were installed to channel stream flows, create riffles and pools, transport sediment and stabilize stream banks. Plants and shrubs were planted to aid in reducing stream bank erosion and provide cover and shade for the fish and wildlife. This work has improved the stream quality, enhanced the aquatic habitat and has led to Buffalo Creek being added to the WVDNR trout stocking list and becoming a popular fishery for residents and visitors. The success of the project has greatly increased the public support and environmental awareness of the community. The project is currently in the first year of a five (5) Army Corp of Engineers monitoring program to determine the effects and success of the project.

The South Fork of the Cherry River project goal was to improve the habitat complexity of the stream to promote the growth of the fish population. Twenty-three (23) structures consisting of logs and boulders were installed along a 1300' reach. These structures were designed to increase sediment transport and create pools and deeper channels to provide structure to the stream and enhance aquatic life. Woody debris such as root wads were installed along the stream bank toe in addition to the planting of many trees and shrubs to reduce erosion and stabilize the stream bank. These structures withstood the severe flooding in the region during 2016 with only minor repairs necessary. Regular monitoring of this project will begin in 2017 and will continue for five (5) years to evaluate the design and effectiveness of the project.

The Little Coal River Stream Restoration Project was completed in 2015. The project covered 15 miles and included the construction of 198 log and boulder structures throughout the stream and the repair and stabilization of eroded stream banks. These stream structures were designed to increase sediment transport and create pools and deeper channels to provide structure to the stream and enhance aquatic life. Woody debris was installed along the stream bank toe and 9,060 trees and shrubs were planted to stabilize the stream banks and control erosion. The stream structures have been effective in improving the overall quality of the stream by increasing bed complexity, substrate biodiversity and increased biomass over the entire restoration reach. The revegetation of the stream bank areas with the thousands of trees and shrubs is beginning to have a positive impact on minimizing erosion. Recreational usage of the stream continues to

increase with fishing and kayaking activities by both residents and visitors to the area. The structures have also withstood the flooding of 2016 with minimal damage. The five (5) year monitoring program to evaluate the design and effectiveness of the project is scheduled to begin December 2016 and continue until 2020.

The iron load in Lamberts Run was reduced by 76%, the equivalent of 70,812 lbs./year. In West Run, 100% of the iron and acidity loads have been reduced and 99% of the aluminum load. The Swamp Run project resulted 95% efficacy in the reduction of acidity, aluminum, and iron. The Muddy Creek project removed 90% of aluminum and 100% of acidity. Sovern Run improvements resulted in a removal of 100% of the acidity, 80% of the dissolved aluminum, and 70% of the dissolved iron load. North Fork Greens Run had 100% efficacy in removing acidity, aluminum and iron.

Should you have any questions or require additional information, please contact me at (304) 926-0490.

Sincerely,



Harold D. Ward
Acting Director
Division of Mining and Reclamation

HDW/ch

C: Melinda Campbell
Lewis Halstead
Craig Hatcher
Teresa Koon
Legislative Auditor

Fund 3349 Stream Restoration (Fiscal Years 1999-2016)

<u>Fiscal Year</u>	<u>Receipts</u>	<u>Expenditures</u>
1999	\$799,575	\$0
2000	\$606,581	\$0
2001	\$540,324	\$0
2002	\$252,441	\$3,133
2003	\$159,155	\$462,508
2004	\$675,905	\$1,440,133
2005	\$301,146	\$125,710
2006	\$293,174	\$458,565
2007	\$1,413,396	\$296,906
2008	\$824,952	\$317,257
2009	\$8,988,752	\$343,231
2010	\$3,299,729	\$264,615
2011	\$1,119,345	\$443,625
2012	\$2,393,806	\$1,247,443
2013	\$1,287,449	\$4,439,388
2014	\$860,587	\$2,618,613
2015	\$434,384	\$2,769,686
2016	\$253,261	\$290,203

Commitments: Winding Gulf Project \$17,902; Lower Davis Creek Restoration Design \$71,340; New Haven PSD/Winona Sewer Project \$2,139,876; Preston County Waterline Project \$3,000,000; Helen Project of Raleigh County \$25,000; Lower Coal River Restoration Project \$1,000,000; Buffalo Creek Clay County \$150,000; Buffalo Creek Logan County \$60,000

Fund 3349 Stream Restoration Expenditures by Project

<u>Project</u>	<u>FY02-10</u>	<u>FY2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY2014</u>	<u>FY2015</u>	<u>FY2016</u>	<u>Project Totals</u>
Chief Logan Dam	\$1,905,774							\$1,905,774
Dunloup Creek/Kilsyth Sewage Treatment Project	\$325,000							\$325,000
Wallback Dam	\$405,101							\$405,101
Laurel Lake Dredging Project	\$96,820							\$96,820
Ohley Stream Bank Restoration	\$101,467							\$101,467
Devils Fork Treatment System	\$59,334	\$45,517	\$43,982	\$9,059				\$157,892
Logan Flood Plain Initiative	\$185,000							\$185,000
Summerlee AMD Treatment	\$50,000							\$50,000
Stream Partners Sub-Grants	\$267,280							\$267,280
Evaluation of Little Coal River	\$85,000	\$80,000	\$109,991	\$110,000	\$55,000			\$439,991
Ashland Wastewater Treatment Plant	\$149,127							\$149,127
Lambert Run	\$57,451			\$79,059	\$19,863			\$156,373
Barton Branch		\$634	\$50,520	\$71,017	\$13,741	\$12,627		\$148,539
Nonpoint Source Remediation		\$314,897	\$446,920	\$296,985	\$1,259,473	\$324,588	\$614,739	\$3,257,602
Lower Davis Creek Restoration			\$31,885	\$38,020	\$17,060			\$86,965
WV Conservation Agency			\$204,300					\$204,300
Little Coal River Design			\$301,300	\$749,539	\$1,232,402	\$1,745,584	-\$427,983	\$3,600,842
Buffalo Creek (Logan Co.)				\$611,000		\$335,000	\$15,000	\$961,000
Lincoln County Water Line				\$2,400,000		\$352,000		\$2,752,000
WV Watershed Assessment				\$65,923	\$18,533			\$84,456
Plumb Creek							\$88,000	\$88,000
Miscellaneous	\$24,703	\$2,577	\$58,545	\$8,786	\$2,540	-\$113	\$447	\$97,485
Totals	\$3,712,057	\$443,625	\$1,247,443	\$4,439,388	\$2,618,613	\$2,769,686	\$290,203	\$15,521,015