

Maintenance Activities as they Relate to the Level of Coordination/Permitting

Presented by Carol Sullivan
DeIDOT Environmental Studies

Maintenance δραστηριότητες που έχουν σχέση με το επίπεδο του συντονισμού / επιτρέπουν

Παρουσιάστηκε από Carol Sullivan
DeIDOT Περιβαλλοντικές Μελέτες

*Hmm...I wonder if I need to
get a permit to bury my gold
under that bridge?!*



EXAMPLES OF GREEN (NON-REGULATED) ACTIVITIES



Upland Ditch Excavation/
Maintenance

- ✓ No coordination required
- ✓ No permit authorizations needed



Pipe Cleanout using a
sewer flusher truck



Debris Removal (non-tidal)



Maintenance of SWM ponds
(located in uplands)



Sediment Removal (non-tidal)

EXAMPLES OF YELLOW ACTIVITIES

- Only pertain to activities in non-tidal waters
- Filling of wetlands is prohibited (else will be into “Red Activity” category)



Articulated Precast Concrete Block (APCB) placement



Spall Repair below water line



Placement of Sheet Piling

- ✓ Must coordinate with Environmental Studies Office (ESO).
- ✓ Provide ESO with necessary information so we can query DNREC Natural Heritage
- ✓ Formal approvals may/may not be required

ANOTHER YELLOW ACTIVITY:

Pile "Jacketing"

P

PILE WEARHOUSE

W

You're going to like the way they look... I guarantee it!



RED ACTIVITIES:

- ANY work in tidal water/wetlands
- ANY work in non-tidal wetlands (except as listed on “Green Activities” list)
- Maintenance of SWM ponds originally constructed in jurisdictional water/wetlands



Example of tidal water/wetlands



Example of non-tidal wetlands

- ✓ Must coordinate with Environmental Studies Office (ESO).
- ✓ Provide ESO with necessary information so we can query DNREC Natural Heritage
- ✓ Formal approvals will be required

EMERGENCY ACTIVITIES

➤ Emergency reconstruction must occur within a “reasonable period of time after damage occurs” in order to qualify for an exemption from the Corps.



- ✓ Must be coordinated through Environmental Studies Office to determine if the work is exempt from permits/approvals.
- ✓ Determination CANNOT come from within DeIDOT.

SAMPLE LETTER TO DNREC NATURAL HERITAGE

February 2, 2010

Mr. Matthew Bailey
Delaware Natural Heritage Program
Division of Fish and Wildlife
4876 Hay Point Landing Road
Smyma, Delaware 19977

Dear Mr. Bailey:

This document is submitted for your information regarding an upcoming DelDOT project. A brief description of the proposed work to occur at this location is as follows:

Project Name, Contract # (if there is one) (maps attached) Description of work.

Example of wording for a pipe replacement: The work at this location will consist of removing the deteriorated corrugated metal pipes (2 - 72" diameter) and replacing with two 60" diameter HDPE pipes. One pipe invert will be 6" below the channel invert and the other will be 6" above the channel invert. Riprap will be placed as necessary to stabilize the roadway slope and disturbed areas in the stream. Riprap in the stream will be recessed 1' and backfilled with natural streambed material. Riprap on the channel slopes will be covered with topsoil and seeded.

Please forward any information or records that you may have regarding the presence of rare, threatened or endangered species within the project area to the above address. In addition to the rare species information, please forward any information that you may have regarding State Natural Heritage Sites and Delaware Natural Estuarine Research Reserves.

If you have any questions or require additional information please do not hesitate to call Anna Maria Smith at (302) 760-2126. Thank you for your assistance; we look forward to working with your agency to successfully complete this project.

Sincerely,

Therese M. Fulmer
Manager, Environmental Studies

TF:am
Enclosure
cc: File

SAMPLE RESPONSE FROM DNREC NATURAL HERITAGE



STATE OF DELAWARE
DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENTAL CONTROL
DIVISION OF FISH & WILDLIFE
NATURAL HERITAGE & ENDANGERED SPECIES
4876 HAY POINT LANDING ROAD
SMYRNA, DELAWARE 19977



TELEPHONE: (302) 653-2880
FAX: (302) 653-3431

December 18, 2009

Ms. Therese Fulmer
800 Bay Road
PO Box 778
Dover, DE 19903

Re: BR 3-543 on Hudson Pond Road

Dear Ms. Fulmer:

Thank you for contacting the Delaware Natural Heritage and Endangered Species Program (NHESP) about information on rare, threatened and endangered species, unique natural communities, and other significant natural resources as they relate to the pipe replacement at BR 3-543 on Hudson Pond Road.

