Coldwater Heritage Partnership
Final Report

Year: 2020
Grant Round: 25

Organization: Trout Unlimited
Stream Name: Beaverdam Run
Project Title: Beaverdam Run Habitat Improvement and Sediment Reduction Phase II
Grant expenditures: Grant Funds: $8,000 Cash Match: $5,372 In-Kind Match: $4,500

Project Summary:
TU staff provided construction oversight for the installation of structures on September 28-30, 2020 (see attached as-built documentation). The installed devices included 47 Chop and Drop installations and 9 Toe Wood Structures. The devices were installed strategically to maintain the thalweg in the center of the channel and increase toe stability of actively eroding banks. Together the devices stabilized approximately one and a half miles of Beaverdam Run, eliminating approximately 13,900 pounds of sediment a year. Further benefits of this project include increased overhead cover, complex woody material, and additional pool habitat. A contractor was hired by TU to complete the machine work and DCNR and TU staff provided sawyers to fell the trees.

Project Outcomes:
The specific goals and objectives of this project were to improve habitat and stabilize actively eroding streambanks along 4.5 miles of Beaverdam Run. All project deliverables were met. The attached final report prepared under Trout Unlimited's Nonpoint Source Technical Assistance program details these outcomes.

Project Sustainability / Next Steps:
In the long-term, this project is expected to need little to no maintenance. Monitoring will occur on at least a yearly basis and following extreme storm events that could damage the project structures. If maintenance needs are identified, TU will work with Kettle Creek Watershed Association and other partners to address the problems.

Future plans for the watershed include the construction of Phase III. The specific goals and objectives of Phase III are to improve habitat and stabilize actively eroding streambanks along an additional 4.5 miles of Beaverdam Run preventing approximately 13,180lbs/year of sediment. Phase III is the final phase of restoration activities planned in Beaverdam Run.

Partners and Volunteers:
This project was completed with support from Kettle Creek Watershed Association, Clinton County Conservation District, and DCNR Bureau of Forestry. DCNR provided staff support during the installation of chop and drop enhancement structures. No volunteer support was used due to the nature of construction and the Covid19 pandemic.

Beaverdam Run Stabilization/Large Wood Addition Project
Beaverdam Run, Clinton County

Final Report for Technical Assistance Provided through Trout Unlimited's Nonpoint Source Technical Assistance Program

