

MAINTENANCE PROGRAM

ALL EROSION AND SEDIMENT CONTROL BMPs MUST BE MAINTAINED PROPERLY UNTIL THE SITE IS STABILIZED. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROLS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING, MUST BE PERFORMED IMMEDIATELY. MAINTENANCE REQUIREMENTS SPECIFIC TO THE BMPs TO BE UTILIZED ON THE SITE ARE AS FOLLOWS:

STABILIZED CONSTRUCTION ENTRANCE: THE DIMENSIONS OF THE STABILIZED CONSTRUCTION ENTRANCE, INCLUDING ROCK THICKNESS AND WIDTH, SHOULD BE CONTINUALLY MAINTAINED BY THE ADDITION OF ROCK AS NEEDED. ACCUMULATED SEDIMENTS SHALL BE REMOVED FROM THE STABILIZED CONSTRUCTION ENTRANCE, AND CLEAN ROCK MATERIALS SHALL BE ADDED AS NEEDED. ANY SEDIMENT TRACKED ONTO PUBLIC ROADWAYS SHALL BE REMOVED AT THE END OF EACH WORKING DAY.

SEEDING AREAS: ANY SEEDING AREAS THAT BECOME ERODED SHALL HAVE THE TOPSOIL REPLACED, THE GRASS SEED RESEWN, AND MULCH REAPPLIED. IN AREAS WHERE ESTABLISHMENT OF VEGETATION IS DIFFICULT, THE CONTRACTOR SHALL INSTALL EROSION CONTROL MAT SUCH AS CURLED WOOD MAT. AS AN ALTERNATE, THE CONTRACTOR MAY INSTALL SOD IN ERODED AREAS.

MULCHED AREAS: MULCHED AREAS SHALL BE PROPERLY MAINTAINED UNTIL VEGETATION IS ESTABLISHED. MULCH MATERIALS THAT HAVE BEEN DISLODGED OR LOST DUE TO RAIN, WIND, FIRE, OR OTHER CAUSES SHALL BE REAPPLIED AT THE INITIAL APPLICATION RATE OR AT A MODIFIED RATE AS DIRECTED BY THE CLEARFIELD COUNTY CONSERVATION DISTRICT. IF A SLOPE FAILURE OCCURS AFTER MULCHING WORK ON A SLOPE HAS BEEN COMPLETED AND THE SLOPE FAILURE REQUIRES REDRESSING, EXCAVATION, OR THE ESTABLISHMENT OF A NEW SLOPE, THE MULCH SHALL BE REAPPLIED AT THE INITIAL RATE.

FILTER FABRIC FENCE: ANY NECESSARY REPAIRS TO FILTER FABRIC SHALL BE PERFORMED IMMEDIATELY. ACCUMULATED SEDIMENTS SHALL BE REMOVED WHEN THE ACCUMULATED DEPTH OF THE SEDIMENT REACHES 1/2 THE HEIGHT OF THE FENCE ABOVE THE EXISTING GROUND SURFACE OR 1/3 OF THE HEIGHT OF THE ROCK FILTER OUTLET. SEDIMENT REMOVED FROM THE FILTER FABRIC FENCE OR ANY OTHER BMP SHALL BE DISPOSED OF PROPERLY. ANY UNDERCUTTING OR EROSION OF THE TOE ANCHOR OF THE FENCE SHALL BE REPAIRED IMMEDIATELY WITH COMPACTED BACKFILL. ANY FENCE SECTIONS THAT HAVE BEEN UNDERMINED OR TOPPED SHALL BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET. CONTRACTOR SHALL ADHERE TO MANUFACTURER'S RECOMMENDATIONS FOR REPLACEMENT OF FABRIC DUE TO WEATHERING.

PUMPED WATER FILTER BAGS: FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF FULL OR FAILED BAGS.

