



Regional Environmental Managers Technical Committee

FY21 CZM & FY22 WIP Phase III

Tuesday, September 20, 2022

1:00pm to 3:00pm

Digital Meeting and Conference Call

MEETING MINUTES

In attendance (30): Beverly Hawthorne (Emporia); Darryl E. Walker and Reginald Tabor (Petersburg), Ron Svejkovsky (Tri-Cities MPO); Jay Ruffa (Crater PDC); Heather Barrar (FOLAR); Robert Wilson (ARWA); Matt Gerhart (NVCT); Scott Rae (Fredericksburg); Valerie Tyler (Spotsylvania County); John Saunders and Emily Torrey (Stafford County); Chris Clarke (King George County); Jessica Pica and Lisa Moss (US-FWS); Stacey Farinholt (DCR); Daniel Moore (DEQ); Bryan Bays (VDOF); Dan Redgate (VDOT); Gabi Kinney (Wetlands Watch); Michael Zehner, Luke Peters, Lindsay Edwards, and Nadya Syazsa (Berkley Group); Trevor Lee; Deona Johnson; Beverly Walkup (Sussex County); Lauren Clay (Dinwiddie County)
Called In (2): +1 (434) □□□-0590; +1 (804) □□□-9905

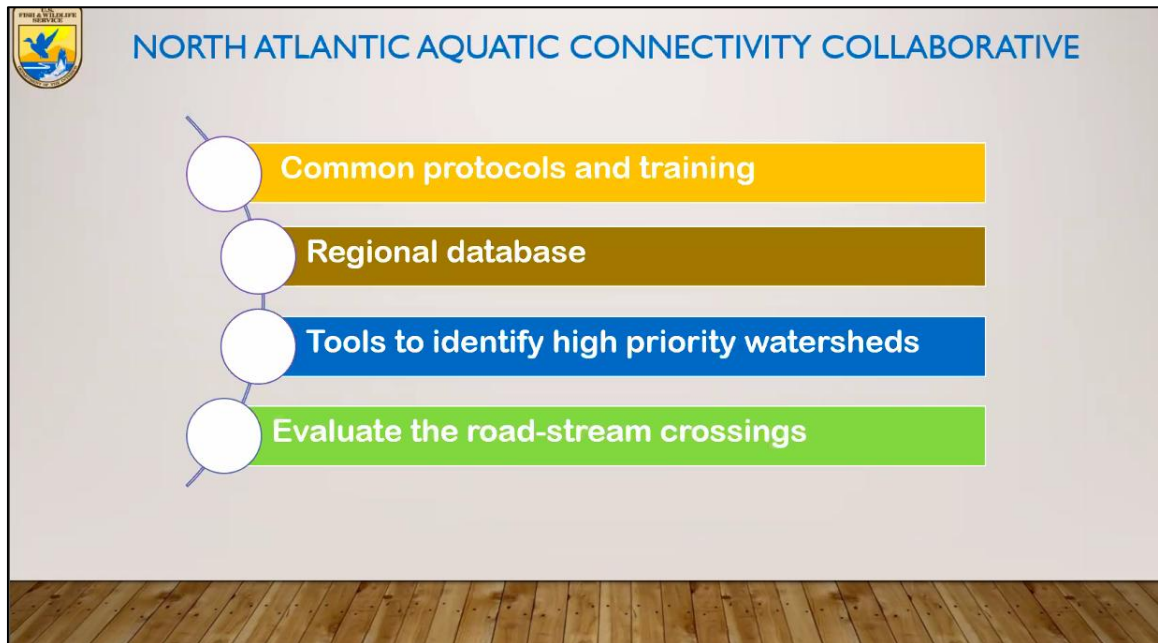
Meeting Notes

The September meeting is a joint discussion between the GWRC Regional Environmental Managers Technical Committee and the Crater PDC Environmental Working Group on restoration and protection of aquatic organisms and habitats as well as permitting process and funding opportunities for culvert and road-stream crossing upgrades.

Outcome #1: A presentation by Lisa Moss, from the Virginia Fish and Wildlife Conservation Office, on restoring aquatic connectivity in VA.

