

January 26, 2011

Stream Team Notes

Note Taker: Pat Durack

Introduction: Introduction and Review of the agenda

### **Stream Restoration Project Checklist Discussion**

Draft "Stream Restoration Project" checklist reviewed. When land Water receives a permit application they have 30 days to get all the information they need to do a review.

Land Water is seeing lots more stream restoration projects and Dam removals. Goal is to develop a checklist that has all the information that is needed to properly review an application. Primary concern is to be consistent with reviews. Proposed to develop a list of information that is needed to add to the application and do a proper review.

Asking the Team to review and edit sheet.

Looking for a form to add to a correction request. This checklist will be used to give to staff.

This list is for projects that do not fit the Minor Project category.

Pre-application meeting can be setup and provide proper guidance having no time deadlines. However, when we get an application we are under a timeline to get information within the next 30 days.

DAM Team in process, officially DAM team is not formalized.

### **Stream mitigation rule Update**

EPA is getting more involved in stream mitigation and is pushing the state to get more into stream mitigation. The way we want to do it is thru the rules, similar to the Wetlands mitigation requirements.

EPA has a deadline to change 301 rules for July 2012. This time frame imposed by EPA. EPA Audit in 2008.

Mitigation also applies to 2012 deadline.

Requesting the Stream Team to comment on three areas:

1. Stream Mitigation Types

2. Mitigation Location
  - a. EPA on site primary
3. Mitigation Amount

#### Summary

By July this summer in draft form, public hearing and comments. Rules will be general with flexibility but will develop guidance in detail.

Internal team just started yesterday to talk about rules and mitigation.

General Rules will meet one-on-one with groups and have Public comment period.

Mitigation will have Stakeholder group.

Guidance doc will come after July deadline. Primary push to get Rules through.

#### **State Wide and Lake Michigan wide barrier inventory**

Currently in the process of putting together a proposal/project to do a culvert inventory of the lake MI basin.

Lake MI committee piece and State of MI

Shortly after this meeting in January went to Michigan Association of County Road Commissioners. MDOT, goal to try to get everyone to use this format to collect similar data

County Road Commission and MDOT are on board.

Lake MI Technical Committee, State of Wisconsin, Forest Service and DNRE Transportation Unit, formed true committee to go ahead and move this inventory forward.

This spring, should be ready to use. Anybody will have access to it. All non-governmental groups can get access thru the local state of government agency.

Recent funding submitted \$80,000 grant (USFWS) to develop the next part of this project. Next pass will pull info from data sheet to a fish passage model. If “unpassable” then a prioritization program to evaluate the sites within a watershed.

Working with ARCOE, will match \$60,000 thru HIA grant. Money to Fish Division. Possibly use this model to upgrade to get fish program up to speed or for field work.

### Screening Tool and Prioritization Model

Developed a metric of aquatic habitat conductivity, this metric considers amount of habitat accessed, diversity and quality of habitat as unit of measure rolled into one index of conductivity. For every stream segment you can measure conductivity status. That unit of measure is weighed against the cost of replacing that structure. Cost benefit analysis for the entire watershed. The Prioritization Tool looks at cost benefit ratio of every single barrier in watershed, give top one, then through an optimization routine, it pretends to removes that barrier, then re-analyzes again and gives the second top priority barriers until all barriers removed. Final list is an Optimized barrier removal project.

Anybody who has internet access will have access to this data.

For stream mitigation we could use this to target mitigation.

Rough screen, minimal, quick, 20 minutes assessment.

Sea lamprey folks very interested in this.

Working with CRA and Huron Pines in developing draft template to go into Road Software. Latest revision wanted more information on erosion due to funding requirements.

Draft Template tabs to include: Fish passage, erosion, wildlife passage and safety. Additional information can be collected if needed.

Suggestion to do a presentation to the Tech Commirttee meeting in March. Technical committee for every lake each day.

Issue of collecting so much data that cannot be analyzed fully and is it going to meet the goals and objectives of the project?

Lake Superior contact, Forest Service Binational Planned Workgroup. 2011 is the Lake Superior year of intensive monitoring. One project to work on is inventory of couple of watershed using conductivity metric monitoring tool to track how connected these wastershed are. Do assessment in 2011 and five years later assess progress.

Huron Pines want info available in Arcview and Road soft.

