Fall 2018 Habitat GIT Meeting
November 8-9, 2018
Cacapon State Park
Berkeley Springs, WV

Participation

Christine Conn (MD DNR, Habitat GIT Chair)
Jennifer Greiner (USFWS, Habitat GIT Coordinator)
Paige Hobaugh (CRC, Habitat GIT Staffer)
Margot Cumming (CRC, Habitat GIT Staffer)
David Whitehurst
Alana Hartman (WV DEP)
Tom Idhe (Morgan State Univ.)
Neely Law (CWP)
Brooke Landry (MD DNR)
Matt Meyers (Fairfax Co., VA)
Steve Faulkner (USGS)
Matt Robinson (DC DOEE)
Morgan Corey (CRC)
Kevin DuBois (DOD)
Peter Tango (USGS)
Dan Brellis (UMCES)
Rebecca Chillrud (CRC)
Matthew Pennington (WV Eastern Panhandle Planning and Development Council)

Doug Kirk (WV DOH)
David Thorne (WV DNR)
Katie Radcliffe (USGS)
Gina Hunt (MD DNR)
Mary Gattis (Alliance for the Chesapeake Bay)
Seth Moessinger (MD TU)
Joe Wood (CBF)

Remote
Denise Clearwater (MDE)
Mary Andrews (NOAA)
Kristy Beard (NOAA)
Claire Buchanan (ICPRB)
Becky Golden (MD DNR)
Mitch Hartley (USFWS)
Renee Thompson (USGS)
Jake Reilly (NFWF)
Deb Klenotic (PA DEP)

GIT Funding Project Updates Review of GIT Funding process, timeline and updates on past and upcoming GIT Funding projects.

1) Overview of GIT process
    a) Currently we have submitted information on the scope of work and the CBT is translating that information into RFPs
        i) Could be ready as early as next week
        ii) Bids from potential contractors are due in early December
        iii) Work will start in early 2019
2) 2018 Projects to be Funded
    a) **Cross-GIT: Fish Habitat Assessment Update – Gina Hunt, MD DNR**

        i)   Phase 1 was a STAC workshop in spring 2018
- (1) Identified important factors, stressors and research gaps
    - (a) 54 significant variables
- (2) Targeted research gaps that would be needed to complete a watershed wide assessment

      ii)   Phase 2 of fish habitat assessment development funded in 2018 GIT funding
- (1) Compilation of data identified in phase 1
- (2) Design a pilot project to test the analysis
- (3) Outreach and communication

    iii)   Management Strategies have been updated to reflect these goals

    iv)   Other regional efforts are happening around the US - efforts to coordinate these assessments with Chesapeake assessment

b) **Habitat GIT: Culvert Assessments for Fish Passage in the Opequon Watershed of WV – Alana Hartman, WV DEP**

       i)   Supports fish passage, brook trout, stream health, climate resiliency, water quality outcomes and goals.

      ii)   50k to hire 4 individuals to assess stream road crossings by NAACC standards in Opequon watershed of WV.

    iii)   Deliverables/steps:
- (1) Develop with quality assurance plan for data, training individuals, do culvert assessments, enter data into database, identification for future fish passage projects with recs for BMPs, prepare a lessons learned document to help other stakeholders, e.g. state highway agencies.
- (2) Focus on projects that reduce streambank erosion, improve hydraulics, reduce sedimentation and that minimize barriers to fish, minimize insults to fish habitat.
- (3) Opportunity to bring in natural resource agencies and state highway agencies together, forge relationships.

    iv)   Opequon watershed - USACE priority map for restoration. 319 grants have be granted, have done dirt road investigations for sediment contributions. Came up with 11 roads; some on private land. Looking mostly for site where DOH have ROWs. experiencing rapid growth along i-81 corridor.

     v)   Discussion:
- (1) Law: Are culvert assessments limited to size?
- (2) Hartman: Not currently, open to amending list of culverts to assess.
- (3) Law: Good idea to combine both objectives, depending on where you're doing it, zero/first order streams have smaller culverts. Smaller pipes and culverts in headwater type environments, be inclusive of smaller streams.
- (4) DuBois: Will there be any assessment of whether system evaluated is compliant with sediment control/erosion regulations? Could be half your problem right there.
- (5) Hartman: Could be part of lessons learned document.