- Responsibilities:
 - Protect and recover threatened and endangered species
 - Manage and distribute funding to aid with conservation
 - Community outreach focused on environmental stewardship and recreational fishing
 - Fish and habitat assessment and monitoring on public, private, and federal lands
 - Barrier removal and stream restoration benefiting native and at-risk aquatic species
- National Fish Passage Program in VA (NFPP) – **2023 funding cycle coming up**
 - Since 2004, VA-FWCO has engaged in partnerships to:
 - Remove barriers to fish passage
 - Reopen 1750 mainstem and upstream functional stream miles
 - Reconnect fish and mussels to previously fragmented and degraded habitat
 - Remediate poorly designed structures
 - Receive over \$2.1M in funds and leverage over \$3.9M in partner funding to complete NFPP and habitat projects

- Current NFPP projects:
 - <https://www.arcgis.com/apps/dashboards/99040e452de9487f80d9f5748f717880>
- **North Atlantic Aquatic Connectivity Collaborative (NAACC)**



- Examples:
 - Harvell Dam Removal on the Appomattox River
 - Funded by NFPP
 - Rock weirs altered fish movement for harvesting in pre-colonial times
 - The dam structure was already in rubble and sections of concrete had been broken up; baby eels were trying to pass the remains of the dam
 - Removal began in 2014 – now helps enhance recreation and improve public safety
 - Jordan’s Point Dam Removal on the Maury River
 - Poor condition and would cost \$3M to modernize and comply with DCR’s regulations
 - Railroad piers removed in 2019 – restoring natural riverine hydraulic
- NAACC Data (from FWCO) – Utilized to prioritize habitat projects of benefit to at-risk and listed species
- While the NFPP has focused on dams, in the past approximately eight (8) years has widened its purpose to look over road stream crossings (i.e., culverts) through the NAACC.
 - Culvert assessments in VA’s Trout streams (2014)
 - Evaluate road-stream crossings as barriers to free passage of the Eastern Brook Trout
 - UMASS River and Stream Continuity Project protocol and the Vermont Culvert Aquatic Organism Passage (AOP) Screening tool were used to survey and classify crossings
 - Collaboration with partners and communities to establish the *Piedmont Region Trout Stream Restoration Initiative*

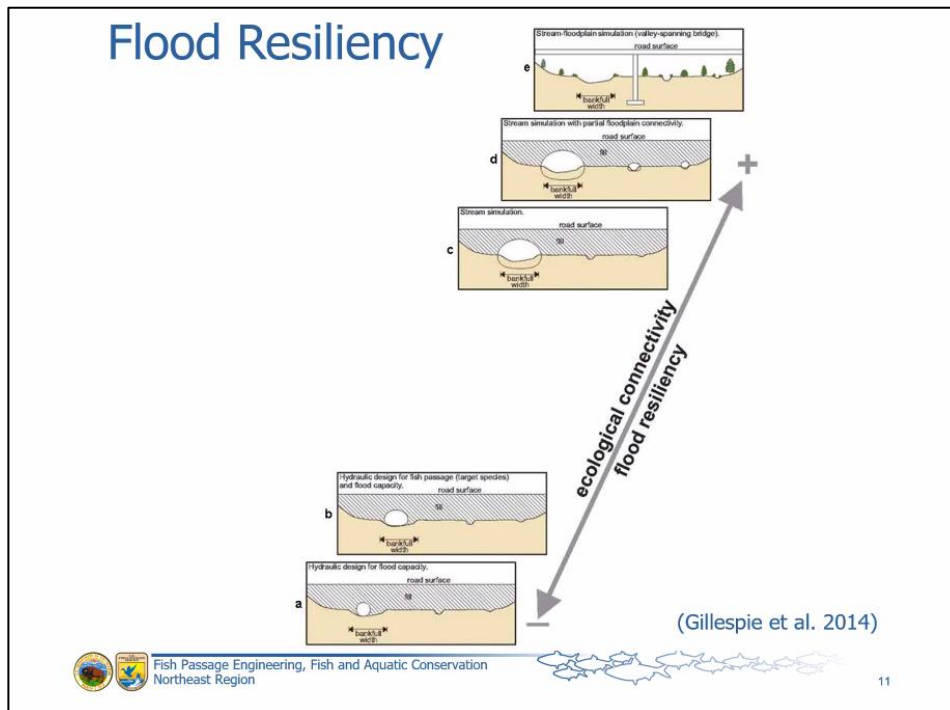
- Criteria for projects:
 - Impediment to AOP and at-risk of failure
 - Due for replacement
 - Allopatric brook trout populations present
 - Proximity and reconnection to pristine and protected habitat
 - *Piedmont Region Trout Stream Restoration Initiative*
 - Culvert assessment was used to create a systematic process to improve aquatic connectivity in counties bordering the Shenandoah National Park
 - Strategic partnership to mutually achieve:
 - Water quality
 - Climate resiliency
 - Fish passage
 - *Upper Rappahannock River Watershed (2021)*
 - Partnership with the Friends of the Rappahannock (FOR) to install an open-span structure at the Entry Run crossing
 - Provided access to SNP trails through the Potomac Appalachian Trail Club
 - Stream surveys and project design were completed by VT engineering students with guidance from FWS specialists
 - Site prep and bridge installation was completed in 2021
- NAACC Assessments of VA's priority watersheds:
 - Demonstration project at Lower James River Watershed – funded by the Chesapeake Bay Trust in 2016
 - FWCO assessed 319 road-stream crossings in historical American shad and river herring spawning tributaries
 - Study approach:
 - NAACC Non-Tidal Protocol
 - Chesapeake Bay Fish Passage Prioritization Tool
 - NAACC Tiered Priority HUC12 sub-watersheds
 - TNC Atlantic Coast Alosine Prioritization Model
 - Expert knowledge and literature review
 - Decommissioned road and subsequent culvert removal to restore fish passage; nearly 2 miles of aquatic habitat reconnected; beneficial to native fish and at-risk American eel and river herring populations
- Endangered species consultation and transportation projects
 - The Gloucester field office currently working on protection of the James spiny mussel and Roanoke logperch
 - FWS and partners have removed dams and worked with landowners to improve their practices and reduce sedimentation
- Question from **Jay**: “Is a best practice to move away from culverts to some other structures? What type of culverts are most detrimental to fish passage in our regions of Virginia?”
- **Lisa**: To the extent an open-span structure can be used (e.g., bridge or single-box culvert (bottomless if possible) – allowing for fish passage and allow stream to maintain its

