MEETING MINUTES 3 NOVEMBER 2011 NSTC GREAT LAKES IL

11/3/2011

NSTC GREAT LAKES

NAVAL STATION GREAT LAKES MEETING MINUTES
November 3, 2011
Naval Station Great Lakes, Illinois

Attendees:	Tetra Tech	NAVFAC Midwest	NAVFAC Atlantic	Illinois EPA
	Robert Davis	Howard Hickey	Thomas Spriggs	Brian Conrath
	Robert Smith	Terese Van Donsel		
	Chad Bailey	Benjamin Simes	US ACE	Illinois DNR
			Frank Veraldi	Beth Whetsell
				Jessica Riney

By Conference Call – NAVFAC Atlantic - Jennifer Wright, Jason Williams, Khoi Nguyen

See attached list with the contact information

Meeting Topic – Pettibone Creek North Branch Remediation and Restoration

1. Tetra Tech presented photographs of stream restoration and bank stabilization projects that have been conducted in the U.S. northwest and near Pittsburgh, PA. Several photographs were shown for the Pataha fish passage project that required fish salvaging prior to commencing the work, bank stabilization, and channel feature design to provide fish passage up two existing highway bridge structures. Photograph of the Meacham In-stream Design and Floodplain Enhancement project was a complete reconstruction of the stream to a new location. The Pittsburgh project photographs were distributed to everyone a few months before the meeting and the follow-up discussion focused on the construction process and observations of the stream flow after the log vanes were installed. The main point was to stress the function of the log vane to deflect stream flow towards the middle of the stream and reduce flow at the edge of the log vane and stream bank. These projects used log vanes and rootwads for the bank stabilization.

   ACTION/DECISION ITEM – Tetra Tech will send Pataha and Meacham photographs.

2. Tetra Tech presented photographs of Pettibone Creek and the weir/concrete apron near the Boat Basin showing the salmon that had accumulated while attempting their spawning run. Many of these salmon appeared to be Chinook salmon based on the pictures that were sent to Tetra Tech biologists back in the office. During Tetra Tech's site visit of the creek the previous day, approximately 40 dead salmon and 4 live salmon were observed within Pettibone Creek with quite a few at the culverts where Pettibone Creek comes onto Navy property. The culverts appear to be a fish passage barrier upstream of the Navy property. The requirements of the salmon for spawning were discussed briefly and included flow rate, depth of water, desirable bed material composition for spawning within the creek bed, etc.

   ACTION/DECISION ITEM – Tetra Tech will send ILDOT drawings and Pettibone Creek fish photographs. The ILDOT drawings show the origination of the larger culvert next to the culverts for Pettibone Creek – this pipe was identified when the drawings were sent after the meeting.

3. Group discussion on the revised draft Remedial Action Plan (RAP) and Illinois EPA comments. The Navy requested the calculations for the basin sizing and further detailed discussions as to the methodology for re-using salvaged concrete and soil within the creek as possible stabilization measures. The need for post-removal samples (Illinois EPA comment 4) were discussed – native sediment was collected in December 2008 and the risk assessment based on the native sediment results in the revised draft RAP indicates the risk will be reduced sufficiently, so no post-removal/verification samples need to be collected. Visual confirmation will be used to evaluate the acceptance of mechanical sediment removal and photographs will be taken to document the removal.

Backfill sources will be sampled at a rate of 1 sample for every 10,000 cubic yards to verify compliance with off-site backfill material requirements (Illinois EPA comment 6). Additional details will be added to the RAP regarding the wash water and water collected from the dewatering pad (Illinois EPA comments 7 and 8). Provide additional detail and quantities related to the stream bank stabilization features (Illinois EPA comment 18).

ACTION/DECISION ITEM – Tetra Tech to send the calculations for the basin size to the Navy and make revisions to the RAP based on the discussion and the response to Navy and Illinois EPA comments.

No post-removal samples will be collected.

4. Group discussion on the Illinois DNR comments. Add text that describes the method to relocate the fish during the remedial actions (Illinois EPA comment 23). The request to conduct biological surveys (Illinois EPA comment 24) is noted but budget constraints must be taken into account. Another option is to discuss having the biological study performed with/through a local university as a potential graduate student project. There is a difference of opinion on the stream bank stabilization methods (Illinois EPA comment 26) between the Illinois DNR, USACE, and Tetra Tech related to lunkers and rock toe stabilization.

   ACTION/DECISION ITEM – Illinois DNR will provide some stream data for Pettibone Creek that is available from the USACE.

   Tetra Tech will make revisions to the RAP based on discussions and the responses to Navy and Illinois DNR comments. The USACE will be consulted regarding potential stream bank stabilization methods. Tetra Tech will include rock riffles that will help stabilize the stream bed and decrease downcutting therefore decreasing the destabilization of channel banks and gully slopes. Tetra Tech will also rename the side channel wetland to side channel floodplains to eliminate confusion.