(6) Thorne: If you're preparing culvert for fish passage, you need to make sure its complaint (bottomless, elevation correct).

(7) Meyers: when new culvert goes in, people installing are civil engineers, no general guidance for fish passage. Something to pay attention to with this project.

3) Past Project Updates

    a) **Targeted Outreach for Wetland Protection and Restoration (2017) – Mitch Hartley, USFWS**

        i) Outreach to private landowners for black duck habitat protection

        ii) Important bc taps into larger existing science tools and funding

        iii) Maps of targeted outreach areas

            (1) Agricultural lands that are seeking innovation

        iv) Started working with landowners - aiming to increase participation in local programs such as NRCS working lands for wildlife

        v) Discussion:

            (1) Conn: Are there any project metrics to communicate successes?

                (a) Hartley: Designed project to collect additional data on landowner attitudes

            (2) Law: Movement of restoration to private lands is increasing, what are some best practices to get in contact with landowners who are receptive to projects?

                (a) Hartley: Landowners and especially farmers, it is important to tap into trusted, local resources. Additionally, utilizing a POC who is local can help getting connections in the area.

            (3) Greiner: Important to point out that this project is in a priority watershed.

    b) **Review of Statutes and Regulations that Protect Submerged Aquatic Vegetation in the Chesapeake Bay (2017) – Becky Golden, MD DNR**

        i) Goal of reviewing current protection measures to ensure they are sufficient for achievement of SAV restoration goals

            (1) Make any recommendations if statues are not sufficient

        ii) Searchable database for federal and state regulations is currently in second draft

            (1) The final draft is in in revision

        iii) Analysis of gaps and comparisons between states: in progress

        iv) Finalization deadline of January 15

        v) Discussion:

            (1) Idhe: Are any of the people impacted in this process involved? Aquaculture/permitting agencies?

                (a) Golden: Any management agency who has statues are involved

                (b) Idhe: There is a lot of conflict already, how will people who are improving water clarity impacted as SAV expands.

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(c) Landry: There are efforts to make sure that groups are copesetic with regulations and how the sav is changing

(d) Hunt: In areas where there are already conflicts and the new regulations are increasing, there needs to be another step.

(e) Landry: There are already projects like this, so this conflict will be addressed. The report will have recommendations, which will not be automatically regulations - decisions and talks will need to happen to decide what needs to happen to protect the SAV. This report can be a tool in these discussions.

(2) Greiner: who else could we invite to the spring meeting to have dialogs about this? Important to take into account multiple points of view.

(3) Idhe: Yes - would be helpful to take into account Co-benefits.

c) **Development of Citizen Scientist Submerged Aquatic Vegetation Monitoring Protocol/Manual and Training/Certification Program (2017) – Brooke Landry, MD DNR**

i) SAV recovering well in the Bay since TMDL - hard to know which species are coming back where bc not enough people on the ground to continually monitor everywhere

ii) Goal: increase citizen data collection and more localized data

(1) Pilot project was very successful so 2018 GIT project deliverable is a protocol

(2) IAN UMCES producing materials and final draft is in production, visual aids are currently being edited for final

(3) Development of certification program is upcoming

iii) Applied for extension for deadline in March 2019

(1) Need to decide how to implement certification program in the future

iv) Protocol Design:

(1) 2 tiers of monitoring protocol to become certified:

(a) Basic - water recorder/reporter app (Ches. Commons)

(i) SAV key incorporated within app - it emails Brooke/VIMS to download the data

(b) Advanced - if your watershed group has SAV monitoring program, coordinated effort through organization

(i) Volunteers to monitor using datasheets on the water about shoreline/sediment/sav presence/etc., submit and it will go to VIMS

v) Discussion:

(1) Idhe: We've tried to get fish monitoring going with citizen science piggybacking on this project, from our perspective, in a year, any idea of retention rate of volunteers? Any suggestions for best practices to keep high retention rate?

