



Atlantic States Marine Fisheries Commission

1050 N. Highland Street, Suite 200A-N, Arlington, VA 22201

703.842.0740 703.842.0741(fax) www.asmfc.org

Vision: Sustainably Managing Atlantic Coastal Fisheries

TRAVEL AUTHORIZATION

TA No. 17-060

Charge To: 1026000SHAB

Approved by: Laura Leach

Meeting Name: ACFHP/Habitat Committee Spring Meeting

Meeting Date: MAY-02-2017 - MAY-05-2017

Meeting Location: Arlington, VA

Hotel Details: Meeting to be held at ASMFC Office, 2nd floor Accommodations: Hilton Garden Inn-Courthouse Plaza 1333 N. Courthouse Road Arlington, Virginia 22201 Reservations: 703.528.4444 and provide Group Name: ASMFC to receive discounted rate.

Cutoff Date: APR-03-2017

Per Diem: Hotel: \$242 Meals: \$64 (\$16/\$17/\$31)

Mileage Rate: \$0.535/mile, eff. January 6, 2017. Rental cars must be specifically authorized.

Airport Transportation: Washington National (DCA)—4.5 mi. Rail: \$4, Taxi \$15; Washington Dulles (IAD)—23 mi., Taxi \$50; Baltimore Washington Int'l (BWI)—38 mi. From BWI: Airport provides shuttle to nearby Amtrak station for train to Union Station, then (Orange Line) metro to Court House Station.

Local Transportation: Hotel provides 11-passenger shuttle service within 2mi. radius of the hotel Mon-Fri 7am-11pm. (includes ASMFC office and Court House metro station). Both hotel and ASMFC located within walking distance to various restaurants.

Basic Guidelines: In consideration of the Commission's budget please attempt to select the most reasonable airfare. You are responsible for determining your arrival and departure times. Commissioners(or their proxies) are eligible to attend all meetings; all others are eligible for reimbursement to attend board/committee meetings of which they are a member. If the distance from your office to the meeting site is under 35 miles, ASMFC will not reimburse hotel, mileage or per diem but may reimburse any miscellaneous expenses that would not normally occur during a work day (i.e., parking, tolls).ASMFC reserves the right to disallow travel expenses it deems excessive or unnecessary to conduct ASMFC business.

Reimbursement: You must submit an ASMFC travel voucher with receipts within 30 days of the final day of travel. Electronic travel vouchers and scanned receipts are preferred and should be sent to Vouchers and receipts will also be accepted via snail mail if emailing is not an option. You must submit an ASMFC travel voucher with receipts within 30 days of the final day of travel. Electronic travel vouchers and scanned receipts are preferred and should be sent to accounting@asmfc.org. Vouchers and receipts will also be accepted via snail mail if emailing is not an option.

General Notes: Complete ASMFC Travel Reimbursement Guidelines can be found at http://www.asmfc.org/files/Meetings/TravelReimbursementGuidelines_Jan2017.pdf and the Electronic Travel Voucher: http://www.asmfc.org/files/Meetings/ASMFCElectronicTravelVoucher_Jan17.xlsx Please contact the ASMFC office if you have questions or would like staff assistance.

Authorized Travelers:

Babb, Russ

Campfield, Patrick

Carloni, Joshua

Groskin, Bob

Havel, Lisa

Johnson, Jimmy

Kritzer, Jacob

Lorson, Benjamin

McReynolds, Dawn

Murray, January

Odell, Jay

Patterson, Cheri

Powell, Chris

Rousseau, Mark

Sanger, Denise

Schneider, Eric

Schuler, George

Smith, Kent



Atlantic States Marine Fisheries Commission

1050 N. Highland Street, Suite 200A-N, Arlington, VA 22201

703.842.0740 703.842.0741(fax) www.asmfmc.org

Vision: Sustainably Managing Atlantic Coastal Fisheries

Authorized Travelers:

Thomas-Blate, Jessie

Tinsman, Jeff

Topolski, Marek

Watkinson, Tony

**Directions to
Atlantic States Marine Fisheries Commission
1050 N. Highland Street, Suite 200A-N
Arlington, VA 22201
703.842.0740**

From Baltimore and Points North

- I-95 S
- Merge onto MD-295 S via EXIT 52.
- Merge onto US-50 W / NEW YORK AVE NE toward WASHINGTON (Crossing into DISTRICT OF COLUMBIA) (go 5.0 miles)
- Take I-395 S toward TUNNEL (Crossing into VIRGINIA).
- Merge onto WASHINGTON BLVD / VA-27 W via EXIT 8A toward RIDGE RD. (go 1.1 miles)
- Stay STRAIGHT to go onto WASHINGTON BLVD / VA-27 W. Continue to follow WASHINGTON BLVD. (go ~2.0 miles)
- Turn LEFT onto 10th ST.
- Turn RIGHT at the 2nd street onto HUDSON ST.
- Take the **2nd** PARKING GARAGE ENTRANCE on your RIGHT and follow to B2 level.
- COMMERCIAL VISITORS PARKING will be directly in front of you. Once you get out of your car, walk to the RIGHT of the ramp and follow until to you see a door marked ADC Dentistry.
- Office is located on the 2ND floor, immediately to the right of the elevator

From Richmond and Points South

- Merge onto I-95 N toward WASHINGTON.
- Take EXIT 170A-B toward I-395 N / WASHINGTON / I-495 N / TYSONS CORNER. (go 0.6 miles)
- Merge onto I-395 N via EXIT 170A on the LEFT toward WASHINGTON. (go 8.2 miles)
- Merge onto WASHINGTON BLVD via EXIT 8A toward VA-244 / COLUMBIA PIKE / FT MYER. (go ~2.6 miles)
- Turn LEFT onto 10th ST.
- Turn RIGHT at the second street onto HUDSON ST.
- Take the **2nd** PARKING GARAGE ENTRANCE on your RIGHT and follow to B2 level.
- COMMERCIAL VISITORS PARKING will be directly in front of you. Once you get out of your car, walk to the RIGHT of the ramp and follow until to you see a door marked ADC Dentistry
- Office is located on the 2ND floor, immediately to the right of the elevator

From Washington DC

- Take 14TH ST Bridge. Continue to follow US-1 S (Crossing into VIRGINIA).
- US-1 S becomes I-395 S. (0.2 miles)
- Merge onto WASHINGTON BLVD/VA-27 W via EXIT 8A toward RIDGE RD. (1.1 miles)
- Stay STRAIGHT to go onto WASHINGTON BLVD/VA-27 W. Continue to follow WASHINGTON BLVD. (~2.0 miles)
- Turn LEFT onto 10th ST.
- Turn RIGHT at the second street onto HUDSON ST.
- Take the **2nd** PARKING GARAGE ENTRANCE on your RIGHT and follow to B2 level.
- COMMERCIAL VISITORS PARKING will be directly in front of you. Once you get out of your car, walk to the RIGHT of the ramp and follow until to you see a door marked ACD Dentistry
- Office is located on the 2ND floor, immediately to the right of the elevator

**Directions to
Atlantic States Marine Fisheries Commission
1050 N. Highland Street, Suite 200A-N
Arlington, VA 22201
703.842.0740**

From National Airport using the Metro

- Take BLUE LINE towards LARGO STATION
- Change at ROSSLYN STATION to the ORANGE LINE towards VIENNA
- You will be getting off at CLARENDON STATION
- Exit CLARENDON STATION and make RIGHT onto N. HIGHLAND ST.
- Cross over 2 streets and arrive at 1050 N. HIGHLAND ST. (past Lyon Hall entrance). Office is on the second floor (you will need to buzz in to enter).

Parking

If there are no available spaces at 1050 N. Highland Street, you can also use metered parking on the street or go to the paid public parking at 1205 N. Garfield Street Arlington, VA (see map on next page).