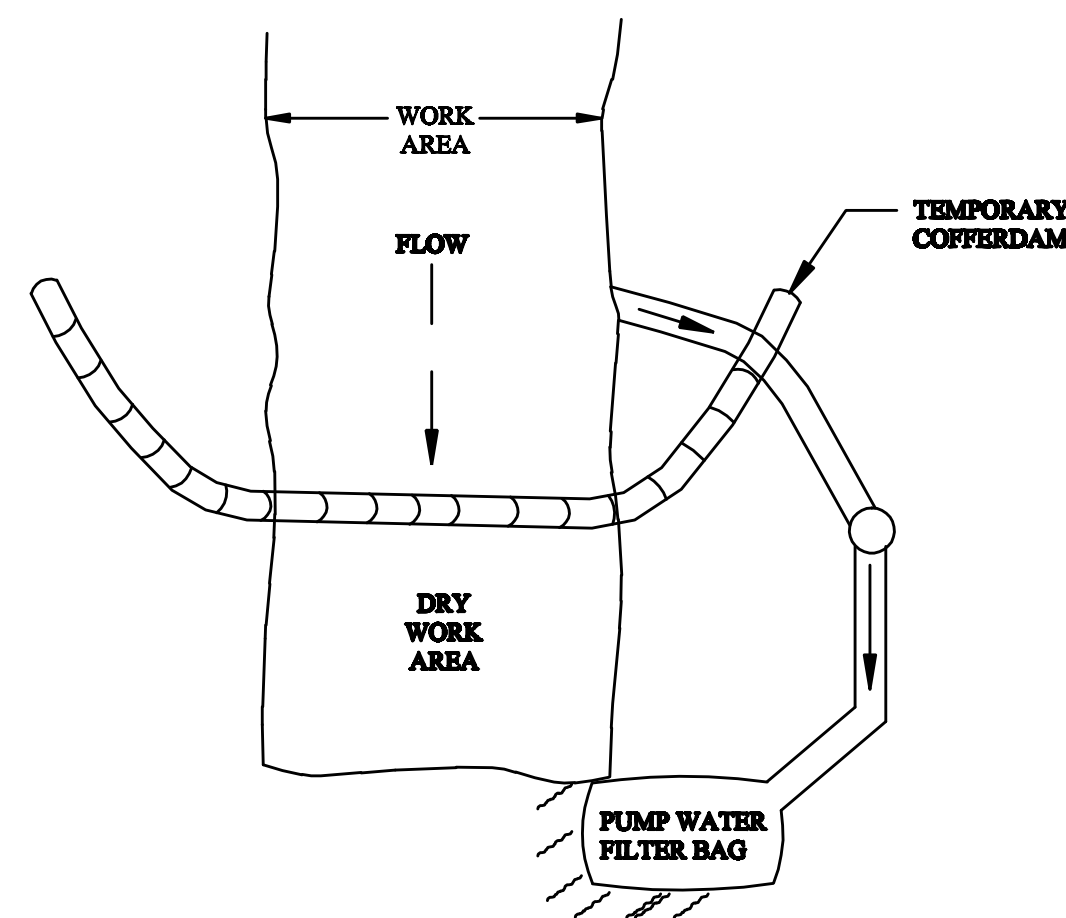
ROCK FILTERS: SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE FILTER. CLOGGED FILTER STONES SHALL BE REPLACED IMMEDIATELY.

8 CONTROL PLAN NOTES

1. EROSION AND SEDIMENT BMPs MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPs.
2. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMPs MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMPs MUST BE STABILIZED IMMEDIATELY.
3. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER. FILTER FABRIC FENCE SHALL BE INSTALLED BELOW ALL STOCKPILES.
4. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS.
4. (CONT.) ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING, AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
5. WASTE MATERIALS SHALL BE RECYCLED, WHERE FEASIBLE.
6. CONTRACTOR IS RESPONSIBLE FOR CONTROL OF CONSTRUCTION WASTE MATERIALS, INCLUDING HOUSEKEEPING, MATERIALS MANAGEMENT, DUST CONTROL, AND LITTER CONTROL. WASTES SHALL BE DISPOSED OF IN AN APPROVED DISPOSAL AREA.