(a) Landry: it seems a lot of that is up to watershed/riverkeeper coordinator's enthusiasm and dedication. Key thing is to be realistic and honest up front about time commitment and

physical needs of the project. Constant communication, make it easy for volunteers as possible. We simplified the process as much as possible (little time, little commitment, clear instruction as possible). First year, the riverkeepers designed their own programs and didn't provide much instruction; lack of clear instruction was a problem. We assume people get what they need to do, people that aren't trained don't understand that, they need a check mark everywhere of steps to include. A lot of people wanted to know exactly where their data is going, how it's being used. Make sure they know their time isn't being waster.

    (2) Tango: Where is this going to be housed. IAN product? CBP product?

        (a) Landry: We haven't quite figured that out yet, we've talked about it, hopefully be on CBP website somewhere. Ian will likely print a lot of physical copies.

    (3) DuBois: Improving citizen involvement and stewardship, considered engaging adopt a spot program for communities to adopt SAV beds, give communities a greater sense of ownership? Can monitor if bed is expanding/shrinking, providing feedback. [Keep America Beautiful](#) promotes adopt a spot program for litter prevention/beautification, possible to expand this to SAV sites.

        (a) Landry: We are thinking about sentinel monitoring sites, and this could be possible.

Wetland Outreach Website Demo – Dan Brellis, UMCES

1) [Wetlands Work](#) website, launched 11/7. Will be doing promotion soon.
2) Dan is primary developer for this website.
3) Meant to remain a living product.
4) GIT funding project, wanted it to be trustworthy and welcoming website to dispel any negativity ag landowners might have about govt agencies. NO USE OF TMDL, jargon.
5) Home page:
   a) Call to action, first item you see. Get users to see success stories first and foremost bc based on research, there is negative connotation about govt agencies. Show fellow landowners who had positive experiences with wetland restoration programs, other people have gone through this process successfully.
   b) Bottom: background of project/website, info about workgroup
   c) Below that: enter state, county, search to find funding programs and planners nearby. People and agencies for people to contact for help/more information.
   d) Below: benefits of wetlands; big motivator for farmers is clean water, habitat creation, keeping spaces open. Wanted to highlight this as well.
   e) 3 sections: enabling/assisting, inspiration, education sections.
6) Benefits of wetlands tab: education.
   a) Information about what a wetland is, characteristics of soil, water, specific plant life.

    b) Types of wetlands: targeting upland and coastal landowners. Importance of restoration: talk about social good of wetlands, how they can help curb issues important to ag landowners, e.g. open land spaces, clean water, wildlife, economic benefits.

7) Discussion:
    a) Whitehurst: Maybe eliminate tundra swan from wildlife page, tear up fields.
        i) Brellis: Have done user testing, will continue to do user testing and update website as found necessary.
    b) Interest around the room in the $ values assigned to ecosystem services on this website, WWF and economics associated with natural areas in DelMarVa peninsula paper.
    c) Greiner: Bobwhite quail could be of interest to farmers/hunters, maybe add this to the website.
        i) Whitehurst: Not quite wetland species, but popular on ag land.
    d) Whitehurst: What contributions do wetlands make to groundwater and well water? If wetlands contribute to higher water tables/shallow aquifers. Contentious issue in tidal areas, might be a plus for farmers to know this. Shallow aquifer recharge value. Might be good to include in website.
    e) Faulkner: Have issue with loblolly pine with example of wetland plant, pretty dry species. Categorized as facultative, occurs as easily in wetlands as in uplands. Maybe find a more wetland obligate species representative of wetland habitat.
        i) Brellis: Something we can look into as well, unsure why certain species were chosen, had no say in that. Possibly due to this targeting potential new ag wetland customers, use more easily identifiable species to capture attention of new users.
    f) Interest around the room regarding economic resource benefits.
        i) https://www.cbd.int/financial/doc/wwf-wetlandsvalues2004.pdf
    g) Tango: cultural differences using SLR vs land sinking, any sensitivity to using that language during field testing?
        i) Brellis: Unsure.
    h) Hunt: How much was project?
        i) Cumming: Will look up.
        ii) *At time of PDF creation, Margot was not able to access past GIT proposals due to the 2019 government shut down. Updates will be made ASAP.
    i) DuBois: Success of peer to peer interactions between farmers, do success stories include contact info for the farmer? Might be beneficial.
        i) Brellis: we don't want to put their personal contact info on the internet. Farmers could potentially reach out to us and we could connect them if they have further questions.