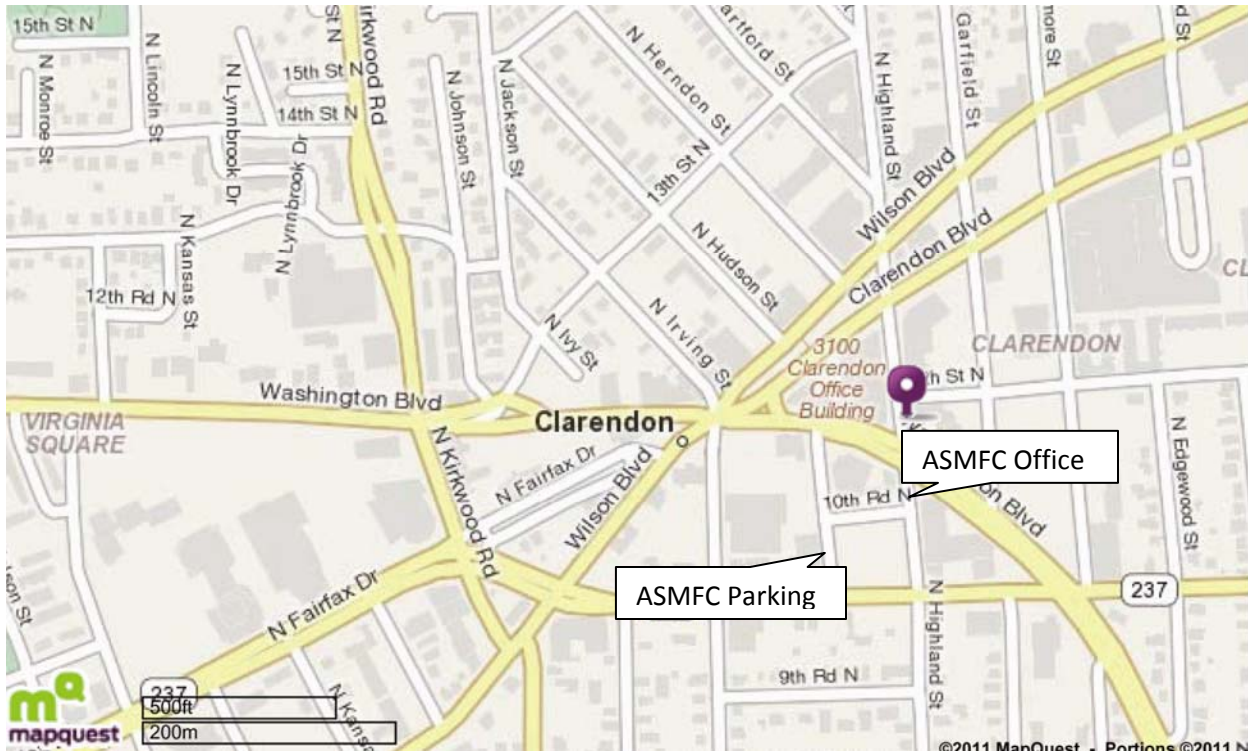
From Clarendon Metro station to the Atlantic States Marine Fisheries Commission

**Directions to
Atlantic States Marine Fisheries Commission
1050 N. Highland Street, Suite 200A-N
Arlington, VA 22201
703.842.0740**

From Public Parking to the Atlantic States Marine Fisheries Commission



**Directions to
Atlantic States Marine Fisheries Commission
1050 N. Highland Street, Suite 200A-N
Arlington, VA 22201
703.842.0740**



**Walking directions to ASMFC @ 1050 N. Highland Ave. from Hilton Garden Inn
Clarendon @ 1333 N. Courthouse Rd.**

- On Courthouse Road turn right and walk towards 14th. Street N.
- Left on 14th St. N. & walk 1.5 blocks to N. Barton St.
- Turn right and walk to corner (Clarendon Blvd)
- Take a left onto Clarendon Blvd & walk for 5-6 blocks to N. Highland (see Pacer's Running Store on the corner).
- Turn left onto N. Highland, passing entrance to Trader Joe's on your left. Walk 2 blocks towards 7-Eleven, cross intersection, then cross again toward Lyon Hall Restaurant.
- Passing Lyon Hall on your right, continue next door, enter glass-enclosed lobby, and take elevators to 2nd floor. ASMFC office is first entrance on your right.
- Total walking distance is 1 mile

Atlantic Coastal Fish Habitat Partnership

Steering Committee Meeting

May 3 - 5, 2017

Atlantic States Marine Fisheries Commission

1050 N. Highland St. Suite 200 A – N

Arlington, VA 22201

Webinar: <https://global.gotomeeting.com/join/514344773>

Conference Call: 1-888-394-8197 Passcode: 222918

Agenda

The times listed are approximate; the order in which these items will be taken is subject to change; other items may be added as necessary.

Field Trip

Day 1: Wednesday, May 3rd

Please meet at the ASMFC Office (2nd floor) at 12:50 pm in order to depart promptly at 1 pm. *More information to follow.*

Day 2: Thursday, May 4th (9:00 am – 5:00 pm)

- | | |
|---|----------|
| 1. Welcome and Introductions (<i>K. Smith</i>) [Briefing materials 1, 2, 3] | 8:30 am |
| 2. Committee Consent (<i>K. Smith</i>) [Briefing materials 4, 5] | 8:40 am |
| • Approval of Agenda | |
| • Approval of Proceedings from Fall 2016 | |
| 3. Action Planning: On the Ground Conservation (<i>K. Smith</i>) [Supplemental 1] | 8:45 am |
| 4. Technology Break (15 minutes) | 10:15 am |
| 5. Action Planning: Science and Data (<i>M. Topolski</i>) | 10:30 am |
| 6. Lunch | 12:00 pm |
| 7. Action Planning: Outreach and Communication (<i>C. Powell</i>) | 1:15 pm |
| 8. Technology Break (15 minutes) | 2:45 pm |
| 9. Action Planning: Finance (<i>P. Campfield</i>) | 3:00 pm |
| 10. Wrap up (<i>K. Smith</i>) | 4:30 pm |
| 11. Adjourn Day 2 | 5:00 pm |

Day 3: Friday, May 5th (9:00 am – 12:00 pm)

- | | |
|---|---------|
| 12. Reconvene | 8:30 am |
| 13. NFHP, Coastal FHP, and Whitewater to Bluewater Update (<i>L. Havel</i>) | 8:35 am |
| • New ACFHP member possibilities: industry, aquaculture, etc. | |
| • Discussion on how to allocate funds from Beyond the Pond | |
| • Aligning goals with partners discussion | |
| 14. Science and Data Update (<i>L. Havel</i>) [Briefing materials 6, 7, 8] | 9:20 am |
| • Southeast Mapping Project | |
| • Black Sea Bass Project | |
| • Telemetry Applications | |
| • Matrix Online Database | |

15. Technology Break (15 minutes)	10:00 am
16. ACFHP Business Plan Update (<i>P. Campfield</i>) [Supplemental 2]	10:15 am
• Board of Directors discussion	
17. ACFHP Operations Update (<i>P. Campfield</i>)	11:00 am
18. Melissa Laser Award Discussion (<i>L. Havel</i>)	11:30 am
19. Other Business	11:45 am
• Next meeting location/time	
20. Adjourn Day 3	12:00 pm

**Atlantic Coastal Fish Habitat Partnership
Steering Committee Meeting Notes**

Gulf of Maine Research Institute
350 Commercial Street
Portland, Maine 04101
October 18-19, 2016

ASMFC/ACFHP Staff Present: Patrick Campfield, Lisa Havel.

Guests: Jeff Barnum (Conservation Law Foundation and Great Bay-Piscataqua Waterkeeper), Will Duncan (USFWS-NE Region), and Graham Sherwood (Gulf of Maine Research Institute).

SC Members Present: Russ Babb (NJ), Lou Chiarella (NMFS-NE), Jessica Coakley (MAFMC), Julie Devers (USFWS-NE), Virginia Fay (NMFS-SE), Robert Groskin (Fly Fishers), Jimmy Johnson (NC), Wilson Laney (USFWS-SE), Dawn McReynolds (NY), January Murray (GA), Cheri Patterson (NH), Mark Rousseau (MA), Kent Smith (FL), Jessie Thomas-Blate (American Rivers), and Marek Topolski (MD).

October 18th

❖ **Welcome, Introductions, & Approval of Agenda and Meeting Summary** (*K. Smith*) 1:00 pm

Kent welcomed everyone to our wonderful meeting location at the Gulf of Maine Research Institute (GMRI). Kent covered logistics, location of restrooms, telephone conference line (speakers in the ceiling). Kent noted that we should not have any IT issues. Kent noted that most everyone is here already. Lisa noted that Pat Campfield and Russ Babb will be joining us (they were still at lunch). Kent asked that we not monitor e-mail except at the Technology Breaks, and noted that we have a lot of work to do. Kent noted that the GMRI is providing guest passes for parking. Lisa noted if the GMRI lot is full, ASMFC will pay for parking. Kent noted that the meeting location is unbelievably convenient, and he had the best lobster roll he ever had, for lunch, at Becky's Diner next door.