December 2020

Background

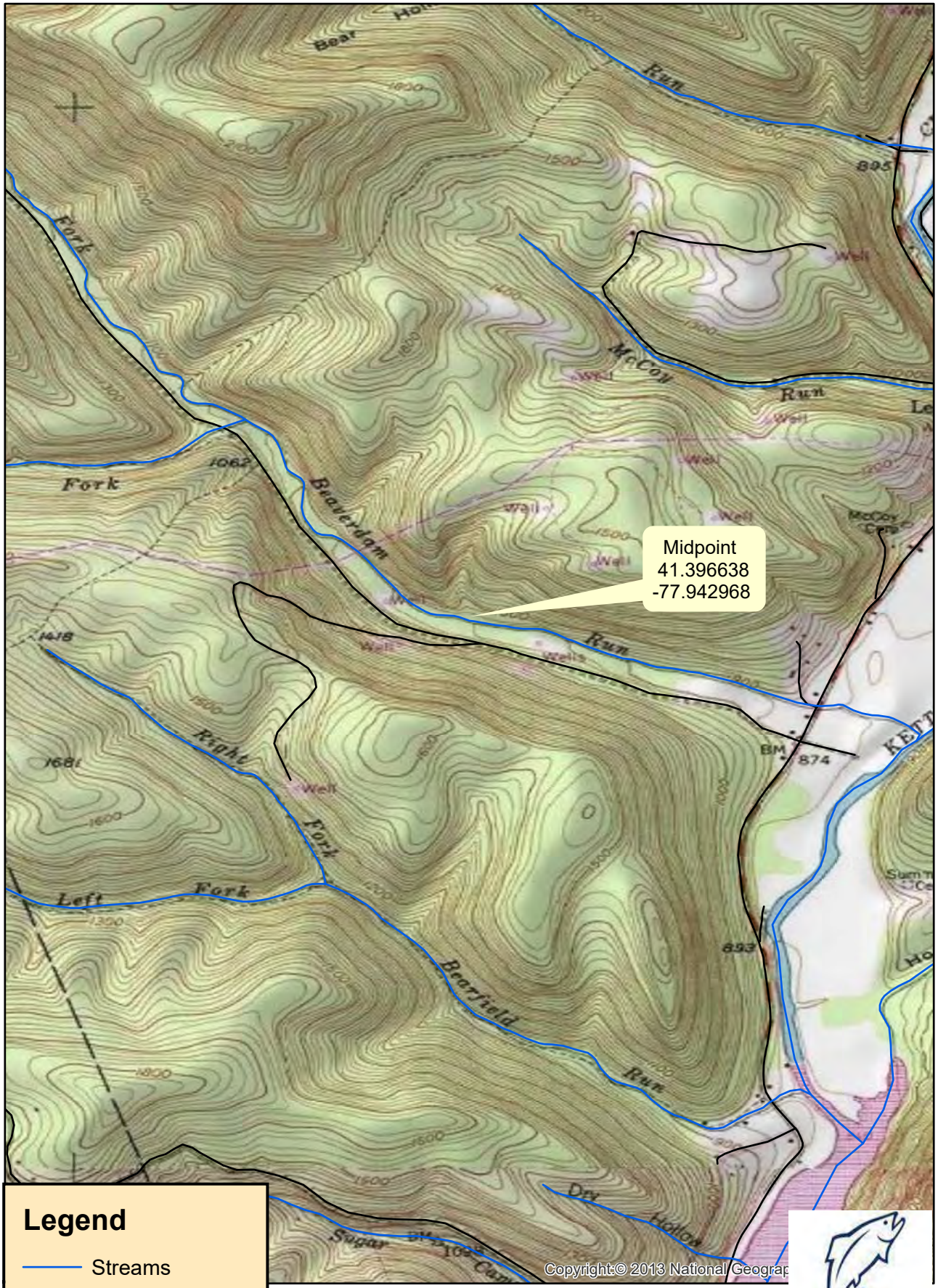
The Kettle Creek Watershed Association (KCWA), requested technical assistance from Trout Unlimited for the construction oversight of a streambank stabilization/large wood addition project on Beaverdam Run, a tributary to Kettle Creek. Beaverdam Run is a high quality, cold water stream which supports a native population of brook trout. TU assisted the Kettle Creek Watershed Association with the permit application for this project in 2020 through NSTAP #2021.

Summary of Technical Assistance Activities

TU staff provided construction oversight for the installation of structures on September 28-30, 2020. The installed devices included 47 Chop and Drop installations and 9 Toe Wood Structures. The devices were installed strategically to maintain the thalweg in the center of the channel and increase toe stability of actively eroding banks. Together the devices stabilized approximately one and a half miles of Beaverdam Run, eliminating approximately 13,900 pounds of sediment a year. Further benefits of this project include increased overhead cover, complex woody material and additional pool habitat. A contractor was hired by TU to complete the machine work and DCNR and TU staff provided sawyers to fell the trees. Funding for this project was provided by a grant from the Coldwater Heritage Partnership and financial assistance from Kettle Creek Watershed Association.