8) Building your wetland:
    a) 5 step process, high level timeline of process. FAQ section. General guidelines section. Question box. Questions go to Margot!

9) Programs and planners tab:
    a) Easement types/lengths of time, program types, planners, eligibility, restrictions, ranking criteria, financial information.

b) Filter tool up top to narrow search.

10) Success stories tab:

a) Relatable photo, quotes about process and how it went, photos of the work being done, results of wetland installation.

b) Each person has a different incentive for installing them, 4 different perspectives.

11) About us section:

a) information about bay program, contact us section - all questions go to Margot! She cannot wait to field everyone's input!

12) General Discussion:

a) Faulkner: Would be helpful to include module about threats to wetlands. Impetus to protect existing wetlands, explain how basic activities degrade or imperil wetlands before we get to the need for restoration.

    i) Cumming: There is a threats section. Goal of this is to be a tool for ag landowners to convert lands back to wetlands.

    ii) Greiner: Can be tangential side project, separate effort.

Watershed Implementation Plan (WIP) Engagement Action Team (WEAT) – Deborah Klenotic, PA DEP

1) Local Government Advisory Committee (LGAC)

a) Mary Gattis, Coordinator

b) Comprised of elected officials appointed by governors or mayors to advise the leadership of the CBP on policies and programs related to local governments in order to implement the Watershed Agreement.

c) LGAC Oversees Local Government Engagement Initiative (LGEI)

    i) Purpose to convene partners to lead local governments strategically through Phase III WIP development and development of the Midpoint Assessment through messaging, strategies for engagement, and schedules for rolling-out information.

    ii) Focus is to connect local government concerns (infrastructure, economic development, public safety) to water quality and other CBP issues (e.g. stream health).

d) Created WIP planning process fact sheet for local governments

2) WIP Engagement Action Team (WEAT)

a) Deb Klenotic, Chair

b) Established by CBP Communications Workgroup

c) Purpose is to develop communications tools that WIP developers need to engage with local partners to improve implementation

    i) Representation from DE, MD, PA, VA, WV, Choose Clean Water Coalition, UMD, federal agencies.

d) Initial meetings have assessed the Phase III WIPs communications materials that states have already developed

    i) Developed a materials spreadsheet that will be developed further in the future as items are produced

ii) Spreadsheet will be available on the Communications Workgroup page on www.chesapeakebay.net

e) Existing Communications Products:
   i) All states have been doing in-person outreach through stakeholder meetings and one-on-one outreach
   ii) States have made powerpoints, spreadsheets of WIP process
   iii) States have held online webinars
   iv) States have crafted letters asking for participation and outlining process to specific stakeholders
   v) In PA - Community Clean Water tool kits targeted to counties to provide water quality data and BMP information.

f) Gaps and Needs:
   i) Communications products relaying co-benefit/other CBP outcome information. More outcome related outreach necessary to influence groups to include co-benefits in WIP development.
   ii) States not going "above and beyond" if they aren't required to due to a lack of funding
   iii) Financing communication
   iv) Digital tracking tool for BMP implementation

3) Discussion:
   a) Greiner: Matching a message to an audience is important. Priorities of local landowners can often be disconnected with priorities of local planners. Important to figure out what are the priorities and how to communicate those
   b) Hunt: Audience is important - we have a good message that will resonate with private landowners. It is hard to talk to local planners because they have very specific priorities.
   c) Pennington: There will be no single message or priority, there are agriculture vs. urban issues, demographic issues - it is important to sit back and listen to what the communities are saying. Having more people on the ground listening, or tapping in/supporting local groups can be a conduit between groups identifying priorities and who is putting the project in. Having the right people is important.
   d) Faulkner: Do we know about the decision making process?
   e) Gattis: Identifying who you need to do what is a critical step in this process. Listening to communities and interpreting their issues can help steer their decision making to show the BMPs that are important on multiple fronts. Smaller focuses are important to get things done.
   f) Pennington: Look at the ways things get done at the small scale - ex. Planning ordinances are the traditional method for getting specific things done. Providing direct guidance on this level can make it easy at the local level (zoning, stormwater management ordinances, etc.). Someone needs to walk them through the process bc they have many key issues.
   g) Hunt: WEAT can be the group to go between the science and figuring out what people need to know.