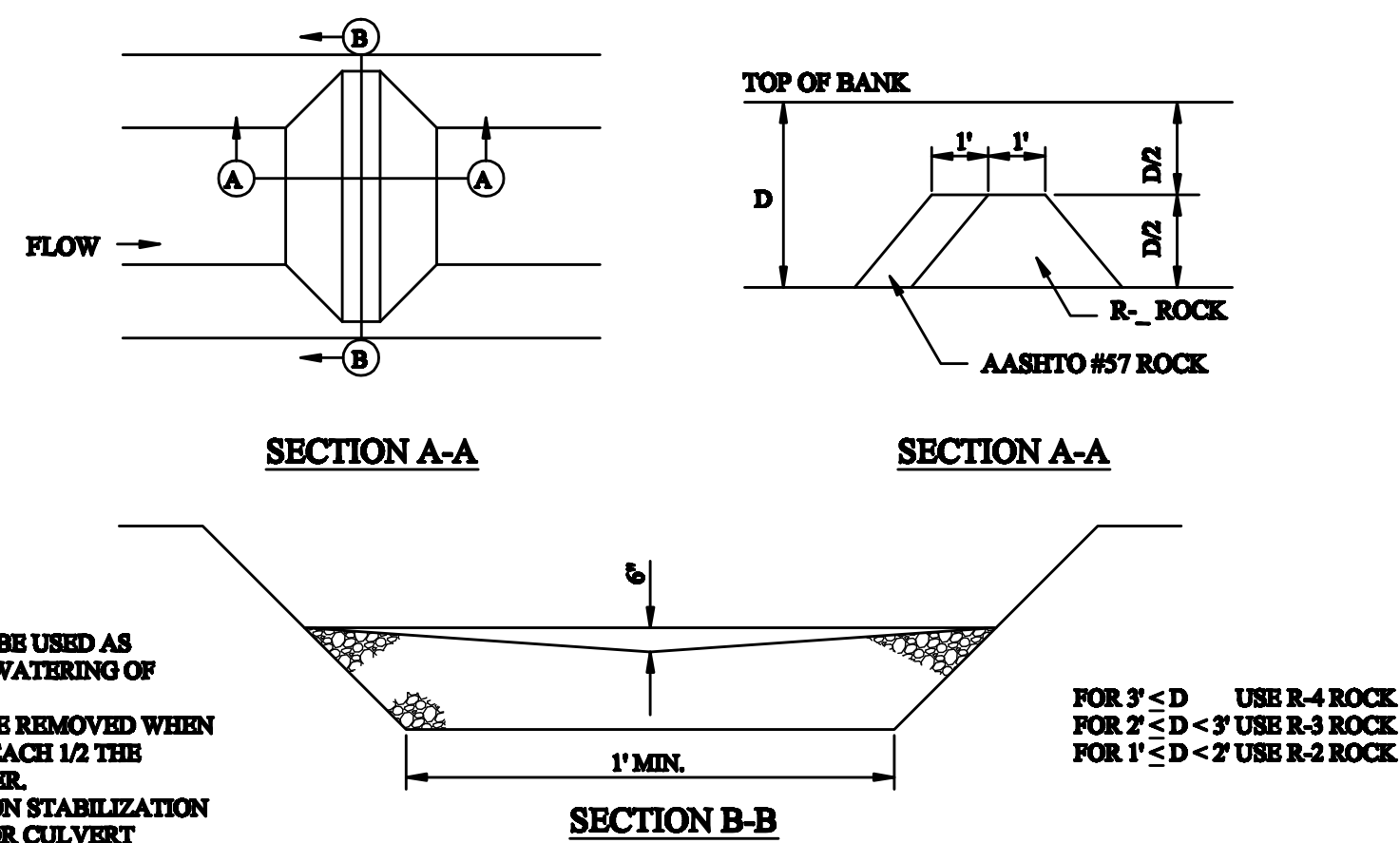
RECYCLING AND DISPOSAL OF MATERIALS

EXCESS MATERIALS GENERATED DURING THE CONSTRUCTION OF THIS PROJECT MAY INCLUDE VEGETATION, TOPSOIL AND SUBSOIL, ROCK MATERIALS, PIPING, AND FILTER FABRIC FENCE. ALL EXCESS MATERIALS FROM THE PROJECT SITE SHALL BE RECYCLED TO THE FULLEST EXTENT POSSIBLE. MATERIALS THAT CANNOT BE RECYCLED SHALL BE DISPOSED OF PROPERLY. ANY ROCK OR SOIL MATERIALS MUST BE DISPOSED OF IN THE DESIGNATED DISPOSAL AREA AT THE EMIGH RUN HEADWATERS RELOCATION PROJECT OR AT ANOTHER ACCEPTABLE SITE THAT HAS AN APPROVED E&SPC PLAN FOR THAT SITE. WASTE MATERIALS SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL FACILITY. RECYCLING AND DISPOSAL OF MATERIALS IS THE RESPONSIBILITY OF THE CONTRACTOR.