Kent reviewed the agenda briefly for today's meeting. Tomorrow we will pretty much work all day on our Strategic Plan. Our half-day field trip will visit four dam sites. Lisa noted that Julie Devers of USFWS was instrumental in arranging our field trip.

Wilson suggested that we do introductions for the benefit of Graham and Jeff. Everyone did so.

❖ **Introduction to the Local Environment** (*Graham Sherwood, GMRI*) 1:15 Presentation 01

Graham introduced himself and noted that he is a Research Scientist, a fisheries ecologist, here at the Institute. He does inshore, coastal and some riverine projects. Much of what he does is related to commercial fisheries. He noted that many people come to Maine for American lobster, or foliage, but now 40 percent of them come to Maine for beer, given the number of microbreweries in Portland. He noted that tomorrow's weather is projected to be sunny and warm.

Graham gave us a brief overview of the GMRI. They have an equal effort in science, education, and community. They bus kids in from all over the state, free of charge, to educate them about marine ecology and fisheries, and they have educated over 100,000 kids so far this year. They also delve into complex management questions. The Research Science Team, of which Graham is a part, links ecology, oceanography, modeling, gear technology, resource economics and ocean data to understand a changing Gulf of Maine.

Graham reviewed some of his research: Maine inshore acoustic herring survey; Penobscot River Restoration pre-dam removal food web monitoring; Casco Bay Aquatic system Survey; and Snap-a-Striper. A lot of his work involves forage fish, and predators, in part because healthy forage fish drive recovery of stocks like cod. Graham went through each of the four projects in more detail.

Maine Inshore Acoustic Herring Survey: Graham noted that they wanted to know whether the quota allocations reflected the actual distribution of the stocks. When they began in 2012, the offshore survey was discontinued. The inshore survey has been running for five years (2012-2016). They focused their research in Area 1A. They are partnering with the American lobster industry. They are partnering with lobster fishermen, who run transects using their boats. They repeatedly run pre-determined line transects. There seem to be some repeatable hotspots of herring abundance. They estimate the relative abundance of herring. They consistently find herring off the mouth of Penobscot Bay, and Casco Bay. There are areas where they see few herring. The survey is done in the fall, mid-August to early November.

Cheri asked if the fish are all Atlantic herring, or there are river herring mixed in the schools. Graham noted that was a good question. Based on the behavior they think they are all Atlantic herring, but there are some river herring mixed in, outside of spawning activity. Graham noted that they can split out spawning schools, from all pelagic fish biomass. They see an inverse relationship with landings, in the same year. They will be monitoring this more closely in the future.

Kent asked where most of the fishery takes place. Graham noted it depends on the season and where the fish are located. The fish spawn in the fall, then closures take place.

They plan to track interannual abundance relative to landings. They also get depth, and bottom hardness from the acoustic surveys, and hope to determine when and where spawning takes place.

Chris asked if there are any sanctuaries out there. Yes, Graham advised that there are several of them. One of them is on Georges Bank. They do not sample in the closed areas.

Marek asked about the harvest areas, and the closed areas. Graham explained the four stock areas which receive their own allocations. Graham explained how the fishery is managed, along with supplemental input from Cheri. Cheri noted that there is more quota allocated for the early part of the season.

Marek asked if Graham was seeing patterns incongruent between the way the management is going, or is there some sort of disconnect between harvest management and spawning. Graham noted that there is some overlap between harvest and spawning. Graham noted that they can actually see when spawning begins, and when it ends, so they can influence management. Graham noted that they are now trying to make sense of all of the data.

Patrick asked about the herring food. Graham noted that they feed primarily on calanoid copepods, and wondered if the observed hotspots are concordant with calanoid copepods. Graham noted that could well be the case.

Penobscot River Restoration: Graham noted this work was done prior to 2010. They were funded by The Nature Conservancy (TNC) to look at the freshwater/marine linkages before and after dam removal (with Karen Wilson and Theo Willis). The study employed stable carbon isotopes to determine the source of prey. Graham noted that marine consumers tend to consume more “heavy” carbon than those in freshwater. Graham noted that everything on the freshwater side should be “light” carbon, and “heavy” carbon should be on the other side of the Bay, nearer the Atlantic Ocean. Their actual samples from the Penobscot and Kennebec-Sheepscott, reveals a knife-edge curve in the Penobscot, prior to dam removal. There were some Smallmouth Bass that had a small marine signature. When they looked at the Kennebec, they see more marine signature. They believe that this is a good technique to use to see how systems respond to alteration.

Chris Powell asked if this type of monitoring is feasible to do, to assess the benefit of projects. Graham said it is. That is what they sold to TNC. The biggest cost is personnel and boat time.

Graham hopes they get further funding for post-project monitoring. Bob asked Graham to explain the monitoring. Bob asked what the sources of “light” versus “heavy” are. Graham explained the sequence of carbon isotope use. Graham noted that littoral processing favors lighter carbon.

Casco Bay Aquatic Systems Survey (CBASS): This is a ten-year monitoring project to observe change in the Casco Bay ecosystem. It is a sentinel system for change in the southern Maine coastal area. From the patterns they are seeing they anticipate more forage fish in the Bay. The survey focuses on the western portion of Casco Bay. They look at timing, and energetics, of the alewife population. They are also looking at cod, haddock, and redfish; they use an acoustic survey, oceanographic sampling; trap sampling; and temperature monitoring. He noted that they catch fish in lobster traps, including black sea bass (BSB).

Graham touched on some small pieces of their monitoring sites. They do river sampling in early May, and take samples of the river herring. They want to be there on the river prior to anyone sampling. Graham noted that the timing of some runs may be relatively fixed. They are starting to see a healthy run, which could increase due to ASMFC management measures.

Graham noted that he wanted to link the acoustic survey, with the benthic fishery, for several other angles. They have looked at the relationship between the cod from the acoustic survey, and the Jig Survey. In 2015 there was an early increase, and then a decline. The cod pattern was the same in 2014 and 2015. Graham noted that this year, there wasn’t much there in the way of forage fish, or cod. There is a definite strong relationship between herring and cod, at their stations.

Kent asked what is driving the inshore push? Graham indicated that was a good question. The fish definitely spawn up the rivers.

The last project is **Snap-A-Striper**. This one is in partnership with the Coastal Conservation Association (CCA). The Maine Striped Bass fishery is a seasonal recreational fishery made up of migratory (southern origin) and resident (Kennebec) fish. Right now they are asking anglers to catch striped bass and then e-mail the photos to them. If there is a regulatory, migrating fish. Anglers take photos and save the heads. The project is all pro-bono. Except, for the otolith analysis. The cost is based on the number of samples. They can do 20 cod per day. For striped bass it should be about the same. Bob asked what “micro-chemistry” does. Graham noted that the otolith cores will have different chemical signatures. Metal concentrations in the otoliths vary with temperature, and they are just beginning to develop a process.

They use a multivariate approach to analyze the data. They have an 80 percent classification rate, based on the criteria they are employing to characterize body shape. Graham showed us an example of Cluster Analysis. They believe that striped bass in the Kennebec, are not all likely of Kennebec origin and instead are ocean-migrating.

Graham noted that he was over time so he would stop.

Marek asked about tagging for the striped bass. Others are doing that work, using acoustic transmitters. Marek asked about the actual physical tagging of the fish.

Wilson briefed Graham on the ASMFC/USFWS coastwide striped bass tagging program. He noted that some of the fish from the Kennebec seem to have a different body form.

Kent noted that striped bass is a great example of a species that you will see moving here over time due to climate change. Kent noted that the Gulf race striped bass are likely to blink out under climate change, since they have nowhere to go to escape the heat. He suggested that the striped bass will move north on the Atlantic Coast. Graham indicated that the waters are warming. He noted that for striped bass, the only known spawning in Maine is in the Kennebec.

Cheri asked if the sampling they are doing is done before July. She was curious whether the river herring that are coming in, are full of lipids which may be useful for cod. Graham noted that from their work, most of the adult alewives move in the rivers in the early part of the year. The juveniles come out beginning in August, and the real challenge will be whether they can see a lipid response, due to the outmigrating juveniles. They haven't been able to detect a lipid response from the migrating adults. Cheri noted that there used to be a more inshore stocks of Atlantic Cod, which fed on the river herring.

Graham noted that in Casco Bay, as they see more forage fish, they may capture more cod.

❖ **Update on Exeter Dam Removal** (Jeff Barnum, Conservation Law Foundation) 1:45 Presentation 02

Kent introduced Jeff Barnum to give us a presentation on the **Exeter Dam** removal.