h) Gattis: It's important to take advantage of local partners and trusted sources - finding these connections is the best way to get the message to the local levels.

i) Law: Local government is often as complicated as science. Important to tap into local champions and deciding who can influence the decisions.

j) Gattis: When you know one community, you only know one community. Do not assume you understand how every community works. We need an army of people on the ground to talk, build one on one relationships.

k) Klenotic: Seed these champions onto the groups that are organizing at the local level (e.g. county action teams) and make sure they are using our tools (e.g. fact sheets).

l) Greiner: Example of the use of those tools, earlier demonstration of the Wetlands Work website. Information served up in a way "who do we need to do what for the bay"- based on attitude survey and work of contractor, we have a way to empower people to take action. Getting that information out would be useful, to APA, similar groups.

m) Gattis: Using the American Planning Association or other groups could be helpful. Planners are overlooked in helping us achieve practices we want people to use. Many of them already have environmental initiatives similar to GIT goals.

n) Greiner: How could we tap into this resource and help them out?

o) Gattis: Do not make anymore tools. We have to know how to get a tool into someone's hands and the information necessary to get them to act. Need the right messanger for the right message - a broader partnership!

p) Tango: Are there any venue/meetings for information exchange opportunities? Do we need state/county specific events?

q) Gattis: As a certified planner, you need to get continuing education credits. This could be a good way to communicate to a whole new audience for linking the sediment and nutrient benefits with habitat benefits. Webinar outlet may be useful for this. Local Leadership Workgroup could help to identify the correct outlets.

r) Hunt: Continuing education credits can be a powerful method for accessing these local audience.

s) Pennington: The Local Leadership Workgroup is tasked with producing curriculum/materials for outreach. We could go to the GITs and help with the development and with funding. Perhaps collectively we could get the curriculum developed.

t) Gattis: Curriculum development is a huge gap right now - there are outlets, but the curriculum isn't there yet.

u) Klenotic: It may be useful to collect success stories from across the watershed.

v) Gattis: Yes - working with state, local governments could collect these success stories.

w) Klenotic: Utilizing the co-benefit fact sheets can be a way to target these success stories and deliver them to the WIP planning.

x) Gattis: Developing case studies is hard to motivate change, but being able to call to mind examples of peer to peer information knowledge building. The HGIT could be a good convener of these relationships.

y)   DuBois: Missing the piece of social marketing analysis - to understand why are people not choosing co-benefit projects. Would suggest a social marketing to understand the suite of motivators.

z)   Gattis: I agree - there are a ton of factors. Having someone on the ground is the solution.

aa) Pennington: Yes, this army of people is key. It is helpful to utilize the GITs and the Local Leadership Workgroup as the way to get these conversations going.

bb) Greiner: Having the social piece is important to inform how tools/curriculum are developed.

cc) Pennington: All GITs should discuss their needs of the local groups, then develop some type of social analysis.

dd) Gattis: Behavior change analysis is key to understanding why behaviors are happening, how to provide the correct materials to aid desired change, and how to decide what knowledge gets the people to make the decisions we want them to make. Documents are coming out of LEGI to enhance the networks between these partnerships.

ee) Law: Within the CBP, what level of information or education are the workgroups responsible for? There is a gap between the workgroups and the GITs and the people putting projects on the ground. How does the work were doing at the Workgroup level get to the landowners?

ff) Meyers: Bring it back to the local government priorities; public health and safety, economic development, and infrastructure. It is important to highlight public resources that benefit from strong land planning policies. There is a lot to learn from communities that are finding success from policies that were implemented 25 years ago.

gg) Pennington: As the chair of the Local Leadership Workgroup, I will bring forth the idea of GITs working towards curriculum development. Combining our efforts to work towards these overarching goals could be most effective.

hh) Gattis: The goals of the Local Leadership Workgroup is to help GITs with their local communication/collaboration efforts. Jennifer Starr is the new Workgroup Coordinator. They meet 3 times a year and it may be helpful to send a HGIT person to those meetings.