- NOTES:
1. USE COFFERDAM DIVERSION AS NEEDED DURING CONSTRUCTION TO ALLOW FOR DEWATERING OF WORK AREA.
 2. COFFERDAM TO REMAIN IN PLACE UNTIL TREATMENT CELLS ARE STABILIZED AND FUNCTIONAL.
 3. SEE COFFERDAM AND FILTER BAG DETAILS.
 4. FILTER BAG TO DISCHARGE TO STABLE VEGETATED OR ROCK-LINED LOCATION.

1 WORK AREA COFFER DAM DIVERSION
SCALE: NONE



- NOTES:
1. ROCK FILTERS TO BE USED AS NEEDED DURING DEWATERING OF WORK AREA.
 2. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE FILTER.
 3. IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL OR CULVERT INSTALLATION, REMOVE ACCUMULATED SEDIMENT, REMOVE ROCK FILTER, AND STABILIZE DISTURBED AREA.

2 ROCK FILTER (FOR USE WITH PUMPED BYPASS FACILITY)
SCALE: NONE

SEEDING SPECIFICATIONS

TEMPORARY SEEDING AND MULCHING-ANY DISTURBED AREA ON WHICH ACTIVITY HAS CEASED AND WHICH WILL REMAIN EXPOSED FOR MORE THAN 30 DAYS SHALL BE STABILIZED IMMEDIATELY. DISTURBED AREAS THAT ARE NOT AT FINISHED GRADE AND WHICH WILL BE RE-DISTURBED WITHIN ONE YEAR MAY BE STABILIZED IN ACCORDANCE WITH THE FOLLOWING TEMPORARY SEEDING SPECIFICATIONS.

SEED TYPE	% BY WEIGHT	SEEDING RATE	SEEDING DATES
ANNUAL RYEGRASS	100	40 LB/ACRE	SPRING THROUGH FALL

A. FOR TEMPORARY SEEDING APPLICATIONS, APPLY ONE TON OF AGRICULTURAL-GRADE LIMESTONE PER ACRE PLUS 50-50 FERTILIZER AT THE RATE OF 150 POUNDS PER ACRE, AND WORK LIMESTONE AND FERTILIZER INTO THE SOIL WHERE POSSIBLE. AFTER SEEDING, MULCH WITH HAY OR STRAW AT A RATE OF THREE TONS PER ACRE.

B. DURING THE WINTER MONTHS WHEN SEEDING IS NOT FEASIBLE, MULCH SHALL BE APPLIED TO DISTURBED AREAS AT A RATE OF THREE TONS PER ACRE.

PERMANENT SEEDING AND MULCHING-NON-WETLAND AREAS -VEGETATIVE COVER SHOULD BE ESTABLISHED ON ALL AREAS THAT WILL NOT BE PLANTED WITH WETLAND SEED MIX, SUCH AS BERMS, USING THE FOLLOWING SEEDING SCHEDULE.

SEED TYPE	SEEDING RATE
ANNUAL RYEGRASS PLUS	40 LB/ACRE
BIRDFOOT TREFOL (EMPIRE VARIETY, WITH INOCULANT), PLUS	6 LB/ACRE
BIRDFOOT TREFOL (VIKING VARIETY, WITH INOCULANT), PLUS	6 LB/ACRE
PENNLATE ORCHARD GRASS	3 LB/ACRE
LADINO WHITE CLOVER (WITH INOCULANT), PLUS	5 LB/ACRE
ORCHARD GRASS (SPRING OR WHEAT (FALL) AS NURSE CROP	2 BUSHELS/ACRE

A. HAY OR STRAW MULCH SHALL BE APPLIED TO SEEDING AREAS TO HELP ESTABLISH A PERMANENT GRASS COVER AND TO PREVENT EROSION. HAY MULCH IS PREFERRED OVER STRAW MULCH ON STEEPER SLOPE AREAS.