natural course; Double-box culvert can be an option – with possible modifications and considerations

Outcome #2: A presentation by Jessica Pica on fish passage engineering + design of road-stream crossings to accommodate for fish and wildlife habitats.

- US Fish and Wildlife – Regional Fish Passage Engineer
- Fish Passage Engineering
 - Civil + hydraulic engineers to aid in planning, design, and evaluation of fish passage and protection projects; but also:
 - Develop regional design criteria
 - Research
 - User-friendly tools
 - Workshops and trainings
 - University partnerships
- Road-stream crossings
 - Convey surface water from one side of the road to the other
 - Protection of embankments, roadways, and properties
 - Often designed without consideration for aquatic species
- Issues for Wildlife:
 - High velocity
 - Perched conditions - drop from culvert outlet to the river
 - Outlet pool too shallow
 - Shallow water depth
- Stream Simulation Design
 - Maintain geomorphic and ecological continuity
 - Design Concept:
 - Setting the proper width, correct elevation, and natural streambed
 - Reference Reach – provide template and assist in developing design channel
 - Bankfull – Flows that form and maintain the channel
 - Transports sediment overtime than other discharges; typically occur 1-3 years
 - Structure width = 1.2 x bankfull
 - Recreate bankline
 - Protect footers
 - Flood resiliency
 - Long-term ecological continuity
 - Other Design Components:
 - Elevation – longitudinal profile
 - Alignment – with respect to the stream
 - Streambed materials – same particle sizes and distribution
 - Culvert design selection

- Flood resiliency + ecological connectivity



- Cost-comparison
 - Traditional hydraulic design:
 - Cheaper up-front installation costs
 - Annual maintenance costs
 - Shorter service life
 - Stream simulation designs:
 - Higher up-front installation costs
 - Minimal or no annual maintenance costs
 - Longer service life – stream channel bed and margins protect the structure from abrasion as bed load moves through the crossing

Outcome #3: A presentation by Lisa Moss on the National Fish Passage Program Grants + Other Funding Opportunities

- Eligible activities
 - Projects that provide and other aquatic organisms passage and restore aquatic connectivity by removing in-stream barriers
 - Examples: dam removals, culvert replacements, installation of fishways
- Who can apply:
 - State, county, local governments
 - Native American tribal governments and organizations
 - Nonprofits AND for profit (e.g., small businesses)
 - Independent school districts
 - Individuals

