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west virginia department of environmental protection

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Division of Mining and Reclamation (DMR)  
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Jim Justice, Governor  
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July 27, 2017

The Honorable Mitch Carmichael, Chair  
The Honorable Tim Armstead, Chair  
Joint Committee on Government and Finance  
1900 Kanawha Boulevard, East  
Charleston, West Virginia 25305

Dear President Carmichael and Speaker Armstead:

Enclosed is a compilation of receipts and expenditures from the Stream Restoration Fund (SRF) for fiscal years 1999 through 2015, 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 2015:

- Expenditures - During fiscal year 2015 \$434,384 was deposited into the SRF and \$2,769,686 was expended from the fund. Expenditures consisted of \$12,627 for remediation on Barton Bench Project in Randolph County; \$335,000 for construction on the Buffalo Creek Watershed in Logan County; \$352,000 for construction on water lines in Lincoln County; \$1,745,583 for design, construction on the Little Coal River Project in Boone and Lincoln County; \$324,588 for construction and design of Nonpoint Source Remediation projects in Fayette, Harrison, Monongalia, Preston, Raleigh, and Upshur counties; and -\$112 for miscellaneous expenses (corrections for previous year).
- Acres of Streams Reclaimed – A total of 375 acres of streams and surface mine areas impacted by mining related activities were reclaimed/restored along with improvements to the public water supply system in the following watersheds during FY2015:

Barton Bench, Randolph County	90 acres
Buffalo Creek, Logan County	40 acres (8 miles)
Lincoln County Water Line, Lincoln County	29.8 miles
Little Coal River, Boone/Lincoln Counties	245 acres (15 miles)

Riparian tree plantings 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. Completion of 400 feet of stream restoration on Wolf Creek in Fayette County has reclaimed an additional 1 acre of stream. The City of War Sewer Line Extension reclaimed 1.89 miles / 4.5 acres of stream by removing 54 straight pipes and eliminating fecal coliform contamination.

- Effectiveness of Stream Restoration – The Barton Bench Project is a 90-acre parcel of land within the 40,856-acre Mower Tract located in Randolph County. This site was previously surface mined in the 1970's, prior to it becoming part of the Monongahela National Forest. This area was reclaimed by acceptable practices of the time by heavy compaction and mostly non-native plant species. However, those reclamation methods resulted in a permanent condition known as “arrested succession” that prevents the return to the natural environmental conditions due to human involvement. In the fall of 2011, field assessment and design work began. The goal of the project was to restore the area to the pre-mining native Red Spruce-northern hardwood ecosystem. The project scope included de-compaction of the reclaimed areas, wetland restoration, stream restoration and reforestation by planting 22,500 native species including 10,000 Red Spruce seedlings. Final planting during the Fall of 2014 (FY2015) completed the project. Results of this project will be used by the Forest Service to plan similar restoration projects within other previously mined areas of the Mower Tract

With the 1972 collapse of the Buffalo Creek Mine impoundment, Buffalo Creek was severely damaged. Stream Restoration Fund Grants totaling \$611,000 were previously awarded for Phase 1 and Phase 2 of the stream restoration project. In 2015, the WVDEP awarded a \$350,000 Grant through the Stream Restoration Fund to the Buffalo Creek Watershed Association to continue the stream restoration work along Buffalo Creek under Phase 3 of the project. This Grant would cover design, permitting, construction and yearly monitoring of the Phase 3 work. Phase 3 was completed in FY2015 and included the construction of log and boulder structures to channel stream flows, create riffles and pools, transport sediment and stabilize stream banks. Numerous trees and shrubs were also planted to aid in reducing stream bank erosion and provide cover and shade for the fish and wildlife. With the completion of Phase 3, eight miles (40 acres) of Buffalo Creek has been restored. A total of 192 log and boulder stream structures have been installed along with thousands of trees and shrubs being planted to aid in bank stabilization and reduce sediment loading to the stream. The results of the Buffalo Creek Restoration projects to date has been a continuing increase in the biodiversity of the stream and improvement of the area ecosystem. A total of \$335,000 was spent in FY2015. The remaining \$15,000 of the Grant will be used for the required yearly monitoring for a period of five (5) years, to begin in 2016.