B. MULCH SHALL BE APPLIED AT A RATE OF THREE TONS PER ACRE.

C. LIME AND FERTILIZER SHALL BE APPLIED AS REQUIRED TO OBTAIN A UNIFORM, EROSION-RESISTANT, PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% ACROSS ALL DISTURBED AREAS. APPLY LIME AND FERTILIZER IN ACCORDANCE WITH SOIL TEST RECOMMENDATIONS.

D. IN THE ABSENCE OF SOIL TEST RECOMMENDATIONS, APPLY 3 TONS OF PULVERIZED CALCIUM AGRICULTURAL-GRADE LIMESTONE PER ACRE, AND APPLY 10-20-20 FERTILIZER AT A RATE OF 500 POUNDS PER ACRE. WORK LIME AND FERTILIZER INTO THE SOIL WHERE POSSIBLE.

PERMANENT SEEDING AND MULCHING-WETLAND SEED MIX -AREAS TO BE PLANTED WITH WETLAND SEED MIX, SUCH AS THE AREA OF TEMPORARY WETLAND IMPACTS, SHALL BE PLANTED ACCORDING TO THE FOLLOWING SCHEDULE.

SEED TYPE	SEEDING RATE (OZ PLS/ACRE)	% BY WEIGHT
SILKY DOGWOOD (CORNUS AMOMUM)	40.8	17
GRAY DOGWOOD (CORNUS RACEMOSA)	40.8	17
ARROWWOOD (VIBURNUM DENTATUM)	19.2	8
HERCULES CLUB (ARALIA SPINOSA)	12.0	5
SWAMP ROSE (ROSA PALUSTRIS)	9.6	4
NANNYBERRY (VIBURNUM LENTAGO)	9.6	4
FOX SEDGE (CAREX VULPINOIDEA)	48.0	20
VIRGINIA WILD RYE (ELYMUS VIRGINICUS)	24.0	10
HOP SEDGE (CAREX LUPULINA)	12.0	5
LURID SEDGE (CAREX LURIDA)	12.0	5
BRISTLY SEDGE (CAREX COMOSA)	7.2	3
AWL SEDGE (CAREX STIPATA)	4.8	2
TOTAL	246.0 (15 LBS.)	100

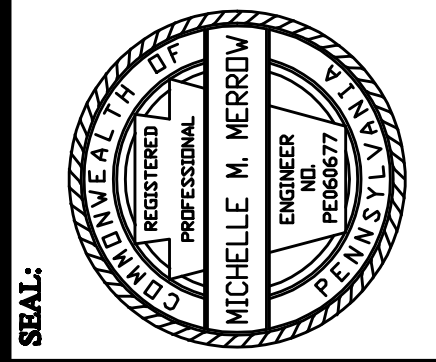
A. SPREAD SEED BETWEEN MARCH 15 AND MAY 30 OR AS OTHERWISE DIRECTED.

B. MULCH BARE SOIL PLANTING AREAS ONLY. PLACE MULCH WITHIN 48 HOURS AFTER SEEDING AT A RATE OF 2 TONS PER ACRE.

SHEET NO.

C-9

9 OF 9



Michelle M. Morrow
PE060677

NO.	REVISIONS	DATE
1	REVISED FOR CONSTRUCTION	05/18/08

THE INFORMATION CONTAINED HEREON MAY NOT BE USED OR COPIED WITHOUT WRITTEN PERMISSION OF THE SIGNING ENGINEER.

ALDER RUN ENGINEERING
107 COAL STREET
OCCOCHA MILLS, PENNSYLVANIA 16666
PHONE: (814) 339-0998

DATE: FEB 1, 2007

EMIGH RUN 8 (ER-8) AMD TREATMENT PROJECT
PREPARED FOR EMIGH RUN/LAKESIDE WATERSHED ASSOCIATION
MORRIS TOWNSHIP, CLEARFIELD COUNTY, PA.

TITLE: EROSION & SEDIMENT CONTROL DETAILS & NOTES

New Miles of Blue Stream
NABS

103 FAIRWAY DRIVE
PHILIPSBURG, PENNSYLVANIA 16866
PHONE: (814) 343-5676