For Lake Huron, 2011 planning year, putting together a mapper tool, like google earth with all the layers with the fish data, and water quality. As planning 2012 for planning. USGS has money to participate in different LAMPS. She can do synthesis/modeling but cannot do field work.

Training in Spring: Looking at mid October to coordinate Instructors schedule training. Training costs still around \$1500 Chicago course outline sent by Joe several weeks ago, Geomorph 101 with a focus on sediment transport

## **Ungaged Sites**

Conservation District signed agreement with ACOE, and will match number of sites. Conservation District will plan on doing 20 sites. ARCOE interested in UP sites. CCD will focus on Northern Lakes and Forest. JR excellent bug areas and compare to what data we have to see what we are missing. Total of 32 sites including Up sites, 4 in the UP.

If any sites on the list, recon it, and check them out. Concerned that there may not be enough sites.

Geomorphic stable streams basis for ungaged measurements.

Basically wade-able and geomorphical stable.

Goal for this data is add on to the hydraulic geometry curves analysis. Looking for the geomorphic geometry of channel dimensions.

Cross sections are all monumented so ability to do another re-assessment for channel change is possible.

Reference marks for the stream gage also used.

For all those who collected survey data please send to CCD.

Next step depository, were does the data set and how do we access it?

Michigan College Traverse, Library

1.5 yr ago NWMC started water studies program. Joined together to try to create an online water library.

Do not do GIS data and not interactive. Cannot take things in an interactive way.

Using online library using open source software developed by MIT to share information, way to publish information

Grown to be used by many academic institutions, piece meal approach

Model is about open access, not limiting access to anyone. Issue of having private data.

It is not dynamic, more of a repository system.

Key difference between us and a website is again, static files, information that may be input every year for permanent access.

Use of Meta data is carefully used. There are many different types of files that can be archived.

Focusing on reports and documents that are not openly accessible to people.

Repository will always be here. Act as a back end.

Metadata developed in corporation with libraries. Used on the internet side more than just libraries. Flexible system with 15 or more elements.

Metadata rely upon subject matter professionals experts to generate for us.

For example: Non-profit educational in Sutton bays, 20 yrs of data collection, seci disk, wave height, temp water surface, and a dredge, plankton and other species.

Meta data, will be collected by students and managed by a biologist, issue of reliability

Oral Histories, Grand Traverse Bank of Ottawa and Chippewa Indians. Documenting the knowledge of elder, oral, photographs, Female participation in their memories of water and how it ties into their culture.

Coalition of academic institutions who are basically determine what D space take, and how this software supports, what functionality it takes, Common delimited files common way to share. Data that we export from proprietary software.

Document, data, hoping remediation reports, before and after, anything see having power to localize certain information about the work done and the benefits from it.

NOAA snow information  
MI CORE

Accessible and findable data-base done on key word search. Do not have to know where the datafile is located. Designed to let google and other search engines to mine this library.

Optical character recognizing and attaching to META data to bring in higher to result

Focus work on resources from non-profits and educational settings.

Preservation of data. Software will make sure files can be read.

Metadata ftdc quality required? Anything that would help.

The Regional Curve Data is Metadata ready.

Similar program by the Global Great Lakes Project from Large Lakes Observatory, has online service and there database has an analysis feature and mapper feature (?).

Store entire database as one lump file or individual sites. Is there some type of bulk download function, such as show me regional curve csv file or individual download for each site? Answer: No we will not have this type of function.

Really thinking having masses of data. Can partition files, by watershed or region.

The organization of the record allows multiple different records within a submission. Broken down by geography, format data ect. Do we want this by site, 5-6 fields for one station or have everything here for 1 site.

Issue is how people will use it.

Issue that easiest thing to do is spit out text files by rivermorph.

Everything in 1 monolithic bay eventually files get to big to download.

Migrating data over to spreadsheet, however excel files will not fit format.

This is more of an archival system

#### Other Issues

Got about 35 sites with 100 points with half in MI. Will revisit all sites this summer and potentially add a few more site. If anybody has current data send to Calvin or if planning on doing any site let Calvin know.

Fellowship Jan Finski (?) set up in her name, first year for scholarship, would like to get a student to finish a current project. Possibly open to student in other Universities. Currently working on the Ausable stream, over widened due to logging. Possible project is to look at impacts of logging on MI streams. Thought is to go back and go thru original survey notes in MI, identify location of measurements and have student collect data and compare to see if stream over-widened. Jessica Mistak is the chairperson for that. Looking to find mentors. Prefer to have the Stream Team asking to do this work.

