

Conowingo Dam Settlement Agreement Provisions

MAKING A DIFFERENCE FOR THE SUSQUEHANNA RIVER AND THE BAY

Setting the stage: Water Quality Impacts of the Conowingo Dam

- ▶ Dam spans the width of the Susquehanna River a mere 10 miles from the entrance to the Chesapeake Bay
 - ▶ Prior to late 1920's when the Dam was built, the 464 mile long Susquehanna River was a major spawning tributary for American shad and River herring and where American eels grew to maturity in freshwater before heading out to the Sargasso Sea to spawn
- ▶ Dam has operated for 90 years as a peaking facility and there was no upstream fish passage for 44 of those 90 years
- ▶ Until 1980 or so, peaking operations sometimes meant that there was also virtually no flow downstream for days at a time, during drought conditions
- ▶ Dam also trapped until about 2014 sediment and nutrients that entered the River upstream of the Dam; the reservoir behind the Dam is now in-filled and no longer has storage capacity
 - ▶ Large storm events result in the scouring of sediment and nutrients from behind the Dam and they travel downstream into the Bay
- ▶ And, trash and debris (mostly woody debris) gets trapped behind the dam and can also be released during large storm events
 - ▶ Large storm events can result in the sudden release of large amounts of trash and debris from behind the Dam and this travels downstream including into the Bay

And what does that mean for the health of the River and Bay?

- ▶ River upstream of the Dam doesn't have the aquatic life it should have—because the Conowingo Dam (along with several other dams upstream) blocked migratory fish passage for so long
 - ▶ This extends to the loss of freshwater mussels upstream as well
- ▶ River downstream of the Dam also doesn't have what it should have because of the adverse impacts of downstream flow associated with the operation of a peaking facility
 - ▶ Water stored (minimal releases) and then let go quickly to spin the turbines fast –creates large changes in water levels downstream in a very short period of time; happens 1-2 time per day and can leave downstream fish “high and dry” and make it harder for migratory fish to reach fishlifts (once fishlifts were finally installed in 1972 and 1991)
- ▶ Bay DO levels in deep channels harmed by nutrients moving from the dam downstream and sudden releases of large amounts of trash and debris also create some WQ issues in the Bay

2 Part Settlement Agreement: Over \$200 M investment in environmental protection, mitigation and enhancement measures over 50 years

- ▶ Includes License Articles enforceable by FERC, including conditions on:
 - ▶ Flow
 - ▶ Fish and Eel Passage
 - ▶ Invasive Species
 - ▶ Trash and Debris
 - ▶ DO, Shoreline Mgmt, Turtle Mgmt, Waterfowl Nesting, Sturgeon
- ▶ Provisions which do not go into the License but are binding agreements to provide \$ to support restoration of ecosystem services
 - ▶ \$ for mussel restoration and land for a mussel hatchery
 - ▶ \$ for resiliency projects & water quality projects
 - ▶ \$ for studies/oversight

License Provisions

- ▶ Flow:
 - ▶ Actions to mitigate impacts of “peaking” operations on fish and aquatic life downstream
 - ▶ Increased minimum flows downstream, restrictions on the rate of “up-ramping and down-ramping” and maximum flows
- ▶ Fish and Eel Passage
 - ▶ Increased attraction flow at fishlift to better attract fish to the lift and increased investment in improving eel passage upstream
- ▶ Invasive Species
 - ▶ Monitoring for Invasive species, removing from fishlifts (e.g., snakeheads)
- ▶ Trash and Debris
 - ▶ Removal of as much as is “reasonably practicable” --at least 50 loads and no more than 450 loads annually (load is a 20 yard dumpster full) and removal of trash and debris blocking DW intakes downstream as well as removal of materials interfering with recreational facilities within Project boundary
- ▶ DO monitoring, Shoreline Mgmt, Turtle Mgmt, Waterfowl Nesting, Sturgeon

Off-License Provisions

- ▶ Mussel Restoration
 - ▶ Freshwater mussels filter and process nutrients and sediments improving water quality.
 - ▶ SA provides \$4.5 million in first 3 years for mussel hatchery and \$250K per year thereafter to help restore freshwater mussels to the River
- ▶ Resiliency and Water Quality Projects
 - ▶ SAV restoration, oyster population restoration in Bay, living shoreline creation, forest buffers, cover crops will improve water quality in the Bay and make the River and Bay more resilient to severe weather events
 - ▶ SA provides almost \$5 million in first 3 years and \$700K per year thereafter to put these projects in place and maintain them
- ▶ Studies and Oversight Costs
 - ▶ Eel passage research, sediment disposal study, chlorophyll A monitoring, etc. plus reimbursement of MDNR/MDE Oversight costs (\$150K annually)

Submitted to FERC for Approval Last Year

- ▶ The SA will become effective if FERC accepts SA proposed license articles “without modification or expansion” into the new license,
- ▶ If FERC fails to approve proposed license articles “in full” the SA provides Exelon and MDE an opportunity to re-negotiate or to terminate the agreement
 - ▶ If terminated, the original WQC remains in effects and litigation resumes.....