



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 18, 2013

The Honorable Jeff Kessler, Chair
The Honorable Tim Miley, Chair
Joint Committee on Government and Finance
1900 Kanawha Boulevard, East
Charleston, West Virginia 25305

Dear President Kessler and Speaker Miley:

Enclosed is a compilation of receipts and expenditures from the Stream Restoration Fund (SRF) for fiscal years 1999 through 2013, 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 2013:

- Expenditures - During fiscal year 2013 \$1,287,449 was deposited into the SRF and \$4,439,388 was expended from the fund. Expenditures consisted of \$110,000 for monitoring of mitigation success of the Little Coal River in Boone, Kanawha, and Lincoln County; \$9,059 for design on the Amigo Wastewater Treatment Project on Devil's Fork in Raleigh County; \$71,017 for construction and monitoring on Barton Branch Project in Randolph County; \$38,020 for design on the Lower Davis Creek Restoration project in Kanawha County; \$611,000 for design, construction, and monitoring on Buffalo Creek in Logan County; \$79,059 for construction on Lambert Run in Randolph County; \$2,400,000 for design and construction of the Lincoln County Water Line; \$749,539 for design, construction and monitoring on the Little Coal River Project in Boone and Lincoln County \$65,923 for assessments of the Gauley, Little Kanawha and Upper Guyandotte watersheds; \$296,984 for construction and design of Nonpoint Source Remediation projects in Fayette, McDowell, Mingo and Preston counties; and \$8,786 for miscellaneous expenses (vehicle expenses, travel, etc.).
- Acres of Streams Reclaimed -600 feet of stream on Pigeon Creek in Mingo County was restored using natural stream restoration techniques. In-stream structures were installed, sinuosity was restored, and riparian areas re-vegetated. This project, located across the street from the high school, will increase fish habitat quality and macro invertebrate

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biodiversity. 41,840 linear feet of Buffalo Creek in Logan County was restored using natural stream restoration techniques. This project, done in association with the Buffalo Creek Watershed Association, restored the stream most heavily impacted by mining activity in West Virginia using natural stream restoration techniques. The project design focused primarily on habitat improvement, re-establishment of sinuosity and flood plain development. Final construction for the Barton Bench Wetland Enhancement Project in Randolph County and the required evaluation and monitoring were completed. This project improved more than ½ acres of wetlands that were previously limited by poor hydrology, deviation from natural flow paths, overly compacted soils, and incompatible vegetative communities. Design work and feasibility consideration continued on the Lower Davis Creek Project. The West Virginia Watershed Assessment Pilot Project, designed to enhance interagency cooperation and public participation in the identification of suitable projects completed stream assessment model and presented results for agency consideration. This project came in under budget and the cost savings were used to expand the study to include the evaluation of additional watersheds. Final designs were complete and construction activity initiated for the Little Coal River Project. Work was initiated immediately following spawning season in June of this year and will continue throughout the construction season. This project is utilizing natural stream design techniques to restore more than 15 miles of stream that has been heavily impacted by mining and other disturbance. West Virginia University continued their Evaluation of Success Little Coal River Project monitoring the work done in Boone, Lincoln, and Kanawha Counties. The Lambert Run Ecological Restoration Project done in association with the Cannan Valley Institute, the United States Forest Service is part of the Mower Tract and adjacent to Barton Bench, a high elevation site in the upper Shavers Fork watershed of Randolph County. Similar to the Barton Bench area, Lambert Run was historically a red spruce-northern hardwood ecosystem prior to mining and timbering activities, which created large benches covered in dense, non-native grasses, compacted soils, and network of unstable roads on hillsides that impact natural drainage features and deliver sediment to the stream. The red spruce ecosystem of the Central Appalachians is characterized by exceptionally high biodiversity and is a priority for conservation and restoration. The focus of this project is watershed and landscape restoration. Deep ripping to de-compact soils will allow rainfall, snowmelt, and runoff to infiltrate, which will help recharge groundwater and reduce the adverse impacts of storm water runoff and erosion on the stream. The project also includes the re-establishment of native forest.