Jeff noted that he is going to give us a non-technical presentation, which will focus on the entire ecosystem. He noted that his ecosystem is the Great Bay-Piscataqua Ecosystem. The Waterkeepers are a world-wide organization and each local Waterkeeper has a sponsor. His sponsor is the Conservation Law Foundation. It is a mix of lawyers and experts working on the ocean ecosystem. They were instrumental in getting the recent offshore National Monument designation (Google: Northeast Canyons and Seamounts Marine National Monument).

Great Bay has seven river tributaries. In the last five to six years, there has been progress in removing dams. Great Bay is only 6,000 acres, not very big, but it is of national significance in the National Estuary Program (NEP). It has a rich history. Oysters, river herring, rainbow smelt, and waterfowl were all part of the heritage. There are 42 towns in NH and another 10 in ME, in the watershed. A central feature of the estuary is a two-mile long, former Air Force Base. The most essential component of the ecosystem is eelgrass. Without it, all they would have under the water is a giant mudflat or a rocky bottom. Eelgrass produces oxygen, anchors sediment, sequesters carbon, and creates the only habitat for finfish, cod and American lobster. They have gone from 2,800 acres down to 1,500 or so acres. Much of the submerged aquatic vegetation (SAV) is compromised. New seeds produced, when the eelgrass flowers, really have nowhere to go. The biomass loss is more critical than the area loss. A green algae, *Ulva lactuca*, showed up all over the mudflats about three years ago. It is speculated that there is too much nitrogen (N) in the system.

Another species, *Ulva intestinalis* showed up in huge amounts, in a lot of the coves. They never had it previously. Eelgrass is hard to see, when turbidity is high. The turbidity comes from redistribution of the sediments in Casco Bay. The system is shallow and this happens to compromise eelgrass growth. The American oyster is one of the iconic species in Great Bay. They used to have more oysters in Great Bay. They may filter up to 20 gallons a day. In 1993, the oysters were hit by several diseases (some scientists suggested that the diseases were always there, but virulence increased due to declining water quality). There is an effort to restore oyster reefs. They are using recycled shell. Only 25 acres have been created in contrast to the acreage lost. In 1993, they had over 1,100 acres of oyster. The light green on the map Jeff projected showed the former distribution of eelgrass. Much of the system is now devoid of eelgrass. The eelgrass won't likely come back until the nutrient levels are down.

With the loss of eelgrass, they lost the flocks of brants which used to come; but they are gaining blue crabs, as well as BSB. The source for all the N is wastewater treatment plants. The non-point sources include human waste, animal waste, chemical fertilizer, and atmospheric deposition. Many homeowners (40%) fertilize their lawns. There are 19 wastewater treatment plants (WWTPs) that discharge into Great Bay Estuary. Eight of those 19 now comply. Only 16 of the WWTPs are primary treatment only, and one of them is in this watershed.

Jeff does a lot of education, in collaboration with a number of partners.

With regard to dams they have partnered with the CCA, and others. Rainbow smelt and alewife are two of their iconic species. People put their shacks on the ice in the Bay, to fish, and also harvested alewife for bait. Two years ago, there were only six ice shacks. Only six rainbow smelt were caught. The numbers are very low, and Jeff hopes that will change.

He noted that temperatures in the Gulf of Maine are increasing. There may be a link between periphyton, and the maturation rate of rainbow smelt. Jeff noted that he can't answer technical questions, but did bring Cheri to answer them.

Jeff noted that striped bass are one of the reasons fishermen fish Great Bay. He feels that the numbers have been diminished. He noted that anglers used to fish for both striped bass and bluefish. He reviewed which dams have alewife and blueback herring runs. Some of the rivers are not offering water quality.

Jeff reviewed the history of **Exeter Dam** and showed us photos of the dam's removal. Jeff believes it will be perfect habitat for rainbow smelt. He hopes that the fish will show up next year in large numbers.

Jeff reviewed the **Winnicut Dam** removal and fishway issues. The latter does not work. Jeff noted that Cheri is taking on that project for them. Cheri noted that the fishway was based on a west coast design. The previous one was designed for salmon, and this one was to some extent as well, except that there is no salmon run on the river. Cheri explained the origin of the design, which doesn't work well for river herring (which don't jump). The particular design resulted in velocities too high for some species.

Jeff noted that perched culverts are another issue. Great Bay Trout Unlimited wanted to improve fish passage, but it ultimately failed for lack of funding.

The **Oyster River Dam** in Durham likely will not come out, due to local cultural considerations. Cheri noted that the fishway at this dam is okay, but the reservoir is problematic. She noted that the town is adamant about keeping the dam.

Marek asked what is historic about the dam. Jeff noted that Exeter was settled on a Thursday, and they built the dam on Friday, so that is why they support it. Marek noted that there is "historic" and "historic" and he wanted to know which one this was.

Cheri noted that there are some political dimensions and she will be happy to address those off line.

Shorey's Brook, South Berwick 2012: There is a river herring run on this stream.

Jeff noted that some 16 beaver dams are being removed from a Saco River tributary.

Souhegan in Merrimack Village 2008. Jeff reviewed this project as well.

Jeff shared a list of where they hope to do additional work. Winnicut, Exeter/Squamscott; Bellamy; Lamprey; Oyster; Cocheco; Salmon Falls; Shorey's Brook; Souhegan and Thompson Brook.

Bob asked how the removal of more dams may affect Great Bay itself. Jeff speculated that efforts would be limiting for the Bay. Jeff speculated that we are still a ways from being able to restore these systems. Sediment is usually analyzed for toxics, prior to dam removal. Jeff noted that they will end up with systems which have no fish passage, some which are limited and others which have none.

Cheri noted that there are some areas where the University of New Hampshire has been dumping chemicals for years, so those likely will not be restored.

Kent noted that ACFHP has actually helped with some of the work, in some of these systems. Cheri and Julie shared some of the other projects which are ongoing. Kent noted that it is nice to have a footprint here.

Kent introduced Lisa to give us some updates.

Lisa noted that her updates will be brief.

❖ **NFHP, Coastal FHP, and Whitewater to Bluewater Update (L. Havel) 2:15**

There is a Fish Habitat Partnership (FHP) workshop next week in the FL Panhandle, and Kent will attend. At the last FHP meeting, the Pacific Lamprey FHP was added, bringing the total to 20. There will be discussion at the next NFHAP meeting of how many additional FHPs will be added. The NFHAP Act was included in the Sportman's Act in the Senate, but it wasn't included in the House Bill. The bill may be passed to the President for signature, if the committees can iron out their differences.

Julie indicated that in both of the bills, funding will go through US Fish and Wildlife Service (USFWS) headquarters directly, and not out to the Regions any longer. There are still discussions ongoing about that aspect. Lisa noted that there hasn't been much discussion about how this would affect the FHPs. Lisa noted that there is bipartisan support for the bill. Ginny asked for additional information. Russ asked if ACFHP had a position on the bill.

Kent noted that we try to avoid political discussions. Kent noted that there are pluses and minuses right now, but overall we are supportive.

Patrick noted that the Atlantic States Marine Fisheries Commission (ASMFC) does go to Capitol Hill, and does track all of the legislation which may affect ASMFC programs.

Kent noted that ACFHP is a non-regulatory component of the government. The Habitat Committee has more of a focus in that regard.

Kent noted that Will Duncan had joined us. Will introduced himself and noted that he now works in USFWS Region 5, and heads up the Aquatic Habitat Conservation Program. Will noted that there are a lot of new, and old, faces in the room who are familiar to him.

Cheri noted that Lisa wanted to touch base with regard to some of the funding conversations we have had. She noted that if the decision is that funding will no longer go to USFWS Regions, then some of our concerns will become moot. Lisa noted that she would get more into what Cheri described.

Lisa noted that she is working on a draft document, which will clarify how the NFHAP Board can help us, and vice versa.

With regard to the Multi-State Grant, ACFHP got around \$10,000, whereas in the past, we received \$50,000. We were approved for not much better than last year in terms of the amounts we are actually receiving. This year was better, but not as much as we had hoped.

Over the summer, ACFHP worked with NC and FL to submit a grant for living shoreline work. We haven't heard anything back yet. Between this project, and the BSB project, we are the only FHP to receive such funds. The BSB contract has been signed, and we will get a progress report next spring.

The Coastal FHPs continue their newsletter.

Kent, Cheri and Marek formed a subcommittee to develop a letter to the USFWS, regarding concerns. Nothing happened in response to a similar 2015 letter. Some other FHPs are partnering with us. If nothing changes, we will follow up with another letter. There was never any response to the prior letter, except "thank you." Lisa noted that seven to nine of the FHP coordinators had written to USFWS to express concerns about how the projects were rated, and funds allocated.