In 2013, WVDEP provided a \$2.4M Grant through the Stream Restoration Fund to assist in the funding for the \$6.9M Lincoln County Waterline Project (aka Alkol/Bulger Road/Mud Run Water Line Project). This project was approved to expand the existing Lincoln County PSD water service to serve the Alkol, Bulger, Spurlockville and Upper Mud River areas of Lincoln County. This proposal included 29.8 miles of 8”, 6”, 4” and 2” water lines, (2) large water storage tanks and forty (40) fire hydrants that would provide service to approximately 320 new customers, and potentially serve up to 516 new

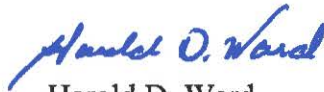
customers. The project was completed in FY2015. WVDEP approved an additional \$352,000 Grant to aid in offsetting a \$552,000 bid overrun.

Preliminary work on the Little Coal River Stream Restoration Project began in 2011 with construction beginning December 2012. Construction was completed in December 2014 (FY2015) with the installation of the final 64 log and boulder structures. The completed project covered 15 miles and included the construction of 198 log and boulder structures throughout the stream. These stream structures are designed to increase sediment transport and create pools and deeper channels to provide structure to the stream and enhance aquatic life. The repair and stabilization of eroded stream banks progressed with woody debris being installed along the stream bank toe for stabilization and to minimize erosion and sediment load to the stream. Each stream structure was designed specifically to improve the overall quality of the stream by increasing bed complexity, substrate biodiversity and increased biomass over the entire restoration reach. Also, the planting of over 9,000 trees and shrubs along the reach was completed in 2015 and will aid in the stabilization of the stream banks and provide additional erosion control. In addition to the expected benefits to the overall ecosystem, improvement to the Little Coal River is expected to increase the recreational use of the stream with fishing and canoeing/kayaking activities which should also have a positive impact on the local economy. The five (5) year monitoring program to evaluate the design and effectiveness of the project is scheduled to begin December 2016 and continue through 2020.

Two acid mine drainage treatment projects were completed in the Muddy Creek watershed of Preston County resulting in reductions in iron and acidity and an increase in pH in Muddy Creek. Post project sampling and stream restoration effectiveness will be available in FY 16. Four additional AMD treatment projects are in the design phase and 3 projects are in the construction phase. Average load reductions and effectiveness of stream restoration will be reported following construction and monitoring in future fiscal years.

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

Sincerely,



Harold D. Ward  
Deputy Secretary

HDW/ch

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

**Fund 3349 Stream Restoration (Fiscal Years 1999-2015)**

<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

Commitments: Buffalo Creek Watershed Asso. (Logan County) \$15,000; Winding Gulf Project Project \$30,464; War Sewer Line Extension \$60,295; Sovern Run Ritchnell & Sands Projects \$68,309; North Fork Greens Run Railroad Refuse \$104,789; Lower Davis Creek Restoration Design \$71,340; Winona Sewer Project \$2,139,876; Barton Bench Restoration Project \$1,373; Preston County Waterline Project \$3,000,000; Helen Project of Raliegh County \$25,000; West Run AMD and Morgantown Airport \$374,870; Herods Run AMD \$235,167; Lambert Site Seven \$199,988; Upper Muddy Creek \$933; Lower Coal River Restoration Project \$1,000,000; Buffalo Creek (Clay County) \$150,000; Lamber Run South \$115,952; Lower Davis Creek \$71,340; Plumb Creek Stream Enhancement \$88,000 (as of 6/30/15)

**Fund 3349 Stream Restoration Expenditures by Project**

<u>Project</u>	<u>FY02-09</u>	<u>FY2010</u>	<u>FY2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY2014</u>	<u>FY2015</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	\$44,512	\$14,822	\$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	\$112,146	\$155,134						\$267,280
Evaluation of Little Coal River	\$30,000	\$55,000	\$80,000	\$109,991	\$110,000	\$55,000		\$439,991
Ashland Wastewater Treatment Plant	\$122,706	\$26,421						\$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	\$2,642,863
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	\$4,028,825
Buffalo Creek (Logan Co.)					\$611,000		\$335,000	\$946,000
Lincoln County Water Line					\$2,400,000		\$352,000	\$2,752,000
WV Watershed Assessment					\$65,923	\$18,533		\$84,456
Miscellaneous	\$11,466	\$13,237	\$2,577	\$58,545	\$8,786	\$2,540	-\$113	\$97,039
<b>Totals</b>	<b>\$3,447,443</b>	<b>\$264,615</b>	<b>\$443,625</b>	<b>\$1,247,443</b>	<b>\$4,439,388</b>	<b>\$2,618,613</b>	<b>\$2,769,686</b>	<b>\$15,230,813</b>