This is a year off and looking to see if Stream Team interested in doing and looking for mentors.

Or other possible projects.

Public Notice for general Permit and minor categories, or Part 301, Inland Lakes and Streams, 303 Wetlands Protection, 325 Great Lakes, will be coming out and will send it out to Stream Team for comments. Open for comments for 90 days.

Kip is a good man.

Issue of stream Team can comment as entity, Team has no authority.

Link on stream Team page has been pulled.

**Mussel workshop:** This spring Joe and her are doing a Mussel identification workshop. Morning education session then field in the afternoon. Approximate cost unknown. Will be sent out to Team when more details available.

2 documents that may be useful for reference material.

1) Channel type user guide: Tongass National Forest, Southeast Alaska. USDA Region 10 Technical Paper 26, April 1992. Steve Paustian, editor. This has recently been revised and internally available on the FS web in .pdf format, which is what I am trying to get to Mary and make available publicly. When this gets done we can let folks know by email

2) A heirarchical framework of aquatic ecological units in North America (Nearctic Zone). Maxwell et al, 1995. USDA Forest Service North Central Experiment Station General Technical Report NC-176. I am still tracking down if this is available in an electronic format - if it is I would work with Mary to get it on the NMC OWL with the above document.

Stream Tema meeting proposed to meet at a restoration site that Kristine is familiar with. To be determined. Back-up sites include Post-it in Romulus and dam removal project that Mario Fusco is familiar with.

Next Meeting proposed to be May 18, however we are requesting if it can be moved to May 20 so we can have a presentation on the impacts of sand traps upon streams. Follow-up e-mail will be sent to confirm location and time.

Michigan Stream Team Meeting Minutes  
July 20, 2011  
City Hall Training Rm. 169  
City of Rochester Hills

Attendees:

|               |                  |
|---------------|------------------|
| Cyndi Rachol  | Chris Freiburger |
| Andrea Ania   | Rob Myllyoja     |
| Ralph Reznick | Joe Rathbun      |
| Tim Pollizzi  | Jeremy Geist     |
| Roger Moore   | Travis Dahl      |

1. Michigan stream morphology design checklist

Michigan DEQ is adapting the Natural Channel Design checklist developed for EPA by Will Harmon and Richard Starr for use in Michigan. The primary use is to help DEQ staff and permittees communicate what the minimum information necessary is to provide with permit applications. The DEQ would like comments on the technical aspects of the checklist from the members of the Streamteam. A first draft is expected to be complete in September and will be circulated to stream team members at that time.

2. Review of Southern Michigan reference curve

Prior to the meeting Will Harmon mentions that when he compared Michigan's regional reference curves to other states the formula for the regression line for the cross sectional area curve is much different than other states curves. There could be many reasons for this but the Michigan regional curves developed by the Stream Team are considered valid and additional data points will allow additional investigation and refinement.

3. Data storage – There was a discussion on where to store the data collected to create the Michigan Regional Reference Curve. At a previous meeting a representative from Northwestern Michigan College presented in formation on their online water library.

**Action Item:** Cynthia and Andrea will contact to Northwestern Michigan College to get more information.

**Action Item:** Joe volunteers to create regime equations using the data from the regional reference curve project.

4. Additional Sites For Regional Reference Curve – Ralph stated that DEQ, Water Resource Division may put some grant funds toward collecting more points for the regional reference curve. He asked the stream team what part of the state additional points should be collected from. Kristine Boley-Morse is in the process of



collecting additional points in the upper Lower Peninsula and Upper Peninsula. DEQ and COE have collected points in the Northwest corner of the Lower Peninsula. It was noted that no points have been collected in the lake plane geology areas around Saginaw Bay and in the far Southeast corner of the state. Chris Freiburger may some funding to collect some sites in the Manistee, Muskegon and Au Sable watersheds. The Stream Team supports work to collect additional data points in and creating a regional curve for the Lake Plain areas.

5. There was a question on where to a list of Great Lakes Restoration Projects. Several members were going to look into it and get back to the rest of the Stream Team.