Attachments

Beaverdam Run Habitat Improvement
Project Location Map



Legend

- Streams
- Pa Local Roads
- Pa State Roads

1:24,000

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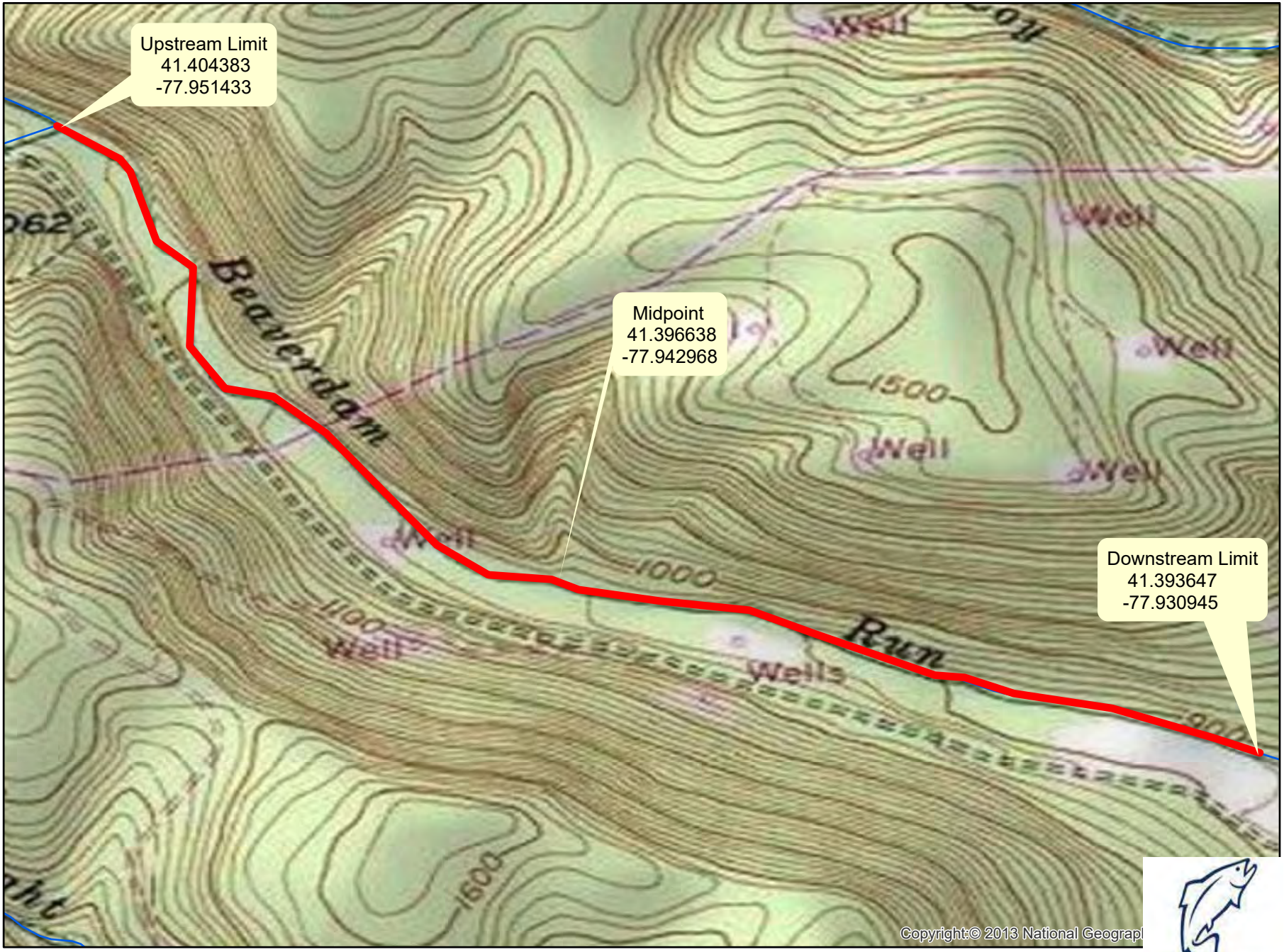
TROUT UNLIMITED