A review of our database indicates that there are currently no records of state-rare or federally listed plants, animals or natural communities at this project site. As a result, at present, this project does not lie within a State Natural Heritage Site, nor does it lie within a Delaware National Estuarine Research Reserve which are two criteria used to identify "Designated Critical Resource Waters" in the Army Corps of Engineers (ACOE) Nationwide Permit General Condition No. 19. A copy of this letter shall be included in any permit application or pre-construction notification submitted to the Army Corps of Engineers for activities on this property.

Appropriate sediment control measures should be undertaken to minimize negative impact to aquatic vegetation and wildlife downstream from the proposed project.

We are continually updating our records on Delaware's rare, threatened and endangered species, unique natural communities and other significant natural resources. If the start of the project is delayed more than a year past the date of this letter, please contact us again for the latest information.

Feel free to get in touch with me if you have any questions or require additional information.

Sincerely,

Matthew Bailey

Matthew Bailey
DelDOT Environmental Review Coordinator
(302) 653-2882 ext. 127
(302) 382-4151 cell
(302) 653-3431 fax
matthew.bailey@state.de.us

DelDOT 2009 BR 3-543 Hudson Road

Delaware's Good Nature Depends on You!

Ongoing Resource Agency Concerns Regarding Riprap Not Being Recessed
(in other words...we gotta do this if we want our permits!)



In the Channel



On the Sideslopes

AND

Br 2-277A on Fox Hunter's Den Rd.



Close up showing the layers of placement.



Br 1-217 on Thompson Station Rd.



← During Construction, April 2001



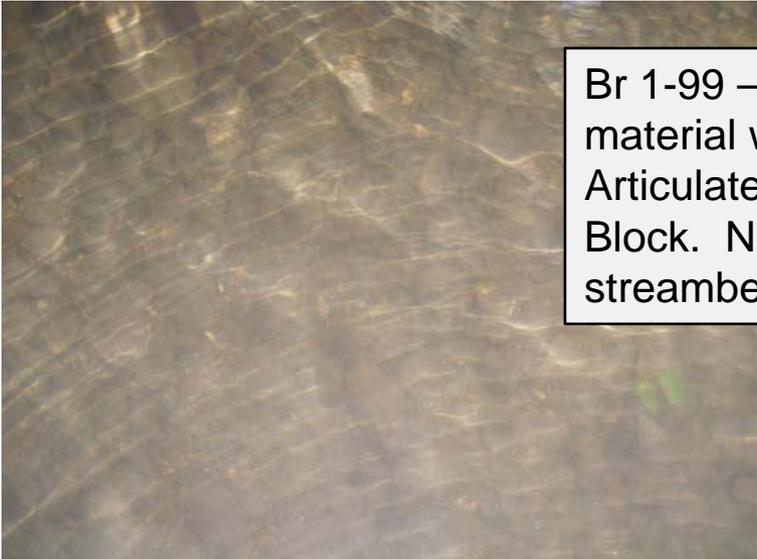
Sideslope Riprap (Topsoil, seeded and mulched)



← Summer 2009



Br 1-212 – view of stream shortly after the CBF was placed



Br 1-99 – excavated streambed material was placed over Articulated Precast Concrete Block. Note the diversity of streambed material



Br 1-913 – borrow B was placed in 1999. Not as diverse as placing CBF, but still much better than placing at-grade riprap.

Br 1-234 on Kirkwood Highway
over Mill Creek



Articulated Precast Concrete Block (APCB) was placed and backfilled with streambed material. This photo was taken within weeks of its placement.



From: Lee Joanne M. (DNREC)

Sent: Wednesday, January 27, 2010 1:10 PM

To: Sullivan Carol (DeIDOT)

Subject: RE: articulated concrete

Carol, Nice pictures. You folks deserve kudos for the innovative designs you have done to stabilize your structures, but also bring them back to natural conditions.

Observations:

It is interesting that the borrow hasn't been blown out by a storm. I like the diversity of the natural stream bed material, but can understand that borrow is occasionally necessary.

