



Adam Webster

FOC Project Updates

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Restoration Program Manager

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Friends of the Cheat

To restore, preserve, & promote the outstanding
natural qualities of the Cheat River Watershed

Beaver Creek at Auman Road

Project Status

- Construction Completed July 2020
- Largest untreated source to Beaver Creek Watershed



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Beaver Creek at Auman Road



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Dream Mountain – Muddy Creek



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EROSION & SEDIMENTATION CONTROL PLAN NOTES:

- All construction improvements being performed in areas that are contained within or protected by the existing passive treatment system are viewed as maintenance activities of existing structures. Disturbance activities occurring outside of these areas will need to apply conventional techniques for erosion and sediment control. Only limited disturbance will be permitted to provide access to install silt barrier components filter sock/wattle.
- Erosion and sediment control Best Management Practices (BMPs) must be constructed, stabilized, and functional before site disturbance begins within the BMP contributory drainage area.
- After final site stabilization has been achieved (uniform 70% perennial vegetative cover or better where revegetated), temporary erosion and sediment control BMPs must be removed. Areas disturbed during removal of BMPs must be stabilized immediately.
- Stockpile heights must not exceed 25 feet. Stockpile slopes must be 2:1 or flatter.
- Until the site is stabilized, all erosion and sediment control BMPs must be maintained properly. Maintenance must include inspection of all erosion and sediment control BMPs after each rainfall event and on a weekly basis. All preventative and remedial maintenance work, including clean out, repair, replacement, regrading, reseedling, and weeding must be performed within 48 hours or sooner if so specified for a given BMP. If erosion and sediment control BMPs fail to perform as expected, replacement BMPs or modifications of those installed will be required. The site Construction Foreman or his designee must ensure that weekly and post-rainfall inspections are completed and shall oversee any required preventative and remedial maintenance work.
- Sediment removed from BMPs must be placed within the limits of disturbance in an area protected by BMPs and promptly stabilized to avoid future re-entrainment.
- Any waste materials generated by including wastes associated with the operation and maintenance of earthmoving equipment and construction materials such as gasoline, oil, paint, vegetation supplies, etc.) or encountered during construction will be recycled, scraped, or disposed of in a permitted facility in accordance with all applicable state and federal regulations as needed.
- Area affected during construction shall be only within the limits of disturbance as shown and shall be kept to the minimum area needed to construct the treatment system.
- Though all cut and fill material will be used on-site, on-site, it is the responsibility of the operator to perform due diligence to determine if any fill material imported from off-site is Satisfactory Fill. Satisfactory Fill is defined as: Uncontaminated, non-water soluble, non-decomposable, inert, solid material. The term includes soil, rock, stone, and designed material.

CONSTRUCTION SCHEDULE & BMP INSTALLATION SEQUENCE

1. Install all barrier fence / compact filter sock where indicated.
2. Clear & Grub only the area that is to be disturbed (as needed). Place trees in windbreak/piles along outside edge of limits of disturbance or as directed/provided by Dream Mountain personnel (as applicable).
3. Grade all affected areas to blend with surrounding topography and to promote positive drainage.
4. Remove excess rubble media enhancements from slag placement area surface prior to spreading soil.
5. Place and spread best on-site soil material and imported topsoil material as needed to ensure successful revegetation of slag placement area.
6. Seed entire affected area per permanent seeding specifications as soon as possible or within 1 week after construction.
7. Remove all temporary BMPs upon establishing permanent uniform 70% perennial vegetative cover.

The general approach to construction and EAS BMP installation intends that BMPs are to be installed prior to earth disturbance activities, each step shall be completed before beginning the next, and the site is to be stabilized as soon as possible upon completion of the work. If the work is delayed into winter seasons, the BMPs are to be installed prior to beginning work in that area. This includes installing controls for all areas downstream of the disturbance activity. If the earth disturbance activities must be suspended for a period of more than 20 days, the disturbed areas are to be stabilized in accordance with the temporary seeding specifications or other suitable means to prevent erosion.

REPRESENTATIVE A&M CHARACTERISTICS									
Point	Flow	pH	Acid	Dis	Dis	Dis	Dis	Dis	Dis
SITE #1	AVG. 128	2.8	423	20	2	21			
DESIGN	201	2.8	625	26	3	21			

Flow rates are based on a 100-year return period storm. Average POC and Sediment loading 2000 - 2020. Design flow rate is based on a 100-year return period storm. Note: First Effluent water quality is intended to be greatly improved, with significant load reduction, reduced total suspended solids, and improved pH. The final effluent water quality is intended to be greatly improved, with significant load reduction, reduced total suspended solids, and improved pH. Note: First Effluent water quality is intended to be greatly improved, with significant load reduction, reduced total suspended solids, and improved pH. The final effluent water quality is intended to be greatly improved, with significant load reduction, reduced total suspended solids, and improved pH.