- Effectiveness of Stream Restoration — The acid mine drainage nonpoint source remediation project on North Fork of Greens Run in Preston County, WV has reduced acidity from 68,147 lbs. /year to 6 lbs. /year, a greater than 99% reduction, iron from 2,182 lbs. /year to 17 lbs. /year, a reduction of 99%, and aluminum from 820 lbs. /year to 10 lbs. /year, a reduction of 98.8%. Overall these pollutant reductions help restore and maintain the tributaries to the Cheat River on which they are located as well as the Cheat Lake fishery. The Buffalo Creek Restoration project will provide long-term fish habitat improvements and increase macro invertebrate biodiversity for the stream. The project has significantly increased the recreational use of the stream and the environmental awareness of the community and resulted in Buffalo Creek being the only stream in Logan County on the trout stocking list. The Barton Bench and the Lambert Run Projects build upon the successful implementation of strategies that were designed (through a partnership with US Forest Service, ARRI and CVI) to address specific issues related to arrested succession and soil erosion. The decommissioning and subsequent recontouring

of road beds has proven very successful in reducing the sediment load in the adjacent trout streams. Additionally, ripping broke apart the root systems of non-native grasses while drawing large boulders and smaller rocks to the surface creating a varied micro topography throughout the site dramatically benefitting the trees planted. The modeling provided by the WV Watershed Assessment provided a frame work that may be considered in the authorization of future expenditures from the stream restoration fund. Evaluation of Success Little Coal River Project shows the increased productivity of the fishery associated with the principles of natural stream restoration projects. The study has confirmed that bed complexity, increased substrate biodiversity, and increased macro invertebrate biomass. This is accomplished by restoring the streams natural ability to move sedimentation during low flow conditions, thereby increasing the ability of the stream to handle high flow conditions.

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

Enclosure

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

Fund 3349 Stream Restoration (Fiscal Years 1999-2013)

<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

Commitments: West Virginia Watershed Assessment Pilot Project \$23,962; Little Coal River Design \$1,792,996; Lambert Run South US Forest Service \$120,721; War Sewer Line Extension Phase One \$316,572; Sovern Run Titchnell and Sands Projects \$192,763; West Run AMD Morgantown Airport \$264,685; Roaring Creek Mars Portal AMD \$215,302; Herods Run AMD; Lamberts Site Seven \$200,000; North Fork Greens Run Railroad Refuse \$107,973; Upper Muddy Creek AMD Treatment Improvements \$12,504; Winona Sewer Project \$2,139,876; WVU Research Corp Muddy Creek \$57,605; Friends of Cheat \$40,302; Canaan Valley Institute \$35,132 (As of 12/16/13)

Fund 3349 Stream Restoration Expenditures by Project

<u>Project</u>	<u>FY02-06</u>	<u>FY2008</u>	<u>FY2009</u>	<u>FY2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY2013</u>	<u>Project Totals</u>
Chief Logan Dam	\$1,905,774							\$1,905,774
Dunloup Creek/Kilsyth Sewage Treatment Project	\$80,000	\$235,972	\$9,028					\$325,000
Wallback Dam	\$405,101							\$405,101
Laurel Lake Dredging Project	\$96,820							\$96,820
Ohley Stream Bank Restoration	\$98,773	\$2,694						\$101,467
Devils Fork Treatment System	\$15,487	\$247	\$28,778	\$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		\$28,344	\$83,802	\$155,134				\$267,280
Evaluation of Little Coal River			\$30,000	\$55,000	\$80,000	\$109,991	\$110,000	\$384,991
Ashland Wastewater Treatment Plant			\$122,706	\$26,421				\$149,127
Lambert Run			\$57,451				\$79,059	\$136,510
Barton Branch					\$634	\$50,520	\$71,017	\$122,171
Nonpoint Source Remediation					\$314,897	\$446,920	\$296,985	\$1,058,802
Lower Davis Creek Restoration						\$31,885	\$38,020	\$69,905
WV Conservation Agency						\$204,300		\$204,300
Little Coal River Design						\$301,300	\$749,539	\$1,050,839
Buffalo Creek							\$611,000	\$611,000
Lincoln County Water Line							\$2,400,000	\$2,400,000
WV Watershed Assessment							\$65,923	\$65,923
Miscellaneous			\$11,466	\$13,237	\$2,577	\$58,545	\$8,786	\$94,611
Totals	\$2,786,955	\$317,257	\$343,231	\$264,615	\$443,625	\$1,247,443	\$4,439,388	\$9,842,514