Fisheries Ecosystem Assessment Division

Last Month

Striped Bass Survey Assessment and Habitat Connections – Staff participated in the Chesapeake Bay Program's Scientific and Technical Advisory Committee workshop for Striped Bass at the Smithsonian Environmental Research Center. Current surveys, habitat and early life history, mortality and movement studies were evaluated for Striped Bass management. Roundtable discussions also occurred to determine priority areas of research for Striped Bass.

Spring Fieldwork Meeting – Staff held their annual spring fieldwork meeting to determine priority sampling locations for the spring of 2025. The Choptank River will be sampled for Yellow Perch larvae presence, Striped Bass egg presence, and Striped Bass larvae for feeding analysis. Mattawoman Creek will be sampled for Yellow Perch larvae presence, nontidal stream anadromous fish presence, and eDNA. Conductivity (Mattawoman) and temperature (Choptank) loggers were also deployed.

Mattawoman Creek Monitoring in 2025 - FEAD and Freshwater Fisheries and Hatcheries Division staff met to discuss eDNA sampling in Mattawoman Creek. The eDNA sampling will be incorporated into this spring's presence-absence monitoring of anadromous fish non-tidal stream spawning in Mattawoman Creek. Adding eDNA will provide more resolution of which herring species are using the stream for spawning and their spatial and temporal distribution. Currently, we cannot reasonably differentiate among herring species. Staff will also use this to evaluate the possibility of using eDNA as a rapid assessment tool to determine the presence of anadromous fish in Mattawoman Creek. FEAD staff completed training with the eDNA sampler with Freshwater Fisheries staff and practiced sampling at a field site in preparation for starting field collection in March.

Staff doing streamside training with the eDNA sampler

Temperature Loggers – FEAD staff received support from Hydrographic Operations to deploy two temperature loggers on the Choptank River. These loggers were placed on buoys in the river on the Striped Bass spawning grounds to monitor water temperatures during the spawning season.

Conductivity Loggers – Staff placed conductivity loggers in Mattawoman Creek to monitor salt runoff from impervious surfaces in the watershed. Staff noted conductivity was high (nearly 3-times higher than the baseline for coastal plain streams) during deployment, even with low flows in the stream. High conductivity is a symptom of watershed urbanization and excessive road salt application and is associated with diminished presence of herring eggs and larvae.

Road salt on a bridge adjacent to a sample site.

Conductivity logger deployed in PVC housing.

State Wildlife Action Plans – Staff attended a meeting with other DNR staff to discuss the list of estuarine and marine species in the State Wildlife Action Plan.

Beyond 2025 Chesapeake Bay Program – Staff attended the joint Forage and Fish Habitat Meeting to discuss the Forage Fish and Fish Habitat Outcomes in the Beyond 2025 Plan. Staff attended an "after hours" meeting as well. We offered an outline of a monitoring plan that was received well. Since the interest for the TMDL is nutrients, sediment, and clarity, the mesohaline subestuaries in summer would be where and when to work. These areas, once stressed by watershed development, have extensive areas of low DO regardless of depth. Less developed areas don't typically exhibit low DO in the upper reaches. The upper reaches would be a good place to look for changes in DO and site occupation by focal species. The living resource part isn't rocket science. If there isn't much DO, there's not much site occupation. White Perch and Blue Crab would be good focal species since they are well sampled by standard techniques and spend much of their lives in the Bay. The NAJFM paper we published in 2011 indicated they responded to impervious surface which was the driver for DO.

Seasonal 2025 – Staff received a list of applicants for the 6-month seasonal position. Interviews will be conducted in March.

Leonardtown Comprehensive Plan – Staff reviewed the Leonardtown Comprehensive Plan and prepared comments on the plan. Staff prepared an estimate of new impervious surface for the Breton Bay watershed after proposed development in the plan and included this in the comments.

These comments were submitted before the deadline. Staff also attended "Comprehensive Plans 101" training from Chesapeake and Coastal Services (DNR) to help familiarize newer staff with the process of reviewing these comprehensive plans.

Striped Bass Hearings – Staff listened to the hearings for SB 87 and HB 889, the juvenile abundance index survey bills. This bill may affect our summer monitoring since we may need to sample areas specified by the bill.

Atlantic States Marine Fisheries Commission – Staff attended the Striped Bass Management Board meeting.

Access Databases – Staff are working on compiling data sets into Access databases for each sampling project. These data sets will incorporate all historical data collected. Options are being explored for the best method to enter data into the database and reduce data quality issues.

Federal Aid Report – Staff is working on data analysis and editing for the 2024 Federal Aid Report.

Atlantic Coastal Fish Habitat Partnership - Staff reviewed 10 applications for project funding. Projects included three SAV, one artificial reef, one shell recycling, and five fish passage. Once review scores have been tallied, a conference call was held to discuss the rankings and confirm project selection.

Looking Forward

Staff will continue data analysis and report editing for the 2024 Federal Aid Report.

Staff will continue assembling master Access datasets.

Spring sampling will begin on March 5th with eDNA and Stream Ichthyoplankton surveys on Mattawoman Creek. Staff will begin Yellow Perch larvae presence-abscense surveys on the Choptank River on March 13th.

Staff will resume the land cover and zoning data development component of the white perch liver tumor study being conducted by DNR staff at the Oxford Cooperative Lab. Specifically, inverse distance weights are being calculated for each land cover type at the HUC12 scale for 11 watersheds. The data development was paused while histology samples were being collected.