5. The USACE indicated that there may be some non-Navy funds that may be available for the stream restoration/stream bank stabilization. These funds may be available through the Great Lakes Restoration Initiative from USEPA, possible funds from the USACE, and funds from NOAA and USEPA related to bankruptcy awards.

   ACTION/DECISION ITEM – The Navy will investigate the potential for alternative funding mechanisms.

6. Site Visit – The Navy, Illinois EPA, Illinois DNR, USACE, and Tetra Tech visually observed via a site walk the stream from the Boat Basin to the culverts at the north end of the base. During the site visit the Chinook were observed at the Boat Basin and in Pettibone Creek, attempting to spawn. Macroinvertebrates were also observed under stream channel rocks in the lower reach of Pettibone Creek. The multiple existing storm sewers that discharge into Pettibone Creek appear to be the main driver for the historical bank erosion impacts. The maintenance activities (placement of rock or concrete slabs, etc.) instituted at the discharge points or downstream of the discharge points are band-aid fixes that have transferred the erosional issues to the next downstream, unprotected area. Removing and managing the piped storm water point source inputs will help alleviate the increased peak flows and increased bank erosion impingements.

   ACTION/DECISION ITEM – No action/decision items for this item.

7. Discussions after the site visit included:
   - Pipe the culverts (depending on specific design evaluations) directly to the Boat Basin or Lake Michigan.
   - Pipe or redirect the storm water pipes originating on the base to the Boat Basin

- Conduct a macroinvertebrate study which could show there is minimal impact from the sediment and the streambed appears to be healthy for the urban environment.
- Allow sediment that is carried onto the base during storm water flows to naturally continue to cap the contaminated sediment in Pettibone Creek.
- Installing a concrete sediment collection basin at the culverts may not be preferred as inhibiting natural sediment deposition may introduce channel degradation/entrenchment downstream.
- A preferred alternative to installing a sediment basin may be to install sediment collection devices in upstream manholes such as hydrodynamic devices and perform routine cleanout of upstream storm sewers.
- Collect sediment in the junction box manholes before entering the base.
- Is the base using BMPs or can BMPs be added to the storm water system to attenuate/minimize/control storm water flow into Pettibone Creek? Also realign existing storm water pipe outfall and install energy dissipation structures at the outfall of the storm water piping currently not protected by such structures.
- The USACE is going to provide examples of neighboring ravine stream restoration activities.

ACTION/DECISION ITEM –The USACE is going to provide examples of stream restoration activities.

ACTION ITEMS BY GROUP

Tetra Tech

Action Item	Completed
Send Pataha, Meacham, and fish photographs and ILDOT Drawing	√
Send calculations for the basin size	√
Make revisions to RAP based on discussions and responses to comments	√
Consult with USACE regarding stream bank stabilization methods	√
Concurrence letter	√

Navy

Action Item	Completed
Other potential funding mechanisms for stream restoration actions	

Illinois DNR

Action Item	Completed
Stream Data	√

USACE

Action Item	Completed
Example Stream Restoration Activities in neighboring ravine streams	√

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Name	Affiliation	e-mail	Telephone number
At Meeting			
Ben Simes	NAVFAC Midwest IPT	benjamin.simes@navy.mil	847-688-2600 x320
Howard Hickey	NAVFAC Midwest	Howard.hickey@navy.mil	847-688-2600 x243
Tom Spriggs	NAVFAC LANT	Thomas.Spriggs@navy.mil	757-322-4335
Terese Van Donsel	NAVFAC Midwest IPT	terese.vandonsel@navy.mil	847-688-2600 x136
Brian Conrath	Illinois EPA	Brian.conrath@illinois.gov	217-557-8155
Beth Whetsell	Illinois DNR	beth.whetsell@illinois.gov	217-557-7816
Jessica Riney	Illinois DNR	Jessica.Forrest@Illinois.gov Jessica.riney@illinois.gov	217-524-0125
Frank Veraldi	US Army Corps of Engineers	Frank.M.Veraldi@usace.army.mil	312-846-5589
Robert Davis	Tetra Tech	Robert.davis@tetratech.com	412-921-7251
Robert Smith	Tetra Tech	Robert.smith@tetratech.com	412-921-8825
Chad Bailey	Tetra Tech	Chad.Bailey@tetratech.com	425 482-7600
By Telephone/Conference Call			
Jennifer Wright	NAVFAC LANT	Jennifer.H.Wright@navy.mil	757-322-8428
Jason Williams	NAVFAC LANT	jason.e.williams2@navy.mil	
Khoi Nguyen	NAVFAC LANT	khoi.t.nguyen@navy.mil	757-322-8102