Chris Powell asked if there are any political heavyweights in Congress or at the Partnership level, who are pushing for more funding. Cheri indicated that Congress wants this and there is bipartisan support, through the Congressional Sportsman's Caucus. She named several supporters. The Energy Bill passed in the Senate, 97-0.

Bob asked if we followed up on the letter. Lisa indicated that at last year's workshop, we found out nothing would change for 2016. They raised the issue to the USFWS representative, David Hoskins, and expressed concerns in person. The biggest concern overall from the FHPs was the project completion requirement. The way the criteria are set is that you report on three years of projects (2012 through 2015 in the last case). Lisa noted that the way this was designed, we couldn't report some projects as "completed" since they weren't supposed to be completed yet. This affected our score. They did change the criterion for 2016, and extended the period of evaluation to five years. These changes didn't help us at all, but it did help other FHPs. Our biggest issue is the match. Region 5 takes out 30% overhead, but some other USFWS Regions do not, so we are disadvantaged. We have to have a 4.1:1 match, to reach Level 3 performance, whereas for other FHPs they have a 3:1 match. Lisa noted she was sure this would be discussed next week.

Jimmy asked if we could move to Region 3.

Will suggested that this may be worth discussion over beverages. Will noted that there is discussion this week in Region 5 about this issue. Some other Regions do take overhead. Will noted that there are services that USFWS does provide based on the overhead. He noted that there has never been any real quantification of what services the USFWS provides to the FHPs, and whether they are covered by the 30 percent overhead, or not. He suggested that could be investigated.

Marek indicated if you strip it down, the issue is really the fairness across the playing field. If FHPs are all dealing with various percentages of overhead, then the field is not level. It is really the fairness as opposed to the different overhead amounts.

Will sees other fundamental core issues as well. Will said if the Region is siphoning off 30 percent, they should be able to demonstrate what they are doing with those funds. He noted that he had worked for an FHP for 10 years (SARP). He wants to know where the funds are going. He noted that if the bill goes through as presently written, you may not have as many services from USFWS. Marek noted that he would like to continue this discussion further, over carbonated beverages.

Lisa noted that we do need to keep in mind that the USFWS has been the only agency to provide this source of funding. We do appreciate the consistent source of funding. But, the playing field needs to be level.

Kent noted that there is no intent to bite the hand that feeds us.

Cheri indicated another way to look at it, is to not have the partnerships accountable for the amount of overhead removed, so they don't have to match it. That way the Region can handle it.

Will noted that he has no argument with that statement. He suggested more carbonated beverages.

Chris noted that when he served on the Board of Save the Bay in RI, he was conscious of what portion of their funding was going into the Bay, versus administration.

Lisa noted that for every NFHAP dollar spent, there is a \$4.10 match, she thinks. Chris asked if all of that had really gone into the ground. It went directly towards the on the ground projects.

Bob confirmed that a letter would be sent, for budgetary considerations, but he asked of Lisa if it was her impression that nothing really will change.

Kent stated nothing will change this year, but in future years, there is always promise. Kent noted that the Steering Committees are not meeting with the higher-level folks. Kent noted that Julie and Callie have been very active working with folks to try to resolve these issues.

Bob asked if outside groups could influence the outcome. Kent suggested that was another topic for later discussion. Kent noted that having support for any letters, would be good. He noted our partners can lobby, independent of ACFHP. FL cannot lobby, nor can the federal agencies.

Will noted that with a change in administration, there will be a change in leadership. He noted that nothing prevents anyone from contacting leadership, and voicing concerns. The intent of the Partnership in part, was to bring in private industry, and they have their own agendas. Bob noted that if appropriate, he is willing to attend the NFHAP meeting.

❖ **Technology Break 3:00—3:28 p.m.**

Bob noted to the group that the GMRI runs a great educational program, which he attended. For a non-fishery management person, it was very educational. Bob had no idea of how they measure how many fish are in the ocean. You can attend via their website. Just say you know Graham.

Kent introduced Lisa to do the Science and Data Committee (SDC) update.

❖ **Science and Data Committee Update (*L. Havel*) 3:28**

Lisa noted that she wished the SDC update was more positive. She noted that the SDC used to have around 30 members. Last year they tried to reactivate it, but a lot of folks were either not receiving, or ignoring the messages. Kent wrote a letter to encourage membership. Right now we have about 10 individuals, consisting of past members, or new members. Lisa had hoped that we could work with them on the southeast mapping project, but Caroly has stepped down from her Merrimack River Watershed position, and went to work for USAID. She is now traveling the world. She was to create the first phase of the project, which was creating the map, and determining the target species, and other aspects. Caroly then disappeared, and her colleague Josh also stepped down about two weeks later. Lisa and Pat have been working through the Merrimack group to get the project finished, and two colleagues from Merrimack College have agreed to take this on, on a pro-bono basis. They are now looking over all of the materials and will get back to us soon. The new goal is to have Phase I completed by the spring meeting.

Ginny stated, given the difficulties associated with this project, if there is something that NMFS needs to do, please let her know.

Lisa stated that the work was pretty far along. They have over 40 GIS layers which were compiled from various sources. Lisa noted that she doesn't know how much work it takes to put all of these together.

Ginny noted that there is also a NOAA Collaboration Team, whose duty is to prioritize mapping needs, so she can involve them as well.

Patrick asked if it was his understanding that Alex from the Merrimack group would stay on the project as well.

Bob asked if the project was as comprehensive as first envisioned.

Pat indicated that it was scaled down to Phase 1. Pat asked Ginny and Lou to confirm that the funds came in for a five-year period. Ginny stated that she had contributed \$13,000 and the rest came from NMFS HQ. Pat noted that there is no due date, on their end. Ginny indicated that they should ask if there are any problems with carrying over any of the funds. Ginny indicated that there could be some issues getting the funding out of HQ. Patrick noted that we have five years, but the new deadline is spring. Originally it was now.

Bob asked if this would affect our scoring. No, because it is NMFS funding, and not from NFHAP. It is therefore under the radar screen. Kent stated we will get there, it is just more challenging with the personnel change.

Chris asked what they had accomplished thus far.

Lisa indicated that Caroly had sent the metrics over for the estuarine, and diadromous portions. They have compiled about 40 maps. The new workers have the GIS capabilities. They were more concerned about the time required.

Jessie asked if ASMFC was in touch with Caroly. Pat and Lisa are, but the Merrimack is not. They are the middle persons. Pat indicated that we have gotten out of Caroly what is needed. Chris asked who the POCs are at Merrimack. Lisa named them, as well as the Merrimack College staff who will be doing the work. Dr. Lyon indicated that he has actually worked with the Kremlin on some GIS projects [that precipitated a lot of conversation].

Kent clarified that Lisa's intent is, once Phase 1 is completed, she would like to have the SDC together in person to review the work.

Lou thought that the original proposal called for a webinar.

Ginny indicated that this is something for discussion later this evening, with regard to the timing.

Lisa indicated that she hopes she will know more in a couple of weeks. If the Merrimack College folks say they can't do it, then hopefully we can find other people to do it. Ginny noted that there are possibilities within NOAA as well.

Kent noted that we owe the SDC members an update as well, so we don't lose anyone from the committee. Kent noted that he has a staff member who sits on the group.

Jessie asked what sort of outreach has been done, to recruit new Science and Data members. Lisa has shared the letter with ACFHP at large, asking them to share the letter and recruit members. Wilson had made a suggestion for someone from East Carolina University, and several others have been suggested.

Action Item: Lisa will share the list of current SDC members with the Steering Committee for more suggestions.
Completed.

It was noted that we would like to have outside folks, if possible. Their travel will be covered.

Patrick noted that we want to have the right people, for the right projects. Another project is getting the habitat matrix put online.

Jessie asked if Erik Martin was on the SDC. He isn't, but he is working on the matrix. Lisa asked if we know people with expertise, we should contact them.

Chris noted that the University of RI has a lot of mapping expertise.

Wilson noted that Pat Halpin of Duke University would be an excellent addition; however he noted that Pat's time is very limited, in view of our experience with him serving on the South Atlantic Fishery Management Council (SAFMC) Habitat Protection and Ecosystem Based Management Advisory Panel.

Lisa noted that she hasn't yet contacted the new members.

Mark asked if they were being recruited for this one project, or for others.

Lisa indicated that would depend. Kent noted that we are going to discuss that tomorrow.

