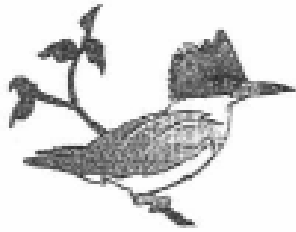


“HOBO Monitoring Stations”

Davis Creek Watershed Association



FY 2014 FINAL REPORT

Amount Requested	\$3,124
Match	\$1,265
TOTAL	\$4,389

Organization: Davis Creek Watershed Association

Contact: Diana Green, Treasurer

Mailing Address: PO Box 5556, Charleston, WV 25361

Email: dkgg@suddenlink.net

Phone Number: 304-543-1946

Grant # 1489

Period: May 1, 2014- November 1, 2014

Project Summary

The monitoring equipment that was to be funded through this grant has been purchased (invoice attached). This purchase of four Onset conductivity / temperature data loggers (and associated reader and software) was the sole expense for this project and considering that the loggers have been purchased and have been deployed this report will suffice as the final report for grant reporting requirements.

The project that this grant provided funding for is a continuation of a monitoring effort initiated by WVDEP's Watershed Assessment Section (WAS). Conductivity / temperature loggers (identical to the units that were purchased by DCWA) were deployed in October of 2013 by WAS personnel. Data was obtained from several sites (largely matching up with the locations that the DCWA loggers were deployed) thus providing several months' worth of baseline conductivity / temperature data from the watershed. The DCWA loggers were purchased in July 2014 and deployed in October following a test period to ensure all loggers were capable of measuring, storing, and communicating valid data back to a secure computer. Personnel from WVDEP's WAS assisted in this deployment effort. Freshly calibrated Hydrolab multi-parameter water quality meters were used to measure water quality at the time of deployment for quality assurance reasons. These discrete measurements will also be recorded at all future site visits which will occur approximately once per month. Loggers will be uploaded to laptop computer and shared on a regular basis with other members of DCWA. Deployment locations as well as initial water quality readings are shown in the maps, photos and descriptions below in the Map and Location of Project Sites section.

Accomplished Goals and Objectives

DCWA has reached several of its goals outline within this project's focus including the following:

Short-Term:

1. Involving more people in DCWA activities by including continuous monitoring results in the quarterly newsletter.
2. Providing a complete (annual) baseline for students to compare their monitoring results to during summer sampling periods.
3. Monitoring data will be uploaded and shared on DCWA's website:
<http://www.daviscreekwv.org/>

Long-Term:

1. Prevention of negative impacts from ongoing and future resource extraction activities by creating a baseline for monitoring on Davis Creek.

Map and Location of Project Sites

WVDEP DMR recently approved a permit for a 414 acre surface mining operation in the Kanawha Fork drainage area of the Davis Creek Watershed (Keystone Industries; permit S-3006-09). Because of concerns regarding trespassing on mine property, the DCWA logger deployed in Kanawha Fork is downstream approximately 0.2 miles from the location of the DEP WAS deployed logger.