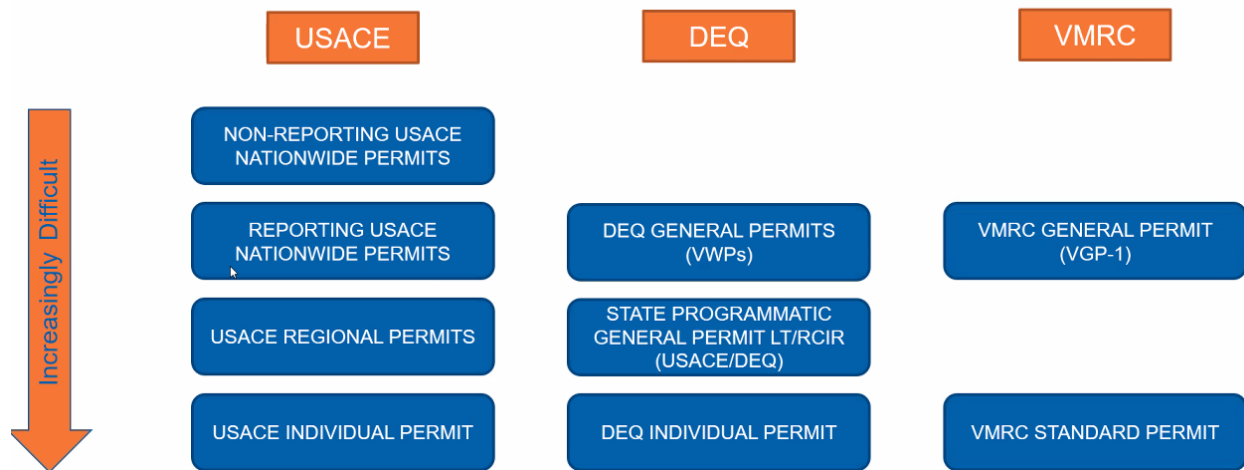
- No match requirement though encouraged and considered in scoring/ranking
- Annual allocation – Proposals due OCTOBER 7
- NFPP BIL – Proposals due late October/early November
- **Bipartisan Infrastructure Law (BIL)**
 - Wildlife Crossings Pilot Grant Program: \$350M over FY2022-26
 - Reduce number of wildlife-vehicle collisions
 - Improve habitat connectivity for terrestrial and aquatic species
 - 80% federal share cost – Tribes not required to provide cost share
 - <https://arc-solutions.org/wp-content/uploads/2021/11/Wildlife-Crossings-Pilot-Program-Summary.pdf>
 - Rural Surface Transportation Grant Program: \$2B over FY2022-26
 - <https://www.transportation.gov/grants/rural-surface-transportation-grant>
 - National Culvert Removal, Replacement, and Restoration Grant Program (“Culvert AOP Program”): \$1B over FY2022-26
 - Grants to improve or restore fish passage for anadromous fish and may include infrastructure to facilitate fish passage around or over a weir or weir improvements
 - Technical assistance to Tribes and underserved communities to assist in project design
 - https://www.fhwa.dot.gov/bipartisan-infrastructure-law/docs/culverts_fact_sheet.pdf
 - PROTECT
 - Resilience planning activities, including improvement plans and construction activities
 - https://www.fhwa.dot.gov/bipartisan-infrastructure-law/protect_fact_sheet.cfm
 - Restoring Fish Passage Through Barrier Removal (NOAA)
 - Funding and technical assistance to restore fish passage by removing in-stream barriers-native and anadromous fish
 - Dam removal and/or modification, culvert removal/replacement, nature-like fishways of bypass channels, and fish ladders
 - <https://www.fisheries.noaa.gov/grant/restoring-fish-passage-through-barrier-removal-grants>
- Justice40 Initiative
 - Interim implementation guidance from OMB memo – the Federal level goal of implementing 40% of investments to underserved communities
 - Disadvantaged/Underserved – consider appropriate data, indices, and screening tools to determine whether a specific community is disadvantaged, such as:
 - Low-income, high and/or persistent poverty
 - High unemployment and underemployment
 - Racial and ethnic residential segregation

Outcome #4: A presentation by Dan Redgate from the VDOT Water Resources – Central Office on permitting requirements of culverts and similar projects.

- Permitting Agencies and Regulatory Authorities
 - US Army Corps of Engineers
 - VA DEQ

- VMRC – VA Marine Resources Commission

Permit Options: General Permits



- Increasing difficulty is tied to increased impacts to humans or nature
- Nationwide Permits (USACE)
 - First line of defense in the permitting toolbox – nationwide permits have essentially already been permitted to the nation – it is not a permit for the project, rather to ensure project conforms to the permit
 - DEQ Section 401 required for all Nationwide permits – 90-95% of permits VDOT obtains are USACE Nationwide permits

Nationwide Permits (USACE)

Most frequently used Nationwide Permits by VDOT:

- **NW-3: Maintenance**
 - **NW-6: Survey Activities**
 - **NW-13: Streambank Stabilization**
 - **NW-18: Minor Discharges**
 - **NW-23: Approved Categorical Exclusion**
 - **NW-27: Aquatic Habitat Restoration, Establishment, and Enhancement Activities**
 - **NW-33: Temporary Construction, Access and Dewatering**
 - **NW-14: Linear Transportation (Tidal only)**
 - **NWP-57: Electric Utility Line and Telecommunications Activities**
 - **NWP-58: Utility Line Activities and Other Substances**
- NW-3: could be utilized to develop a 3-side culvert to be a fish-friendly structure
 - NW-13 and NW-18 also common – if projects' size are under certain cubic yard, USACE will permit it