Beaverdam Run Large Wood Recommendations



Planned LWA

5 Root Wad Revetments
8 Toe Wood Structures
18 Chop and Drop

1 inch = 0.20 Miles

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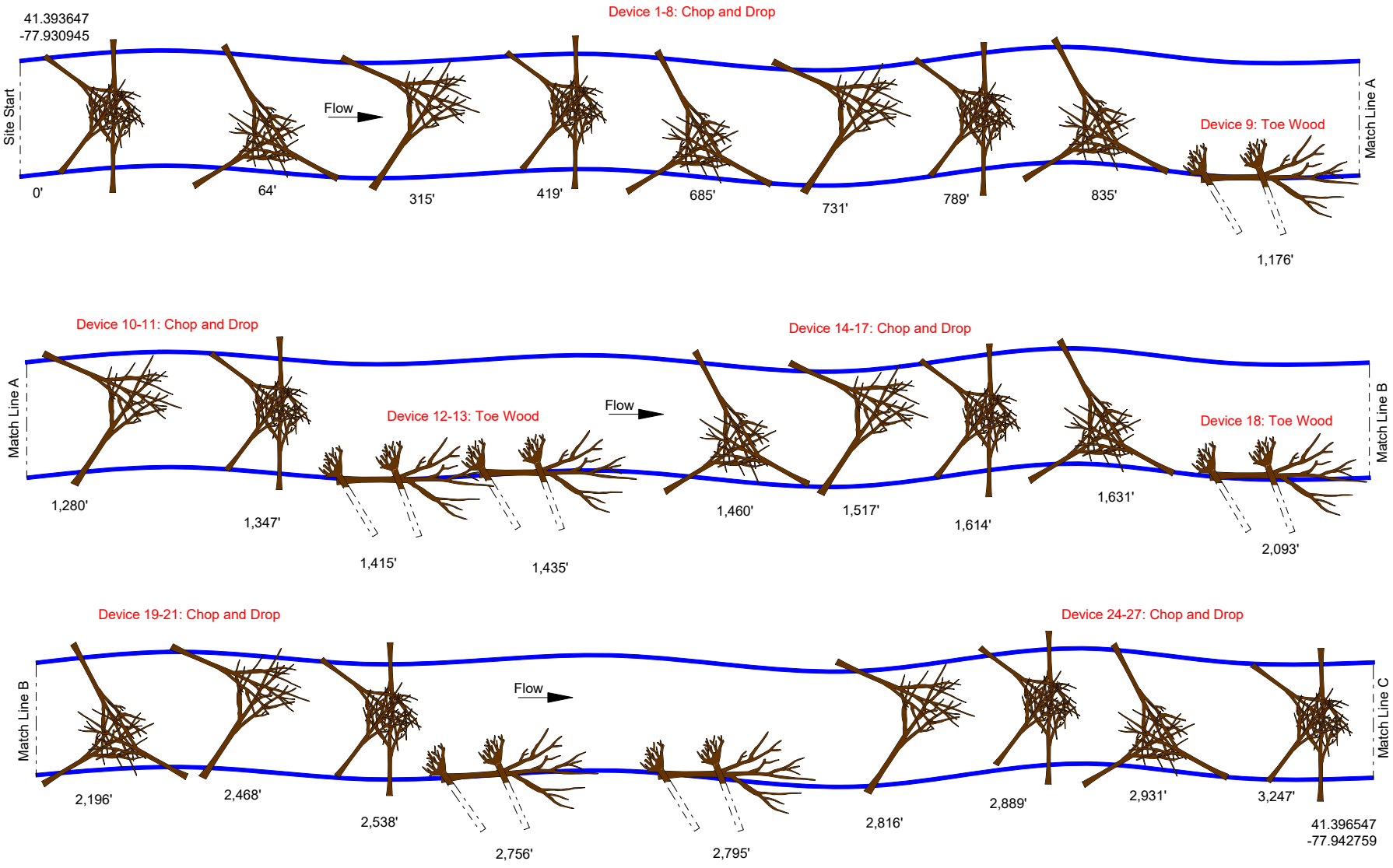


