

Initial APNEP SAV Action Team Meeting  
December 1, 2014  
DENR Regional Office, Washington, NC

**Attendees:** Brandon Puckett (NC-NERRs), Hilde Zenil (ECU for Joe Luczkovich), Amy Uhrin (NOAA), Kevin Hart (DCM), Shane Staples (DCM), Jud Kenworthy (NOAA Ret.), Don Field (NOAA), Anne Deaton (NC-DMF), Jill Paxson (NC-DWR), Dean Carpenter (APNEP), Jimmy Johnson (APNEP)

**Welcome and Introductions:** After introductions were made, Jud asked, “Who is missing and who else should be a part of this workgroup?” - Joe Luczkovich (ECU), John Gallegos (USFWS), Maria Dunn (NC-WRC) “How is this workgroup different than the group that has been meeting for years?” – That question will be answered as we move through the agenda.

**Introduction of APNEP:** Dean gave a brief overview of the Albemarle-Pamlico National Estuary Partnership (APNEP), what it is about, and how the partnership is governed.

**Role of SAV Action Team/CCMP Actions:** Dean gave a PowerPoint presentation regarding the role of the team and what the goals are to be.

There are two major actions in APNEP’s Comprehensive Conservation Management Plan (CCMP) that will be the main responsibility of this team.

B2.2 - Protection Strategy: **Develop and implement a submerged aquatic vegetation (SAV) protection strategy.** APNEP will work with its partners in protecting SAV habitats through mapping efforts, examination of permitting requirements, water quality and habitat issues, and education for boaters.

C3.3 – Restoration Strategy: **Develop and implement a submerged aquatic vegetation (SAV) restoration strategy.** In conjunction with strategies to protect SAV (see B2.2), APNEP will work to restore areas capable of supporting SAV. This work will require study of effective restoration techniques, bathymetric mapping, water quality monitoring, and other efforts. APNEP will continue its contributions to the SAV Partnership to develop and promote a SAV restoration strategy.

Another responsibility associated with this team, and in conjunction with the actions listed, will be to finalize “management” indicators associated with the CCMP. This will be done through the development of indicator metrics and the development of a model for restoration strategies.

There will be a relatively short timeframe for the actions of this team; less than 10 years.

Kevin asked how we monitor when so much is out of our control? Dean responded by saying that we will be tracking and monitoring Mother Nature as well.

Keys to success will be:

1. Importance of the participants to ascribe to the process
2. How the well participants are engaged in the process
3. How scientific conflict and uncertainty are managed

Amy asked for a list of indicators already listed in the CCMP.

Jud stated that ultimately whatever is recommended ends up in the hands of those people and agencies that are responsible for the resource. He then asked, “Who are the logical partners and how do we get their commitment to work on specific actions?”

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Other questions asked were: What do we have to do? Who is best positioned to work on the identified actions?

Dean talked about the funding which is available to help jump start the process and he talked about the make-up of the APNEP Implementation Committee and how there will be a representative from the SAV Workgroup on the Implementation Committee.

**SAV Assessment:** Don Field provided an assessment of what we know today and the resources being used to assess the extent and condition of SAV currently. Don stated how we are always trying to go back farther in history using available images to determine extent and extent of change of SAV coverage. He mentioned some 1961 images available from the Marine Corps that are currently being evaluated with regards to SAV.

There was a lot of discussion about what is available and what is out there that this team could be using. There was also discussion regarding aerial photographs versus “in the water” sampling. Sentinel sites were discussed as well as the use of drones and a Quadcopter.

Three recent exercises were primarily noted:

1. ECSU 2004 – Currituck and Back Bay led by Liz Noble
2. Partnership 2006-2008 – Complete NC coastline and SE VA - APNEP and NOAA ~ 139,000 acres identified
3. Partnership 2012-2014 – APNEP Region photographed by NC DOT – Determine extent status

In both partnership efforts, extensive ground truth efforts were undertaken. There was significant discussion at this point about how that information was being used and how helpful it was to the effort.