My concern about the APCB is long term stability and hopefully it is unfounded and the APCB will continue to work well for you. Joanne

Topsoiling and Seeding Sideslopes



Br 1-346 on Cooches Bridge Rd.



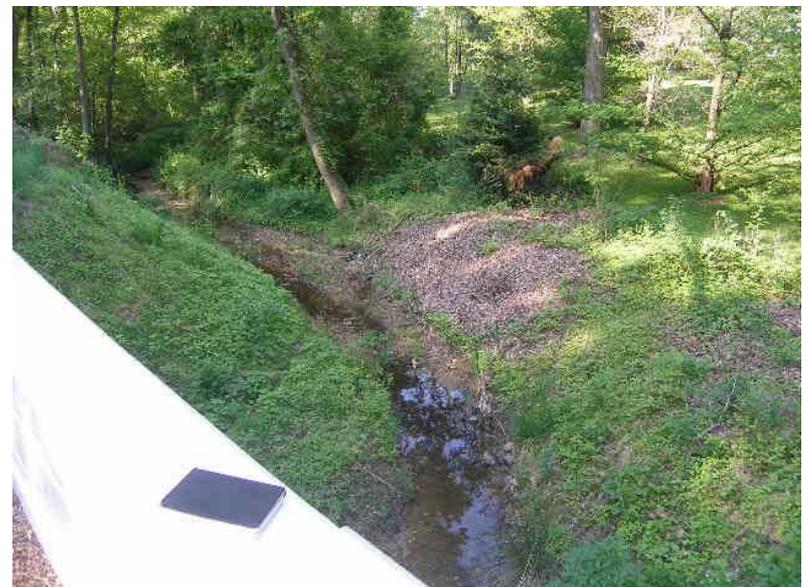
Just after construction – Feb 2005



Beneath Structure - April 2006



April 2006 : Upstream Slope : May 2008



Snuff Mill Road Embankment Stabilization



Prior to Construction - July 2001



Just after construction



Stabilized - October 2003

Snuff Mill Road, Br 1-93



PROBLEMS WITH “SLOPE RIPRAP TREATMENT” GUIDANCE AND IMPLEMENTATION:

1. Topsoil “slipping through” the voids of the riprap
2. Too much topsoil being placed on riprap and it “sloughing off”
3. Not enough topsoil being placed on top of the riprap
4. Topsoil not being stabilized in a timely manner
5. Topsoil not properly prepared (i.e. topsoil area not properly prepared prior to seed placement and/or seed not being placed at all)
6. Blanket not properly fastened/secured
7. Blanket does not fully cover the topsoiled area



When done improperly,
topsoil ends up down the
slope and into the stream,
creating an E & S problem



In an effort to correct these problems, the side slope topsoiling portion of the guidance was revised:

ALL RIPRAP ON THE STREAM BANK, OUTSIDE THE CHANNEL BED, **SHALL BE CHOKED WITH DELAWARE #57 STONE**, FILLED WITH TOPSOIL, SEEDED AND MULCHED WITH SOIL RETENTION BLANKET MULCH, TYPE 3 (ITEM 735533). **PLACE JUST ENOUGH CHOKE MATERIAL TO PREVENT THE LOSS OF TOPSOIL THROUGH THE RIPRAP**, AND THEN FINISH FILLING THE VOIDS WITH TOPSOIL SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. **AN ADDITIONAL 4-INCH TOPSOIL LAYER SHALL BE PLACED ON TOP OF THE RIPRAP**. SEEDING SHALL BE PERMANENT GRASS SEEDING WET GROUND (ITEM NO. 7340151) FROM STREAM BASE FLOW ELEVATION TO 2-FEET UP THE SLOPE AND PERMANENT GRASS SEEDING DRY GROUND (ITEM NO. 734013) ON THE REMAINING SLOPE. **ALL WORK, STARTING WITH THE INITIAL CHOKING WITH TOPSOIL THROUGH THE SEEDING AND MULCHING, SHALL BE COMPLETED PRIOR TO ANY RAIN EVENT**. PAYMENT FOR RIPRAP AND DELAWARE #57 STONE SHALL BE PAID FOR UNDER THE RIPRAP ITEM. ALL OTHER ITEMS SHALL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.