Dawn asked if people were going to be removed who haven't been active. Yes, they already have been removed. Kent noted that we need people to work on the ground, for nothing. The idea is getting dedicated folks who are involved and moving. For the state agency folks, this is an opportunity to work across the landscape and get a bigger perspective.

Dawn stated that there are two people in her agency who come to mind and she will contact them.

Chris asked how we would vet them. Lisa stated that we will take anyone.

Bob suggested that we assess their ability, during the project, and then ask them afterwards to continue with other work, if they work out well.

Lisa noted that some staff at ASMFC had some recommendations with regard to folks at universities, but they asked her to hold off contacting them for the moment.

Kent noted that for the Habitat Matrix, that took a concerted effort. We had a lot of folks working on individual species profiles. It was all volunteer work, requiring extra work on the side.

Lisa stated if Carol had stayed on, she would have done the entire thing.

Kent and Lisa noted that Marek had served as Vice-Chair, and really needs to have someone assist. Kent noted that we had discussed rotational chairs. Marek noted that we need heartbeats first. Kent stated that was a good point.

Bob suggested at this point, we need a project chair, rather than a committee chair.

Kent felt that you could do a little bit of both; he apologized for being so southern. A combination of the two could be done. It would be good to have someone to keep the connectivity going with this group. We need a specific project manager but we also need someone to keep the committee going.

Bob noted that right now that is the only project.

Lisa noted that George had taken on getting the Habitat Matrix online, so that is a second project.

Marek asked if the expectation is for the Steering Committee to generate ideas and task, or the SDC to generate ideas and products. The latter lends more stability. He suggested that we can discuss that tomorrow.

Kent stated we are at a point in the development of the Strategic Plan (SP), and how we deal with SDC, we can make those decisions. Historically it was more the latter. The SDC historically has looked at the actions, and said we can target this or that. We have to come up with funding and that is great.

Ginny noted that she and Lou had finagled the system and it worked once, and hopefully we can do it again.

Kent noted that is food for thought, so hopefully we can have good discussions on that point. Kent noted that members should know which SP functional groups we are on, and we can have further discussion tomorrow. He thinks that those will be productive discussions. As all the information comes out, we can make a determination about what approaches make sense.

Kent recognized Julie for all the work that she has done on the project reviews, each year. He noted that Julie is quite the trooper and done a lot of work for us. Julie noted that Lisa has taken over some of the work. Lisa noted that the whole subcommittee had reviewed all of the projects in a short time span. The subcommittee is Jimmy, Dave O'Brien, Dawn and Marek, along with Kent. Kent noted that they all have very good discussions, thanks to the ranking approach, and good reviews.

[We had an interval here where we were experiencing technical difficulties with the projecting equipment for a while.]

Julie gave us the presentation on USFWS funding for ACFHP projects. She noted that she would give us an overview of all of the projects we have funded from 2010-2016, and the 2017 projects. She will discuss the review team results for the 2017 projects.

We funded fifteen projects, with \$481,954 funded on the ground. Funding supported 7 fish passage, 3 marsh/mangrove restoration, 2 SAV, 2 oyster reef restoration, and 1 sturgeon spawning habitat restoration. Julie showed us the map with all of the projects plotted. The North Atlantic is well-represented, and there are a good many in the southeast as well. We just have not received many proposals from the Mid-Atlantic. Julie noted that there were a couple of oyster projects in the Chesapeake Bay, but those folks didn't receive funding, because shellfish are not a priority in that ACFHP region. Marek noted that we have solicited proposals from folks who could use the funds to purchase plants for marsh restoration but they didn't submit proposals.

Julie showed us the entire list of projects. The more recent dam removal projects have lots of partners, and have a good match. That is on what we put emphasis, because it gives us better scores.

Lou noted that we should discuss the fact that we are biasing our evaluations to keep our scores high.

Chris asked if it would be possible to determine how much actual funding went to each project, in on-the-ground work, versus salary.

Julie noted that the Stump Sound project actually put funds into salary. Chris noted that he wanted to know how much went into the projects aside from overhead and administration.

Kent noted that one factor that plays a role in whether we fund one, or not, is whether we have to pay salaries.

Lisa noted that in the guidelines, we asked that less than ten percent go to salaries. Some partners may be able to contract out some of their work. We do provide some leeway.

Will asked if some of this came from ACFHP guidance, in particular the ten percent rule.

Kent indicated that we fine-tune our RFP, each year. Kent noted that this one was generated after several years of experience. He noted that we hem and haw a lot.

January noted that she would like to get Georgia on the map. They have restricted reef funds, and some funds from the CCA, which can be used as match, so perhaps a couple of years from now we can get on their cycle and fund some things.

Wilson asked if we have the numbers for the total amount of funding that went into each of the projects, over and beyond the ACFHP/NFHAP funding. We do, Lisa indicated. Each of the projects has provided final reports to the USFWS, but we don't have all of them [another topic for further discussion]. Wilson thanked Julie for the information she had compiled, and expressed the hope that we can post this on the web site.

Dawn noted that a lot of the projects were small-scale.

Cheri noted that many times ACFHP funds help push the project over the edge so they can actually get the final amount they need to move forward.

Kent noted that we are constrained in part by the evaluation criteria which USFWS imposed on us.

Lou suggested that the bottom line is, what did we accomplish, and the fact that we contributed. He did agree that it will be useful to have the total dollar cost, so we can estimate the match.

Marek noted that if our goal is to do something against ecological impact, we need to assess how we address the end game, but if we do so, we will get less and less funding. He asked for advice from Will and others on how to work through this issue. This is a huge dilemma.

Lisa suggested that one possible simple solution would be to score us on the average. This is the one issue we face. Score the reports on an average of all the criteria, not just the lowest score.

Chris asked if we could add the Narragansett Bay Conservation Moorings to the list. We can, Julie noted but it wasn't a USFWS-funded project using NFHAP funds. It used funding from NMFS. We can add it to the web site.

Action Item: Lisa will add the Conservation Moorings project to the ACFHP website.

Mark asked if we had looked at the collective ratio, over the entire time series. Lisa indicated that she can look at that tonight. Julie thought that we would be well above 1:1. For each year, we may not meet the 2:1 requirement. Mark suggested it would be worth it to point that out. Julie noted that we have significantly changed our scoring, to meet the USFWS 3:1 match demand.

Dawn noted that is why we have struggled for a long time with exactly what we can do as a Partnership. It has been skewed by the way USFWS rates us. She noted that we have bounced all over, regarding education, getting the word out, getting volunteers, doing on –the-ground work, to get the work done. And we are getting screwed for this. We need to consider what we can do, with the plan.

Kent noted that we have other funding sources as well, such as the NOAA-funded mooring project, and we have a Science and Data project going with them now, and the BSB project with the Mid-Atlantic Fishery Management Council (MAFMC), and we have others. The constraint is only for the USFWS/NFHAP funds.

Dawn stated that we are still all over the map. We need to decide on what we can really focus.

Kent noted that this is at the moment a reliable source of funding. He gets what Dawn is saying, and agrees that should be part of the Strategic Planning process.

Jessie stated she feels this discussion goes back to our Strategic Plan, and annual work plans. She suggested that we just consider that the projects funded using the USFWS/NFHAP funds have certain requirements, and rather focus on what we want to do as a partnership, and then develop a business plan to enable us to do that work. We can still fund using the NFHAP funding, but seek other sources for other work. We can fund small projects if we wish.

Will noted that Jessie and Dawn took the wind out of his sails. He agreed that the scope of what we can do, is big. He noted that NFHAP is just one source of funding, and part of its intent was to generate other partners. He asked how many other projects we had done, that were not using NFHAP funds.

Kent and Lisa noted that the mooring project was the only one. We may have another one, if our current proposal is funded.

Will's vision was that the ACFHP grow to the point where it would have no need for USFWS funding. Kent would like to see us get there.

Lou indicated he totally agreed with Jessie. He felt that we were more opportunistic, than strategic.

Marek felt that the discussion has been good. He noted that at some point, we would have to differentiate in our RFPs, since other funding may not have to meet the USFWS requirements. Kent noted that we have had these sorts of discussions, perhaps over the phone, about putting out a very specific RFP, in terms of the type of project.

Marek suggested that if we want to do smaller projects, we would need a separate RFP.

Chris wanted a reality check. He likes all the ideas, but Lisa can't do it all by herself, if we want other sources of funding. One person on a full-time staff, can't do the work.