Jud stated that with the information has been gathered over the past 10 years, we have a good handle of a large chunk on the resource and how to manage what we know. With what we have we can make some pretty good recommendations, even now.

It was noted that Core Sound was photographed in July 2014. It is currently being interpreted now. There were some issues with the southern half due to cloudiness.

There was discussion centering on the trend analysis of SAV cover and species of composition at the Quibble stations. 17 stations – monitored over the years 2005-2010 – A report is available. Joe Luczkovich’s team and APNEP staff revisited the 17 sites in 2014 and did some boat based work regarding SAV at those sites.

Jud commented that the team needs to consider the development of a model for “potential habitat” and determine that if SAV is not present, then why not? This would help to guide restoration efforts.

**SAV Planning:** Dean committed to posting the 2012 SAV Action Plan on the APNEP website. The Draft Restoration Guidance Document seems to have fallen by the wayside. It got away from being a “white paper” and focused more on the matrix.

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The Action Plan for this team needs to stay focused on indicator metrics and thresholds utilizing a 2-10 year timeframe for the planning process. It was noted that the Chesapeake Bay restoration efforts had been less than a success.

**SAV Implementation:** It was stated that we need a database that keeps track of documents and work that has already been done. The data base should also keep track of any legislative efforts regarding SAV work.

**SAV Monitoring:** 2014 Forward

Albemarle Sound: Utilize the five sub-regions identified in the CRFL-sponsored SAV report.

Boat based technologies and their appropriateness in the Albemarle Region

Sentinel Sites need to be visited at least annually

Start in the Albemarle Sound with sites being monitored beginning in 2015

Hilde described the work that was done by ECU during summer 2014. ECU is currently analyzing the data in order to determine where the sentinel sites should be placed/positioned.

There was a lot of discussion about the how, why and where as well as the protocol that needs to be utilized. It was also discussed that species identification should be an important part of the protocols going forward.

Western Pamlico Sound: Joe Luczkovich has applied for a second CRFL grant to survey the Tar/Pamlico River Basin in 2015 and 2016.

Core/Back/Bogue Sounds: 18 sites in Core and Back Sounds have been identified through presence/absence of SAV. All 18 sites have been cored. There is currently a good base sampling of those areas.

In 2015 10-18 sites have been selected to be re-surveyed primarily looking for the presence of two types of SAV, *Zostera* (eelgrass) and *Halodule* (shoal grass).

These same sites will be examined for the presence or absence of hydrodynamic stress – wind, tide and salinity.

The question was asked if we needed another team to gather more data to determine where the sentinel sites should be in the other regions, primarily the Tar/Pam? Also, at what scale should these sites be delineated or sampled? Is it possible to piggy back on others who are currently working on similar projects? What might those projects be?

Once sentinel sites are established, it would be expected that they would be monitored at least annually.

General conversation:

Brandon stated that the team needs to determine the metrics before a monitoring scheme is designed.

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Dean said that there has been a lot of talk about using drones to determine the bed edge. He also stated that at least 50cm of water depth is needed for boat mounted transducers to work.

Jud asked if there was any type of remote sensing at a higher frequency that was cost effective on the market today?

It was mentioned that there currently are no national standards for SAV monitoring protocol. There are lots of individual efforts depending on local needs and conditions.

**Assignments:**

1. Criteria and information desired for sentinel sites
2. Metrics that will be used to characterize the resource
3. Define the boundary of the extent that can be flown by aerial photography and begin to plan for the next set of flights. Begin to line up money for the next round of flights.
4. Need to have the sentinel sites chosen prior to the next set of flights
5. What does the group want to do with Currituck Sound – 2004, 2007, 2012? Don Field
- 6 Do we have enough information to derive significant restoration goals?

Meeting adjourned at about 3:00pm.