Blanket needs to be properly installed

Slope needs to be fully stabilized (especially closer to the water line)

Areas not protected with blanket need to be seeded, mulched and tracked.



Br 2-296A, Layton's Corner Rd.



Slope is "smoothly" prepared. Track whenever possible.



Entire area is covered with blanket



Br 2-277A on Fox Hunter's Den Rd.



Note how the blanket remained in place despite the high water

Blanket extends all the way down the slope





Ashland Covered Bridge
over Red Clay Creek



Sideslope riprap was
topsoiled and seeded.



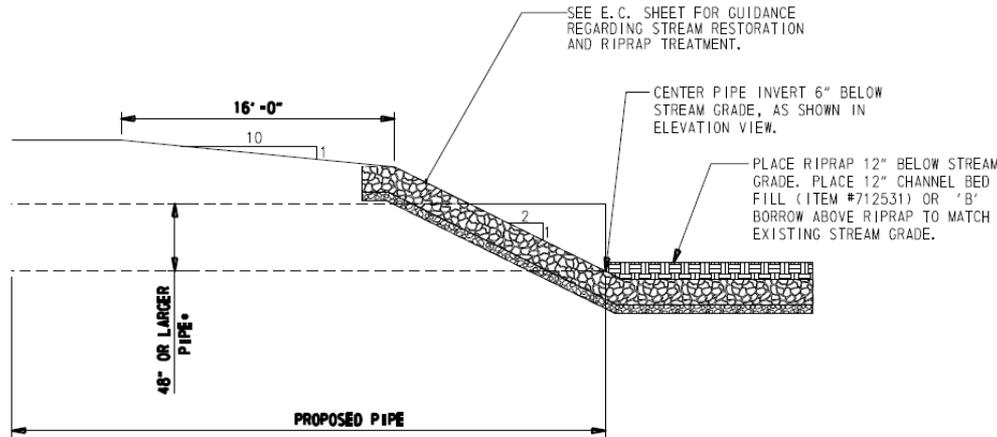
Note the “lying down grass” from
a recent storm event. Slope is
still stable.





We have made lots of improvements!
And we are continuing to improve...

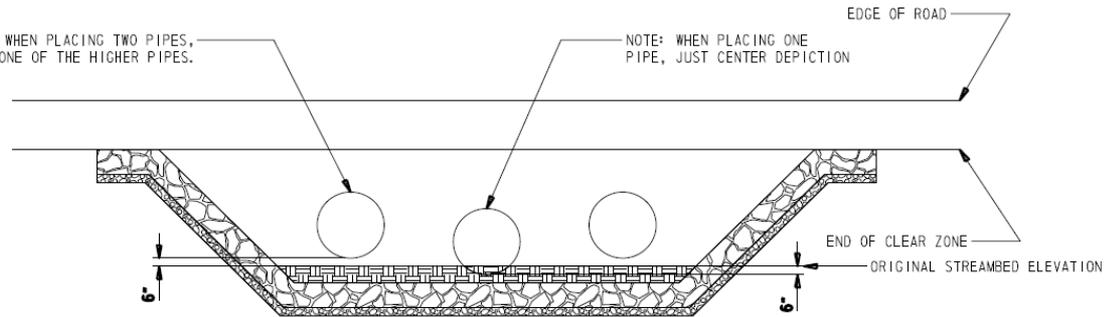
RECESSING PIPES & RIPRAP FOR ENVIRONMENTAL COMPLIANCE



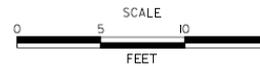
TYPICAL SECTION
(FOR RECESSED PIPE)

NOTE: WHEN PLACING TWO PIPES, ELIMINATE ONE OF THE HIGHER PIPES.

NOTE: WHEN PLACING ONE PIPE, JUST CENTER DEPICTION



ELEVATION



*RECESSING REQUIREMENT PERTAINS TO ALL PIPES 48" OR LARGER, THAT ARE BEING PLACED IN JURISDICTIONAL WATER (I.E. WATERS REGULATED UNDER THE AUTHORITY OF U.S. ARMY CORPS OF ENGINEERS (ACOE) AND/OR THE DELAWARE DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENTAL CONTROL (DNREC).



RETIREMENT

Start planning early. Eat some cat food. Get used to the taste.
Know the flavor of retirement.