Lisa noted that she does have some more time. She isn't maxed out. What she really needs is guidance on what our priorities are, so she knows on what to focus. She needs to know what she shouldn't bother with. If she has a strategy, she can proactively act. We really need to think about what we want to do. She noted that she struggles with all the opportunities.

January noted that it shouldn't be entirely Lisa's burden. Lisa noted that everyone is busy, but once we have a more focused plan, we can move forward.

Lou noted that we have had many conversations with George, about TNC helping us get a business plan together. We need to do that work.

Kent noted that this is great discussion, which we should keep in mind, when we have our breakout discussions tomorrow.

Julie noted that she had something to add to the conversation. Julie noted that NOAA has funds, Coastal Resiliency, and the Community Restoration Grants. She asked how we can coordinate better. How can this group, work with this huge pot of funding, to help set priorities. She noted that the NOAA funding is a lot larger than the NFHAP funding. She asked Lou to speak to it.

Lou and Ginny noted that it is a headquarters thing, which cuts across the line offices. Ginny stated if we can pinpoint what our key priorities are, such as living shorelines, we might get funding. If we pick the topic, we can look around. Julie noted that it is more to make sure the work is getting done, on the ground.

Lisa noted that they brought this up at the NFHAP meeting. They wanted to at least have the priorities aligned.

Julie noted that NOAA is at the table, and has very deep pockets to get some of this work done. We know that NOAA thinks this work is important, because they are here.

Kent noted that we are very effective partners with NOAA, on the habitat conservation side, and Protected Resources side [although that one is a dark door]. Perhaps it is a consideration to get to a higher level.

Bob noted that Will had stated NFHAP was created to develop collaborations between NFHAP and the private sector. He suggested that we keep talking to largely ourselves, rather than external partners. If we don't get the concept, then we may not move forward. He wondered if any of the other NFHAPs have the same issue. Is this unique to our circumstance.

Kent didn't believe it was unique.

Kent noted that we are running late, and he would like to finish the session today. He noted that Pat only has 15 minutes for the operations discussion, or we can move it to tomorrow.

Julie continued her discussion. USFWS provided \$110,000 to ASMFC; \$30,000 in 2014; \$30,000 in 2015; and \$50,000 in 2016 (with \$20,000 in reserve). Julie noted that Wallop-Breaux funding administered by USFWS also goes to ASMFC.

2017 Projects: Julie gave us the table. The top four projects are all fish passage projects, driven by big pots of funding (either Hurricane Sandy funds, or NOAA funds). The group discussed the top two projects in more detail. She indicated that she would cover the top five projects, the number five one is Oyster Reef and Estuarine Shoreline Restoration, Bogue Sound, NC. There was a project from Virginia, but it had some problems.

Julie reviewed each of them. The top-ranked project is in NH. **Sawyer Mill Dam Removal, Bellamy River, NH.** It opens more than one mile of habitat for alewife, sea lamprey and American eel. Cheri indicated that there are a series of breached dams which do allow for passage, about seven miles worth.

Sheepscot River Barrier Removal, ME: Coopers Mill Dam Removal and Head Tide Partial Removal; opens 71 miles for Atlantic salmon and other species; extensive outreach to the community; southernmost Atlantic salmon River designated as Critical Habitat; time 2017.

Bradford Dam Removal, Pawcatuck River, RI: Located on the Pawcatuck River; opens 32 miles for shad and river herring; previously selected for funding in 2016, with only \$15,000 available. Timeframe: March to November 2017. Will asked if Bradford was fully funded. Julie indicated that the sponsors appeared confident they would be fully funded by 2016. They are receiving other funding from USDOL.

Masse Dam Removal, Sebasticook River, ME: Remove Masse Dam to restore Alewife access to China Lake, opens 5.5 miles for salmon, shad, and river herring. This removal would hopefully help de-list the river from the 303(d) list; time summer 2017.

Bogue Sound, Oyster Reef and Estuarine Shoreline Restoration: recycled oyster shells placed along 300 feet of shoreline to promote saltmarsh. This would provide nursery habitat for BSB and red drum, among others. It is a feeding ground for summer flounder; timeframe: summer 2017.

Points of discussion were: move the Sheepscot River Barrier Removal to number one, and then move the Oyster Reef and Estuarine Shoreline Restoration to number two, to diversify our projects funded. She asked if any of the other reviewers wanted to make any comments.

Kent summarized the subcommittee discussions. Sawyer Mill Cheri indicated would come out in 2018. With the Sheepscot River, we get many more river miles. Kent noted that we aren't sure how much funding we will have for grants this year. We wanted to make sure that we had a second project. For the dam projects, all were in the northeast, and we would like to have a project in the southeast, so that is why the Bogue Sound project went to number two. This also precipitated the discussion about having a targeted RFP in a given year. We may be able to do so on a cycle, to be sure that we spread things around with regard to expending funds in different habitats.

Lisa noted that we had not funded a non-dam removal since 2014, and all the dam removals have been in the northeast.

Cheri thought that the recommendations were good.

Julie noted that if we fund the first two, Sawyer Mill Dam would become number three. We also might be able to provide \$20,000 for the Bradford Dam removal.

Lou asked if we could average the projects.

Lisa explained how the averaging would work. It has to be a solid three years for our reporting period.

Kent noted that we are interpreting the criteria a bit differently.

Lou asked Julie to explain the \$20,000 which is in reserve. He didn't understand that portion. Julie explained that if we got the larger amount of funding, we could use the \$20,000 for the mapping project. But it doesn't appear that the funding level in 2017 will be any better. Lou recalled that we had discussed giving the \$20,000 to the northeast, if Carolyn finished the mapping project. Lou asked about operations funding.

Lisa thought that we were fine with operations, without the mapping project.

Pat asked about the NOAA funding. Ginny noted that they had justified the \$37,000 from the southeast, as a pilot project for the coast. Lou explained further about the \$20,000 from the northeast. Lou indicated that he and Ginny had pushed for the hold for the \$20,000, as a good faith effort. Lou said if we don't need it for operations, let's put it toward a project.

January asked what the timeframe is for spending the \$20,000. Pat indicated that they establish a five-year agreement. Julie indicated that the \$20,000 is still sitting with USFWS. It absolutely has to be in some grant agreement by next September. She will have to provide a justification every month the funding sits there.

January asked if the funding could be expended now. She noted that we could give Bradford the rest of the funds we had in 2016. Lisa noted that it could be used either for that, or for the mapping project. Lou noted that the project has to be finalized, then we have to find a contractor to do the work.

5:06 p.m. Kent noted that we have to vacate the room, in ten minutes. We have to take all of our materials with us.

Kent asked if we reached a conclusion. Julie explained to him offline.

❖ **Adjourn for day 5:00**

The meeting adjourned.

October 19th Conservation Strategic Planning

8:35 p.m. Kent convened the meeting. He noted that we have a beautiful day today. He also advised that we can go out on the GMRI dock, if we wish. He noted that he had walked around the town this morning, and there is a lot to do, as well as many breweries to visit.

Kent noted that we are postponing Pat's Operations Review, and Other Business, to the end of the meeting today.

❖ **Introductions and Overview of Day (K. Smith) 8:30 am**

Kent noted that we want to spend our time today, working on our Conservation Strategic Planning. He noted that he has been able to participate in most of the work group discussions, and noted also that we had a really good discussion yesterday, about our role. Kent noted that we would have sub-group breakouts this afternoon. That will be a two-hour session. He indicated that our key goal today, is to walk away from this meeting with all of the information that we need to complete our plan. We will not have a facilitator today. Kent wanted to give a few minutes to cogitate. He asked for comments.

Wilson noted that he had met a USGS person from the Great Lakes Fishery Science Center, at the AFS annual meeting in Kansas City, who is very interested in partnering with ASMFC and possibly ACFHP. This individual has been recruited to head the Wellsboro, PA, laboratory of the Leetown Science Center, and seemed pretty sure that he was going to take the position. He had asked about collaborating with the ASMFC on diadromous fish restoration along the east coast, and felt that such an endeavor would make a good focal mission for the Wellsboro Laboratory. Wilson noted that former ASMFC Maryland Commissioner Tom O'Connell is the new Director of the Leetown Science Center, and he felt that Tom would be interested in strengthening the already-established partnership between the Leetown Science Center staff (e.g., Dr. Dave Smith, Dr. Tim King) and the potential new Director of the Wellsboro Lab. Wilson will try to determine if the staff change at Wellsboro is going to occur, and contact Tom about possible collaboration with ASMFC and with ACFHP.

Pat asked what our plan is with regard to annual work plans. Kent indicated that he envisions producing annual or biennial work plans.