- When securing funding from BIL or NFWF (federal sources), NW-23 is reserved for projects (those that don't need an extension NEPA review) – thus they don't need EIA/EIS.
- Regional Permits
 - USACE
 - RP-01 – authorizes VDOT roadway projects; allows for only up to an acre of wetland impacts
 - State Programmatic General Permit
 - These permits require more requirements to be passed
- Individual Permits
 - Public Notice
 - Timeline – often 180 days for permit decisions
 - VMRC Standard Permit – required if objections are raised by individuals or agencies
- How are culverts upgraded?
 - VDOT will partner with local governments, state/federal agencies, or nonprofits to coordinate improvements to transportation infrastructure for AOP
 - Expanding the scope of culvert repair and replacement projects relative to VDOT's standard option where the existing VDOT structure represents a significant barrier to movement of aquatic organisms:
 - Replace with 'higher capacity structure'
 - Remove rather than repair a low-water structure and replace with a stream ford
 - Install rock step pools at a culvert outlet
 - Perform stream restoration, using natural channel design
 - Partnership to improve crossing structure and reach shared goals
 - Obtain compensatory mitigation credits
- When a road stream crossing goes through the standard VDOT process, culverts are sized hydraulically
- To get permits alluded to earlier – culverts are countersunk below the stream bed 4-6"
- When strong storms come through, culvert materials can be half-filled or scouring can create perching
- BIL funding can be achieved for alternative designs that are better than the standard VDOT replacement
- VDOT's pilot program to use federal funds to make up the difference has until now been with nonprofits
- Refer to VDOT's AOP Partnership – BMPs Manual
 - AOP upgrades being done for stream and wetland and sediment credits at VDOT
 - PEC, JRA, Trout unlimited, FOR, etc.
 - Team with USFWS, NOAA – NMFS federally, DWR and DCR-NH at state level
 - The message to get across – whereas VDOT has been doing private projects for years, BIL money is staggering – could identify sites more expensive than \$200k.
 - If you want to turn a culvert into a full-scale open bridge crossing, that's BIL funding

- BIL is formula funding and grant funding – formula which goes to all states, VDOT is getting \$5M over 5 years. Grant funding is relevant to group – PDC or locality team up with VDOT, USFWS, NOAA, + nonprofit could get hefty grant funding.
- The value that PDCs bring is they know their local areas – can tell you which culverts flood the most, where debris is piling up, etc.

Outcome #5: Group discussion on culvert upgrades and road-stream crossings.

- **Jay:** is there an advantage for some collaboration on identifying a VDOT structure that meet the definition of ‘stream crossing’ to building resilience?
 - Culverts impeding fish passage – NAACC database housing all the culvert inventory data from ME to VA; be strategic in which ones to log onto the database
 - Local knowledge is definitely beneficial in identifying which structures may need removal or retrofiting – <https://streamcontinuity.org>
- Some culverts under Route 58 in Meherrin River led to flooding in Emporia – flooding in both directions from Meherrin flooding up or rain on the other end
 - Locality > PDC > Look at species that would warrant protection > VDOT/Fish-Wildlife
- What is the minimum to warrant VDOT to review and permit for upgrades?
 - It does not have to be one that is already deteriorated, because it is up to the localities to keep track of possible projects
- Perched triple box culvert – isn’t degraded enough to be replaced, could be there another 75 years. Districts are trying to work with partners to get these upgrades.
- Make better AOP design common practice in Virginia. Capacity building is included in funding.
- VTRANS after Hurricane Irene – Vermont made changes to their replacement standards.
- VDOT has a seat on the Resiliency TAC. Virginia is a more hurricane prone state than VT – upgrades
- Make the economic case
- West Virginia targeting eastern brook trout – counties are looking at ecotourism, people spend a lot of money
- Grants are due very soon – October 7th? Do localities need to be going to VDOT or other agencies right now and say “we want upgrades”??
- Some NOFOs haven’t been released yet.
- VDOT team and locality would get together to first identify a site and then get a team together and by next Fall when NOFOs come out might give enough time. PROTECT program will be \$1bb
- NOFO for Culvert Restoration Program is supposed to come out next month.
- Way to sign up for BIL updates.
- Residency admins are trying to keep up with these.
- VDOT would be on the team, but not the grant writer.
- Culvert ratings data from long-range plan straight from VDOT? Ron says yes there is.

- Use PDCs as the nexus between data localities MPO VDOT and agencies.