LEGEND

- EX. CONTOUR (INDEX)
- EX. CONTOUR (INTERMEDIATE)
- EX. ROAD (PAVED)
- EX. TRAIL
- EX. UTILITY POLE
- EX. UTILITY LINE
- EX. STREAM / SURFACE WATER
- EX. GAME FENCING (APPROX. LOCATION)
- EX. TREATMENT WETLAND
- BENCHMARKS
- EX. PASSIVE TREATMENT COMPONENT
- PROP. CONTOUR (INDEX)
- PROP. CONTOUR (INTERMEDIATE)
- PROP. 4" HDPE PIPE (DRY) (PERFORATED)
- PROP. 12" SCH40 PVC PIPE (SOLID)
- PROP. 12" HDPE DR-26 (PERFORATED)
- PROP. 12" HDPE N-12 (TYPE-S) CULVERT PIPE
- PROP. 18" HDPE N-12 (TYPE-S) CULVERT PIPE
- PROP. 12" WATTLES (COMPOST FILTER SOCK)
- TEST PIT LOCATION & NUMBER (SEE TECH SPECS)
- LIMITS OF DISTURBANCE (2.47 AC)
- ROCK-LINED CHANNEL / SPILLWAY

WV A&M WATER IS CURRENTLY BEING DIRECTED TOWARD THE FULCROW MOUNTAIN PASSIVE TREATMENT SYSTEM VIA THE ROAD DITCH AND UNCONTAMINATED COLLECTION POND WITH DRAIN PIPES.

TEMPORARY AND PERMANENT SEEDING SPECIFICATIONS

Temporary

Species: Annual Ryegrass
Pure Live Seed: 88% Application Rate: 48 LB./AC.
Fertilizer Type: None Lining Rate: 0 T./AC.
Mulch Type: Hay or Straw Mulching Rate: 3.0 T./AC.

Permanent

(Species / Application Rate): Orchard Grass - 10 LB./AC.; Timothy - 10 LB./AC.; White Dutch Clover - 3 LB./AC.; White Clover - 3 LB./AC.; Ladino Clover - 3 LB./AC.; Bankston Trefoil (English Vetch) - 13 LB./AC.; Winter Wheat - 40 LB./AC.; Winter wheat for fall planting or spring oats at 34 LB./AC. for spring planting. Winter year or annual ryegrass at 25 LB./AC. may also be used. Kentucky 31 Tall Fescue shall not be used.
Min. Purity: 90% Min. Germination: 80%
Fertilizer Type: 10-20-20 Fertilizer Appl. Rate: 500 LB./AC.
Lining Rate: 3.0 T./AC. Mulch Type: Hay or Straw Mulching Rate: 3.0 T./AC.
Preferred Seeding Season Dates: 3/15 to 6/1, 8/1 to 10/15

12" COMPOST FILTER SOCK (WATTLES)

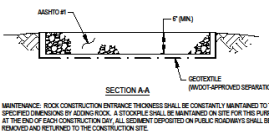
Horizontal Scale: None Vertical Scale: None

GENERAL NOTES

1. Base map origin WV LIDAR source available through WV DEP (<http://gis.dep.wv.gov/lidar/>). WV State Plane - North (US Survey Foot) NAD83 (Vertical datum - NAVD83). Benchmark, Inc. installed vertical control benchmarks referencing an existing gas from original system construction activities. BM1 & BM2 were set by Benchmark, Inc. and are based on the known reference pin (shown on the map). Elevations were obtained utilizing a Sub-Continent Grade Javel GPS unit. Select topographic and cultural features from USGS 7.5' Valley Floor, WV (1987). Additional information from limited 2019/2020 site investigations by Benchmark, Inc. All existing conditions are to be field verified by the contractor as needed.
2. Stream presence/absence determined from "New Insect" at USGS map. Locations verified based on available LIDAR mapping.
3. All dimensions are in feet unless otherwise noted. All size designations are 1/4".
4. Property owned by Dream Mountain Game Ranch LLC.
5. Proposed structures may be altered as approved by the Friends of the Cheat representative as needed to suit field conditions.
6. WV One Call notification will be required for entire construction area including any on-site B1 placement locations.
7. All "High-Cal Limestone" to be 90% CaCO₃ or better (Not just 80% CCE).
8. Proposed AFVFP has been documented to hold water during its use as a slag bed, therefore no additional pond lining is being proposed.
9. Timeline is not represented on the plan for clarity purposes, only minimal tree removal is anticipated.
10. Passive treatment system component design information was based on details from the original Planities & Associates Inc. Design/Markup Drawings (2009).
11. All Riprap (R-4 and larger) shall be placed on WV DOT approved erosion control geotextile.