**Update:** Subsequent to the meeting, the following 2 sites were provided. A map of the Great Lakes Restoration project sites is at;

<http://greatlakesrestoration.us/>

and a description of sites is at;

<http://www.glri.us/projects.html>

6. Presentation: Rob Myllyoja of Hubbell, Roth & Clark presented his Avon Creek restoration design

Rob – Macomb County is using Natural Channel design standards and need more sites to create regional curves.

7. Issues of importance from those in attendance

Chris Freiburger – The DEQ is planning to conduct bank full identification training – Do members of the Stream Team want to help? Travis and perhaps others from the Corps of Engineers wants to participate. Other Stream Team members are interested depending on timing.

8. Next Meeting – To Be Determined, possibly in October. Topics for next meeting will include a discussion of the next big project that the Stream Team should take on, i.e. regional sediment curves, and an update of the Corps of Engineers BEHI calibration project.

9. Field Tour of Avon Creek restoration site

Notes: Ralph Reznick

Michigan Stream Team  
November 9, 2011  
US Fish and Wildlife Service  
East Lansing, MI  
Meeting Minutes

Attendees:

Cyndi Rachol  
Ralph Reznick  
Tim Pollizzi  
Coreen Strzalka  
Jim Watling  
Joe Haas

Chris Freiburger  
Joe Rathbun  
Travis Dahl  
Bethany Matousak  
Chad Kotke  
Al Taylor

1. Formatting and Distribution of Regional Reference Curve Data

Discussed what data to provide to Northwestern College's OWL. Data can be exported from Rivermorph in .txt format but includes data that was collected and not necessarily used for regional curves. Mecklenburg spreadsheets may not provide the same export of data.

Team decides that export of all data from Rivermorph for data storage and public access is acceptable if properly coded to reflect data quality.

**Action:** Cindy R. will export data from Rivermorph into .txt format acceptable for uploading to Northwestern College OWL. Ralph and Joe will compare data exports from Rivermorph and Mecklenburg.

2. Lake Plain Regional Reference Curve Data

Discussed the collection of data in the Lake Plain Ecoregion of Michigan. Much of the this area is ditched or otherwise heavily modified. Is it possible to collect valid data with less than the "Protocol for Field Surveys of Stream Morphology at Gaging Stations in Michigan" requires? If so, how much can data collection deviate from protocol?

After much discussion the team decides that as much data as possible is collected at each site and a determination of validity will be made during analysis for construction of the regional curve. It was agreed that slope will be a critical measurement at each site.

3. Regional Dam Removal Interest Groups

Governor Snyder made dam removal a priority in his infrastructure speech. Southeastern Michigan has started a local dam removal interest group. MiST members were aware of no other groups formed purely on

dam removal but some watershed base interest groups have an interest in dam removal in their watersheds.

#### 4. Tittabawassee River Issues

Al Taylor from DEQ, Resource Management Division and Joe Haas from USFWS presented information on the cleanup of the Tittabawassee River by Dow, some morphology and sediment movement questions they had on what was being done and asked the Stream Team if they could help and how. The Stream Team responded that they could advise on the proper technique to apply to answer the morphology questions posed but could not as a group respond to specific questions about compliance or regarding specific data results. Individual Stream Team members may choose to assist Resource Management Division on specific issues to the extent that they are allowed to do so by their agency and workload.

#### 5. Presentation: Graham Peaslee on Hope College's Sediment Fingerprinting research in the Macatawa Watershed.

Dr. Peaslee presented how he is using environmental forensic techniques to help determine sources of sediment to Lake Macatawa. He is approximately 1 year away from completing his study and publishing a full report.

#### 6. Bankfull Training

Joe Rathbun announced that DEQ was conducting a series of bankfull identification training sessions and 4 field locations around the state.

#### 7. Natural Channel Design Checklist for Michigan

Ralph Reznick alerted the Stream Team that the DEQ was in the process of developing a Natural Channel Design Checklist specific to Michigan based on one previously provided to the Stream Team and created by Will Harmon and Richard Starr. Ralph will circulate the finished draft of the checklist to the Stream Team for comment.

#### 8. USGS Sediment Movement Monitoring

USGS has purchased sophisticated monitoring equipment for measuring sediment movement in river channels. They have enough equipment to set up 3 stations in a regional area served out of Ohio. Cyndi Rachol asked for ideas where the stations might be set up in Michigan.

Next Meeting: Wednesday, January 11, 2012

Notes: Ralph Reznick