ii) Pennington: Start by looking at tree canopy policies across the 6 states and figure out what is working is a good way to think about where to expand.

jj) Gattis: We can ask questions of workgroup members. Who would be the best group to work with in your state in getting this message across? Who should we ask to find the best group? Who can influence people?

kk) Hunt: Who is in your group?

ll) Gattis: I will send out a list of who is on the Local Leadership Workgroup website. Jennifer Starr will be more involved with the GIT, workgroup, and Coordinator/Staffer meetings.

mm)   Hunt: Are the people on this workgroup the right people to help develop this curriculum? Will they be open to taking into account these co-benefits? I wasn't expecting behaviors to change yet, the co-benefits factsheets were to get the

developers thinking about the process and how they may think about it differently in the future.

nn) Gattis: Mostly state agency liaisons, state municipal association liaisons, local government staff, some elected official, technical assistance providers - links to people who have links. A way to think about communicate with these groups - newsletters, publications etc.

oo) Greiner: The decision makers are asking for the information, the GITs have the information - the influences to transfer this information is needed. We are interested in how to develop the "next generation success stories". We need to educate, inspire, and connect.

pp) Klenotic: The success story should be targeted, delivered by a person one on one. Find someone who has experiences the benefits of habitat enhancement.

qq) Greiner: Examples on Wetlands Work website.

rr) Gattis: Think out of the box for these - have to make translations, requires thinking differently.

Linking Conservation Tools and Data with Financing Opportunities – Christine Conn, MD DNR and Jake Reilly, NFWF

1) How do we translate technical information (e.g. decision support tools) into robust funding strategies?

2) Many tools are already available
   a) A cross-program project is in the works to find a central home for decision support tools (DSTs) used widely by CBP .
   b) Regional landscape-level plans
      i) Delmarva Conservation Network
      ii) USFWS Refuge Planning
      iii) Nature's Network
   c) Fish habitat user needs assessment
      i) Respondents to survey are interested in using a fish habitat DST and noted use of many other tools
   d) Tools developed through GITs
      i) Black Duck DST
      ii) Fish Passage Prioritization Tool

3) NFWF 2018 Chesapeake Bay Business Plan
   a) Jake Reilly of NFWF spent time working with our Habitat GIT Workgroups and Action Teams to try to pull information with respect to geographies and objectives to refresh the NFWF Business Plan to more directly address our outcomes. NFWF Chesapeake Bay Business Plan priority areas exist in online maps.
   b) Reilly: NFWF and CBP share a similar perspective/aspiration. We're seeing proliferation of tools. We're in a place where we can aim generally at making more informed decision of where and how to guide program funding. There is a lot that needs to happen to translate DSTs for decision makers of different audiences. How you talk about a certain tool will change dramatically depending on who you're talking to. NFWF focus is entire

Chesapeake Bay Watershed and, as NFWF, we're certainly looking at fish and wildlife habitat as well, in addition to water quality.

c) Reilly: Are people we are funding working in key priority areas? Were looking at using these DSTs to determine coarse level geographic priority areas. Use that information to drive interest and work on the ground. For example, if people want to do Brook Trout work but don't know where, we use our priority vetting process to help them get there.

d) Reilly: Also have been able to use DSTs for goal settings and to inform specific strategies within NFWF.

e) Priorities
   i) Water Quality (WQ)
      (1) Uses the Chesapeake Assessment Scenario Tool to identify areas with the greatest nutrient and sediment loading to guide Water Quality work. While these are focus areas, NFWF also does work outside of them.
   ii) Brook Trout (BT)
      (1) NFWF employs NRCS data on current extent of populations and conservation portfolio work Trout Unlimited has done. Focus on identifying where we are most likely to find intact brook trout populations, state of habitat in these locations, and how we can use that information to guide work. Focus work in places where the kind of habitat benefits from stream restoration and habitat buffers are going to have biggest impact on WQ.
      (2) Want to consider where are the places with best intact BT populations with limited connectivity and habitat restoration activities are going to be most impactful in terms of protecting the existing populations?
         (a) High tier areas are relatively good populations in WQ focus areas.
         (b) Second tier areas are the best populations outside of the WQ focus area.
         (c) Third tier areas are the remaining good existing populations where work can be done.
   iii) Black Duck (BD)
      (1) Identify subwatersheds (HUC12s) with greatest potential for restoration or protection for BD based on bioenergetics/food availability. To the extent that we can pair wetland restoration for BD and WQ, NFWF does that. Paid for Joint Venture to develop additional data refinement to overlap WQ focus areas and restoration priority areas by highest amount of acreage or energetic lift. Can get down to the parcel level.
   iv) Oyster Restoration and River Herring culvert priorities
      (1) Shoreline restoration in areas are going to be most beneficial to oyster restoration projects in places with high loading of nutrients and sediment. Use the oyster restoration areas to create new WQ focus areas for NFWF.