COMPOST FILTER SOCK TABLE		
COMPOST FILTER SOCK DIA	SIZE (INCHES)	USE (INCHES)
CF36	12	
CF36	12	
CF36	12	
CF36	12	

COMPOST FILTER SOCK MUST BE INSTALLED AT DISTINGUISH GRADE. BOTH ENDS OF EACH SECTION MUST EXTEND AT LEAST 8 FEET UPLORE AT 4% TO THE MAIN DISCHARGEMENT. SEDIMENT MUST BE REMOVED WHERE ACCUMULATIONS EXCEED 10" TO THE ABOVE GROUND HEIGHT OF THE FILTER SOCK. ANY SECTION WHICH HAS BEEN UNDERRUN OR TOPPED MUST BE REPAIRED/REPLACED WITHIN 24 HOURS. FOR WOOD STAKES 2" X 4" IN-SECTION, USE NOT NEEDED. REPLACE BIOGRADABLE FILTER SOCK AFTER 6 MONTHS, PHOTOGRADABLE AFTER 12 MONTHS.



ROCK CONSTRUCTION ENTRANCE

Horizontal Scale: None Vertical Scale: None



SHEET 1 of 3

Design Plan / E&S Controls

Plan View, Location Map, Legend, Notes & Details

MUDDY CREEK DREAM MOUNTAIN PASSIVE TREATMENT SYSTEM IMPROVEMENTS

for FRIENDS OF THE CHEAT
Muddy Creek Subwatershed - Cheat River Watershed
Preston County, WV

Scale: 1" = 50' September 2020

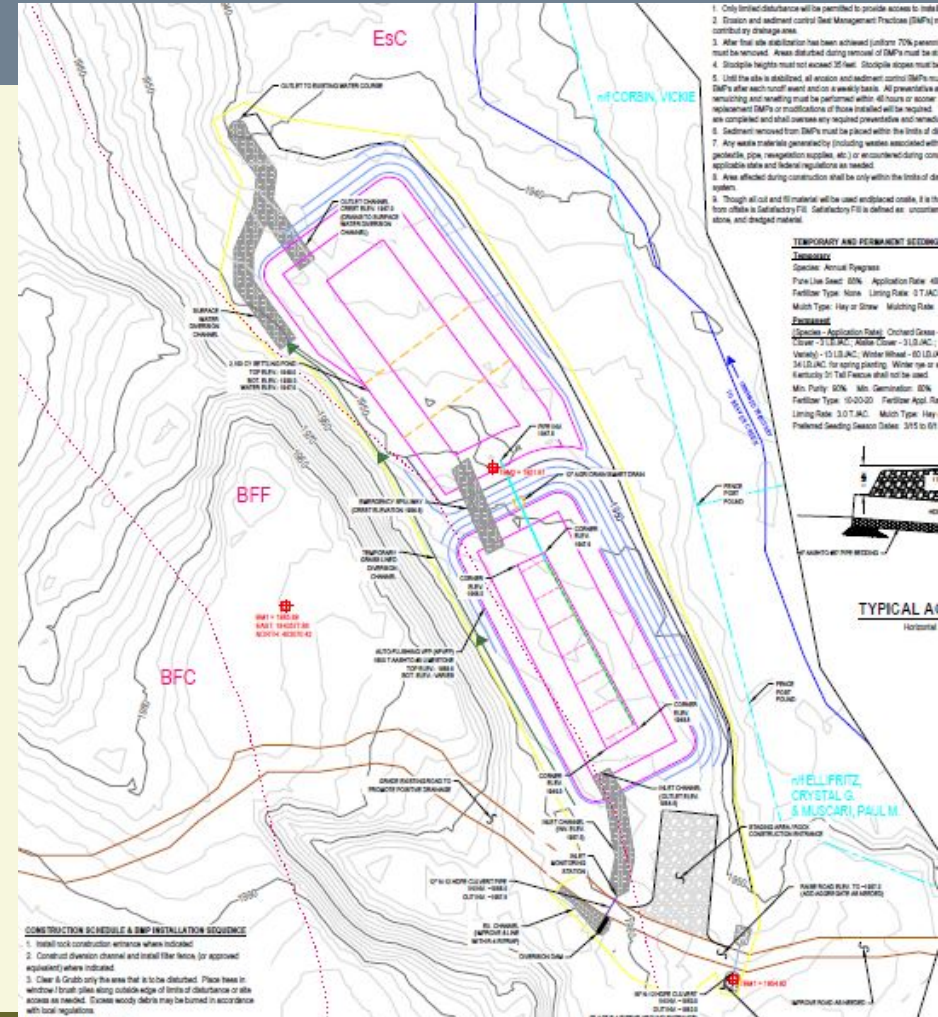
BioMost, Inc. Mining and Reclamation Services
Morgantown, PA www.biomost.com



Beaver Creek - McElroy

Project Status

- Construction to begin tentatively in March 2021



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Sovern Tom Clark

Project Status

- Broken into 3 phases
- Phase I and II Awarded
- Phase III Pending
- Last untreated source in Sovern Run



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New to FOC – Restoration and Partnerships

- NRCS Partnership –
Riparian Restoration
- Goal of restoring 90
acres over next 4 years
- Priority areas identified
using GIS



New to FOC – Restoration and Partnerships

- Albright Dam Removal
- Planning and Partial Implementation Funds Secured
- Hellbender eDNA Study



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Questions?



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