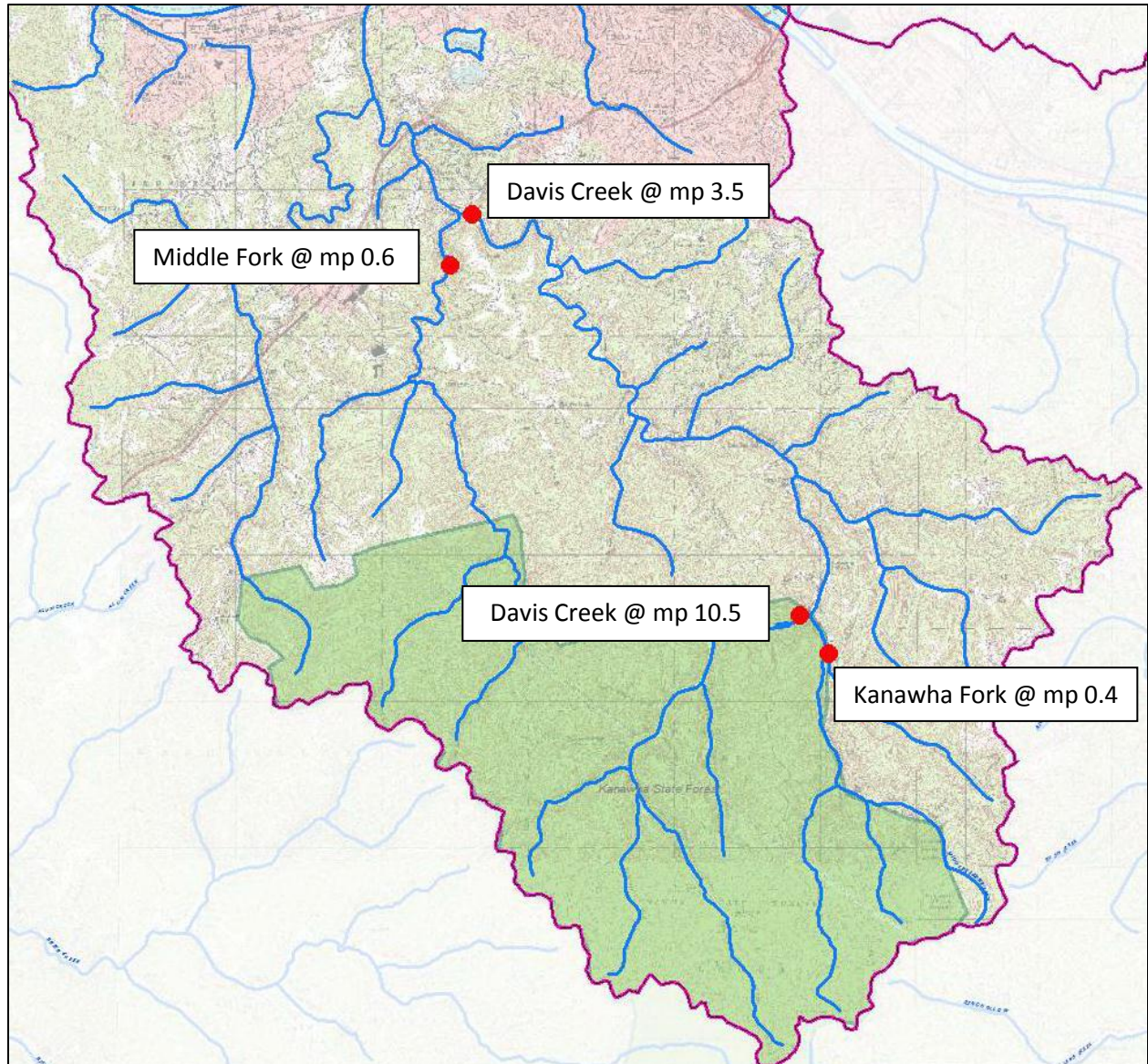


Figure 1. Map showing locations of deployed loggers.

Middle Fork / Davis Creek at milepoint 0.6

This logger was deployed on Oct 26th. The location is downstream approximately 0.8 miles from the location that DEP's logger had been deployed the previous year. Photos show the specific location of the deployed loggers which are attached to strong roots with 1/8" steel cable and aluminum ferrules.

Initial readings from Hydrolab:

10/26/2014 @ 6:25 pm	
Temperature (C°)	12.67
pH (standard units)	8.09
DO (mg/L)	9.33
Sp. Conductance (uS/cm)	252



Davis Creek at milepoint 3.5

This logger was deployed on Oct 26th. The location is at the same location that DEP's logger had been deployed the previous year. This site is monitored annually by WVDEP WAS as part of their Long-term Monitoring Sites program (LTMS) which includes assessment of habitat, biology, and water quality.

Initial readings from Hydrolab:

10/26/2014 @ 4:45 pm	
Temperature (C°)	12.21
pH (standard units)	7.21
DO (mg/L)	9.97
Sp. Conductance (uS/cm)	261

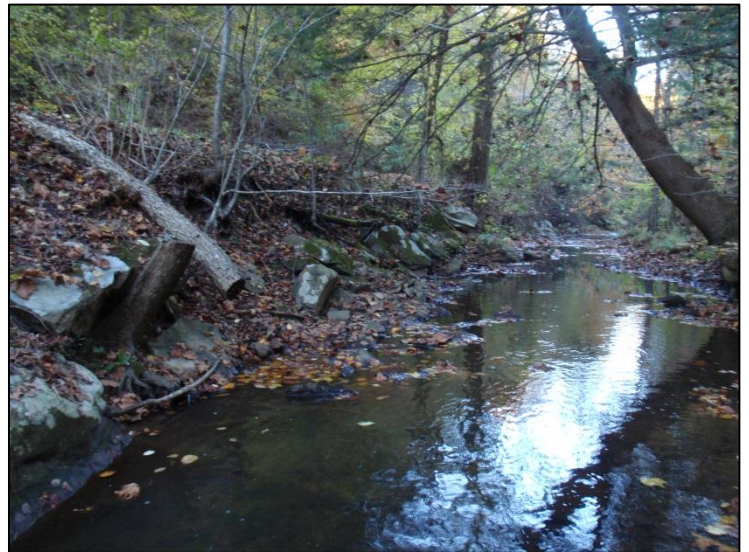


Davis Creek at milepoint 10.5

This logger was deployed on Oct 26th. The location is within Kanawha State Forest and is upstream of Kanawha Fork. Landuse in the upstream drainage is primarily forest with some limited recreational roads and light oil and gas activity.