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<li value="2">Began with Used fish passage prioritization tool - blockage opportunities to get good mileage from river systems with known herring populations. What are the existing culvert/passage impediments that are posing the biggest difference between known existing river herring populations downstream with the largest extent of potential new available habitat upstream?

    f) Discussion:

        i) Conn: This is an applicant tool to drive project implementers to particularly prioritized locales. Any sense how projects fell out?

        ii) Reilly: We talk a lot to our applicants and they are appreciative of the work we've done to provide DST refinement. DSTs tend to service technically oriented audience, not necessarily a bad thing. Black box for the user community, though, takes translational work to massage the message of a DST for your specific purposes. We had a lot of feedback from applicants, happy we've told them where they'd get the most feedback.

        iii) Conn: Jake inspired me to look at projects we've taken on at DNR. $60-80 million trust fund for WQ projects each year. Involved in writing elements of WIP strategies. Good idea to take look at BMP fact sheets, see how our projects affect or involve co-benefits.

4) Co-benefit evaluation of Maryland Trust Fund WQ projects

    a) Maryland Trust Fund projects are driven by WQ priorities. Sparrow driven work; identify watersheds for nutrient and sediment loading, both in agriculture and urban watersheds; this is where most of our restoration work takes place. Projects fall within here and we give applicants a map, say we're preferentially funding projects that fall within this area. Where are we getting co-benefits? Below is is a look at the data to see how it all fell out:

        i) Most of our conservation projects fall within our target ecological areas (TEAs). 13-14% of projects are falling within the "Best of the Best" areas.

        ii) About 20% of our projects are within black duck tiered priority areas (using NFWF targeting tool).

        iii) Most brook trout and Maryland trout priority areas are in western Maryland; not many projects taking place out there.

5) Opportunities for implementing projects in priority areas

    a) Easy to access tools?

    b) Clear decision making criteria?

    c) Evaluation potential co-benefits?

    d) Who are your funding decision makers?

        i) Want to encourage folks to think about who these people are within your agency. Can you help deliver this information to them to help them make decisions that prioritize these co-benefits? Could be a scorecard, like what we do with land conservation.

    e) Discussion:

      i)   Moessinger: From a person on the ground trying to balance opportunities for conservation with funding sources, sometimes there is the tradeoff between opportunities and where specific locations are. See returns on conservation dollars to a degree, then see plateau when we are looking at more intact areas. Priority areas may not be where money is available, vice versa.

      ii)   Conn: enhancing connectivity in western md. Seems to be also dependent on scale that you're working on. A lot of this is objective driven, but what you bring up is definitely something to be aware of.