As Built

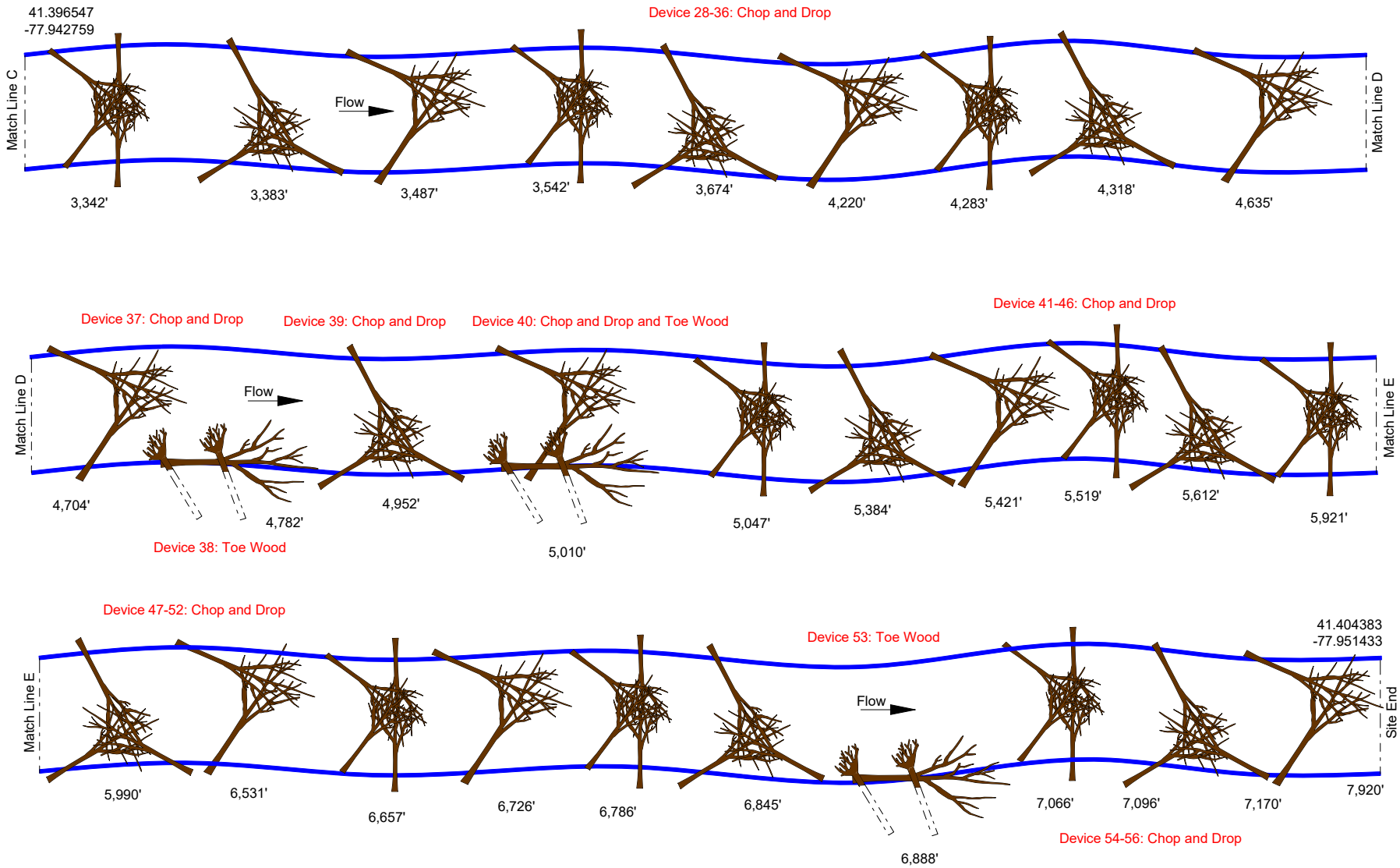
Beaverdam Run Habitat Improvement Project Page 1 of 2

Beaverdam Run, Stream Designation EV

N

Drawn By: Danny Brumbaugh

ALL SIZES APPROXIMATE, FIT IN FIELD



As Built

Beaverdam Run Habitat Improvement Project
Page 2 of 2

Beaverdam Run, Stream Designation EV

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Drawn By: Danny Brumbaugh

ALL SIZES APPROXIMATE, FIT IN FIELD

Stream: Beaverdam Run				Project Name: Large Wood		Date: 9/30/20	
Observers: Thomas, Brumbaugh				County: Clinton		Project Length: 7,920	Comments
	Type of LWA	Bank Pin Y/N	Erosion Rate (ft/yr)	Bank Length (ft)	Bank Height (ft)	Erosion Subtotal (ft^3/yr)	Total # of Structures 56
1	Toe Wood		0.15	360	2.5	135	9 structures x 20'
2	Chop & Drop		0.01	940	1	9.4	47 strutures x 20'
Linear Feet of Erosion =		1300					
% Of Eroded Bank		16.41					
Sum of erosion sub-totals for each Project Name					Total erosion (ft^3/yr)	144.4 ft^3/yr	
Divide total erosion (ft^3) by 27 to get yds^3					Total erosion (yd^3/yr)	5.35 yd^3/yr	
Multiply Total Erosion (yd^3) by 1.3 to get tons					Total erosion (tons/year)	6.95 tons/year	

Photo 1: Pre-construction view of eroding stream bank

Photo 2: Post-construction view of Toe Wood Structure (Post Photo 1)

Photo 3: Pre-construction view of eroding stream bank

Photo 4: Post-construction view of Toe Wood Structure (Post Photo 3)

Photo 5: Pre-construction view of eroding stream bank

Photo 6: Post-construction view of Toe Wood Structure (Post Photo 5)

Photo 7: Pre-construction view of eroding stream bank

Photo 8: Post-construction view of Toe Wood Structure (Post Photo 7)

Photo 9: Pre-construction view of eroding stream bank

Photo 10: Post-construction view of Toe Wood Structure (Post Photo 9)

Photo 11: Pre-construction view of eroding stream bank

Photo 12: Post-construction view of Toe Wood Structure (Post Photo 11)

Photo 13: Pre-construction view of eroding stream bank

Photo 14: Post-construction view of Toe Wood Structure (Post Photo 13)