Initial readings from Hydrolab:

10/26/2014 @ 5:39 pm	
Temperature (C°)	10.98
pH (standard units)	6.92
DO (mg/L)	9.56
Sp. Conductance (uS/cm)	116

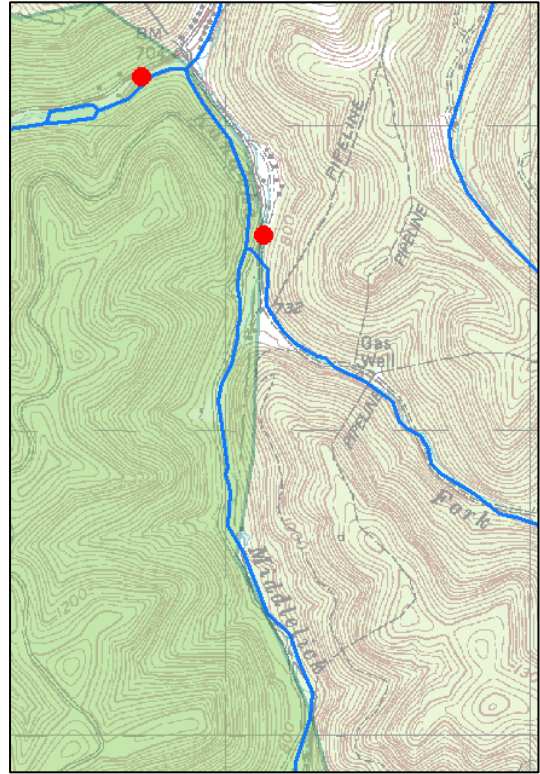


Kanawha Fork at milepoint 0.4

This logger was deployed on Oct 26th. It is at the eastern edge of Kanawha State Forest, bordering private property. This site is influenced by runoff from the new surface coal mine that has been permitted in the headwaters. Conductivity values are expected to increase over time. The deployment site is downstream about 0.2 miles from where DEP had deployed a logger in the fall of 2013 in order to stay off private property. The current location is downstream from the relatively undisturbed drainage area of Middlelick Branch and is expected to measure conductivity levels lower than that which will be experienced further upstream on Kanawha Fork. Discrete temperature and conductivity readings will be measured just upstream of the confluence of these two streams at all future site visits in order to better interpret the data from the logger.

Initial readings from Hydrolab:

10/26/2014 @ 5:22 pm	
Temperature (C°)	12.94
pH (standard units)	6.70
DO (mg/L)	10.12
Sp. Conductance (uS/cm)	416



Expenditures

Semi-Annual 319 Financial Report	
Project:	HOBO Monitoring Stations
NPS #:	01/28/04
Phone:	304-543-1946
Fiscal Year:	2014
Fax:	N/A
E-mail:	dkgg@suddenlink.net
Grantee:	Davis Creek Watershed Association, Inc.
Contact:	Diana Green
Reporting period:	5/1/2014 - 11/1/2014
To	From
319 Grant Funds Awarded:	\$3,124.00
Items for match	Match \$
Volunteer Time (3 volunteers for 20hrs @\$17.76)	\$1,065.60
Traveling/Gasoline	\$100.40
HOBOWare Pro Mac/Win	\$99.00
Totals	\$1,265.00
Request for reimbursements during period	Spent \$
HOBO Conductivity Logger 0-10,000uS/cm (4@\$750.00)	\$3,000.00
BASE-U-4 Universal Optic-USB Base Station (1)	\$124.00
Totals	\$3,124.00
Remaining Balance	\$0.00

Please list any businesses used in the project that qualify as disadvantaged business enterprises (DBE)

DBEs	\$
Totals:	\$0.00

Save this file and submit it to the Coordinator along with the other required elements of your **semi-annual report**.

Challenges

-Due to this project's simplicity and the existing training of the volunteers, HOBOS were deployed without complication. Data will be uploaded to www.daviscreekwv.org. DCWA's very excited to build their monitoring database and share the information with interested parties.

-There was one financial challenge. The timeliness of the reimbursement is somewhat difficult for smaller watershed groups. DCWA was only able to get the equipment in a timely manner due to a volunteer providing their personal credit card to purchase the equipment. If there was any way to provide some of the funds up front, it could really assist smaller watershed groups to stay on their planned schedule and maintain some financial stability.