Designing Fish-Friendlier Road-Stream Crossings – Doug Kirk, WV DOH
1) "Welcome to use, please do not abuse"
2) Van Metre Ford Bridge over Opequon Creek (built 1832) - oldest stone bridge in state. Needs work.
3) 1820-20th Century: Manufacturing, shipping, installing, costs a lot, so good stewardship demands economical design. Initial cost is considered, not life cycle cost. Have been generally designed to be as small as possible. Pipes are "fast, cheap, easy"; led to use of corrugated metal pipes.
4) General Design Policy - Culverts should be
   a) Hydraulically designed
   b) Located to minimize hazard
   c) Structurally stable and hydraulically efficient
   d) Designed to consider construction and maintenance costs
   e) Designed based on risk of failure and property damage, traffic safety, and environmental considerations
   f) Compliant with FEMA maps
5) Obstructions to Aquatic Organism Passage (AOP)
   a) A high drop off at the downstream end
   b) Steep, smooth, narrow, or long culverts
6) Around 2002, Fish Passage was beginning to be considered
   a) Per USACE regarding 404 Permits - fish passage cannot be blocked unless purpose of project is to impound water
7) Slow progress
   a) 20016, WV DOH engineers atten FHWA fish passage summit.
   b) 2007, WV DOH publishes culvert design process for AOP in new drainage manual
   c) Sizing culverts based on "bankfull width" becomes somewhat common practice
   d) "Hydraulic design" still the norm
8) Began to saw benefit in wider culvert design for fish and highways
   a) Reduced future maintenance
      i) Debris clogging
      ii) Abrasion on pipe
      iii) Hydraulic pressure against embankment
      iv) Plunge pool at outlet undermines road stability
   b) Grassroots effort happening not just in central offices, but district offices as well

9) Trout unlimited
    a) Presented WV DOH engineering division with silver trout award for installing box culverts
10) Continuing progress
    a) Greater emphasis on sustainable stream crossings
        i) Drainage Manual Updates
        ii) Training for DOH staff and consultants
11) Discussion:
    a) Hunt: What is a box culvert made from?
        i) Kirk: Steel reinforced concrete
    b) Hunt: Culvert design/evaluation form, does it have to do with habitat?
        i) Kirk: No, its for design. Not habitat assessment.
    c) Greiner: You currently design culverts for 25-50 years, any consideration about changing that?
        i) Kirk: We design them for 25-50 years storm data, using bankfull width more than accounts for a 25 years storm flow.
    d) Greiner: Environmental considerations; does that include aquatic connectivity or increased sediment/WQ loading?
        i) Kirk: It's more about getting 404 permit.
    e) Moessinger: How has your relationship been in the process of interacting with WV equivalent Of MDE for emergency replacements? If you replace in kind, you generally don't have to go through these process. How have you been able to efficiently upgrade your culverts?
        i) Kirk: What happens is that is done at the local level and they just do it, pick up whatever size pipe they have and they stick it in there for emergency replacements. They say they're temporary, but they're in there until they fail.
    f) Moessinger: It would be interesting in improving collaboration between permitting people and DOH engineers.
        i) Kirk: FEMA is trying to facilitate the expansion of these relationships.
    g) Tango: How many do you do of these a year?
        i) Kirk: Improvement projects are hard to quantify. Projects of that size are done at district level and I am only involved as invited. Unsure.
    h) Greiner: Lessons learned from GIT funding project for Opequon, thinking about what were going to do with that document once we have it.
    i) Kirk: Development in karst is difficult, no waterflow in places where people build to flooding.
    j) Moessinger: (Regarding Opequon GIT Funding Project) Western MD TU is focusing on what exists on private lands, PA dirt and gravel roads are public ones. Recommend scouring GIS maps for additional crossings than what NAACC map is showing you; might be missing a ton of crossings, might devalue data.

Action Items and Wrap Up

1) Action Items:
    a) Keep an eye on GIT funding timeline and prepare ideas ahead of time
    b) Look through Wetlands Work website and send comments to Margot
    c) Reach out to GIT Funding Project leads for any follow up questions, clarifications
    d) Habitat GIT will share list of 2018 GIT Funding Projects as it becomes available
    e) Habitat GIT will share Local Leadership Workgroup webpage for reference
    f) Work with local leadership workgroup to focus on co-benefit information dissemination via "influencers"
        i) Look at developing next generation case studies. Habitat GIT will share LGAC's "Next Generation Case Study" document (including information on developing more influential/effective case studies for behavior change) for reference.
2) Upcoming Dates to be aware of:
    a) March 13-14: Biennial Review Meeting in Richmond, VA
    b) May MB Meeting: SRS presentations begin
        i) Stream Health
        ii) Brook Trout
        iii) Fish Habitat
        iv) Fish Passage
3) Spring Meeting Ideas:
    1) Demonstration of SAV Citizen Science/Monitoring visuals water reporter app
    2) Findings of SAV statutes/regulations project
        a) Invite Oyster Aquaculture representative
    3) Living shoreline joint GIT Funding project presentation