Chris noted that we need to prioritize and make sure that we can accomplish what we wish to do.

Kent agreed. He and Chris noted that we all have "day jobs" and squeeze this work into our other responsibilities.

Chris noted that our vision, is large. We have matured and are trying to narrow in on what we know. Kent noted that we talked a lot yesterday about the USFWS funding, and we know what we can do with those funds. We have also worked with other partners, with NOAA, and with the MAFMC, looking at placement of artificial reef habitat. We have also worked to secure funding through NOAA's Coastal Resiliency Program, and have a relationship with the National Fish Habitat Fund, to manage funding. He reviewed the mission statement: To accelerated the conservation, protection, restoration, and enhancement of habitat for native Atlantic coastal, estuarine-dependent, and diadromous fishes through partnerships between federal, tribal, state, local, and other entities.

Kent noted that the heavy lift for the Comprehensive Strategic Plan (CSP) is coming in after we complete the draft . All of us need to review the entire draft.

Will Duncan asked, are we going to conflate the business plan that we discussed yesterday, with the Strategic Plan. Kent stated that George is not here today, but will be the POC for that component. Patrick noted that it is referenced in the Finance Section of the CSP.

Kent noted that he really doesn't have a business background, and none of us do, with the possible exception of Bob. Kent noted that a lot of the other FHPs have business plans.

Cheri noted that the comparable organization she has worked with in NH is the Corporate Wetland Partnerships. She noted that those organizations have largely gone defunct now, but she wondered if she could contact some of those who had been involved in those organizations, about providing some assistance to us.

Kent asked if everyone was familiar with these. Many were not. Kent explained how the organizations worked. They were designed largely to facilitate wetland mitigation, through exposing partner projects to corporate funding. He wasn't sure why the program went south. Something political probably happened that spiraled out of control. Kent noted if there is an entity like that which we could engage, that would be great.

Cheri noted that the people involved with those partnerships, may be aware of sources of funding.

Russ noted that we should look and see if any of those corporate partnerships still exist.

Wilson suggested that it would be a good idea, and also suggested that we may wish to pick some selected local or regional partners, with who we could forge a much closer and productive working relationship.

❖ **Progress Report: Introduction** (*J. Murray*) 8:45

Kent asked January to review the Introduction. January did so. She noted that we had decided to retain the map, and add links to other pertinent information, to shorten the document. Lisa projected the draft on the screen for our review. January noted that we didn't have the vision in there just yet. She noted that perhaps we would want to sidebar the mission and vision, again, as we did in the first plan. January walked us through the draft and shared some of the Introduction Team's thoughts. She noted that the "global overview" section still needs work.

The paragraph on governance and history would have links to the background information. Some of the text is just cut and pasted from the original plan. We moved in to the accomplishments. We discussed how it would be good to have accomplishment bullets, for stream miles restored or other metrics, etc., and link those to the project summaries.

We felt that it is important to address climate change, in the introduction.

Kent noted that climate change is pervasive and a ubiquitous threat. We noted that we as an organization will not likely be able to do much about it, but we decided that we should move it out of the Threats Section, and include it in the Introduction.

Dawn noted that it is hard to modify this to say how we are revising the plan, and what our accomplishments have been, and where we are going from here. Perhaps we should look at other sections, and that will help us to say.

Lou asked if she meant a summary of the last five years. Yes.

Kent thought that we could capture that in the accomplishments section.

Dawn noted that she was reading it and realized that we don't say why we are doing a new plan.

January noted that there was a good bit of language in the first plan, explaining why it was being produced.

Dawn agreed that we didn't want to include that, but we do want to address why the plan is being prepared.

Chris suggested that we may want to have an Executive Summary version, a two-pager, which can be easily read by Congressional staffers. Chris asked us to consider how we would pull out text to make an Executive Summary.

Lisa noted that we have about twice the amount of text in the Introduction, as will be there, because we have the original text in there as well.

Lou suggested that it would make the accomplishments stand out if we put them in the sidebar.

Bob asked about putting some text in which would catch people's attention, about the threats.

Kent suggested that we could include a relational story, to which people could relate.

Chris stated that is exactly what the Communications and Outreach Team has been discussing.

Kent suggested we need a "hook" in the Introduction.

Dawn noted that we need a five-page glossy Executive Summary.

Marek thought that Bob was exactly correct. He noted that his in-laws would have no clue what "threats" means.

Jessie asked if they were the audience for this document.

Marek felt that the audience was another discussion. He noted that we need to define what the “threats” to fish are, in the first few sentences, to inspire readers to complete the document. The first and last sentences are what people remember.

Julie stated that she looks at this document, as our guiding document. It will set forth what we are going to try to accomplish. She doesn’t view this document as the outreach tool. She didn’t believe the goal was to hook the laymen into reading it. It is more of an internal tool.

Marek suggested at the very least, the agency heads need to be able to understand why they are sending staff to these meetings.

Kent said that the “hook” we are using, in the document, is in part the table about the value of the recreational and commercial fisheries which arise from these coastal habitats. Wilson noted that we can get the FL east coast data, if we want. Kent indicated that the plan is to eliminate FL and just deal with the other three subregions. He felt that this information will resonate with politicians. The other hook is the ACFHP regional statistics, but perhaps we should put those in a sidebar box as well. He read the list of unique features of the ACFHP region. We are trying to make it relatable.

Marek felt that this was a great place for a sidebar.

Will Duncan felt that this section was really sweet. He noted that he immediately goes to the bullets. He suggested that we put this in a language which the agencies can understand. He suggested that we should reference the fact that we have already tried to align our activities, with agency priorities, because that will help it sell.

Kent felt that we had already focused on partnerships and so stated in the text.

Bob asked why we list all potential partners, instead of just saying public and private sectors. Bob suggested that since the responsibilities are huge, so we should modify the text to add corporate sponsors.

Marek suggested that we put them first in the list, make an editorial change, to focus on corporate sponsors as a group and not just an entity.

Chris suggested that we take each bullet and relate them back to why they affect fish habitat.

Kent noted that 75% of FL’s population lives within three miles of the coast. A lot of the other population centers are close to the water.

Lisa felt that what Chris suggested was already captured in the text immediately in front of the bullet.

Marek stated that many of the sentences are way too complicated, and we need to reduce the reading grade level to sixth grade.

Kent agreed it would probably help to have someone with an editorial eye, look this over.

Cheri asked if we should point out that we have way more entities engaged, that the other FHPs.

Kent and Lisa noted that we would have to check that out. Wilson noted that SARP for example, is huge. Lisa noted that some of the others engage a lot of tribes.

Chris asked if we shouldn't say that climate change will affect fish habitat, although Kent can't write it. Kent noted that he can write it. Cheri noted that we can say that the Gulf of Maine is warming at a rapid rate, and on the other end of the region, Florida is going to drown.

January noted that those examples can be captured.

Will noted that we really need to sell ourselves, and what he says is probably some of his agency's philosophy creeping in. It wouldn't hurt to note that there are economic benefits, and that this will benefit people, as well as fish habitat. Should we try to incorporate that into the text?

Kent felt we should, noting that is a good hook as well. Kent felt that spoke to Bob's point.

Will noted that we have numbers on those benefits that we can add to the document.

Pat noted that we should highlight the Gulf of Maine as a climate change hotspot. Also, he noted that there are some good reports that we can reference, discussing the potential impacts of climate change on such states as NC.

Bob indicated that he would separate the regions, with perhaps the largest coastline, from the species. Collectively we have more coastline than any other region. Also, he was talking to Will about the fact that there are more diadromous species in the northeast, than anywhere else in the world. Bob noted that if we change our terminology to "healthy environment" and "healthy coastline" is more positive than using the term "threats."

Cheri wondered if we shouldn't use the term "tideline" instead of "coastline." Marek suggested that we use the term "shoreline" which is more generic. Kent agreed that was a better term and we could break things out if need be, into beaches and so forth.

Kent noted that it was 9:30 already. He felt he could complete his review in 15 minutes.

❖ **Progress Report: Threats and Priority Habitats (K. Smith) 9:30**

Kent noted that he wanted to make his section flow a bit better. In the original plan, Habitat and Threats Section [Kent, Cheri, Wilson, etc., but Wilson never showed up], we had included all habitats, and sub-regional habitats, and climate change. For the next plan, we have moved climate change to the introduction, and will talk about it there. We won't identify it in the "Threats" section. Kent reviewed what we have included in the new draft [see the draft]. Kent summarized the changes made in this section. He noted that we had gone through the process of creating a new table during our Cape May meeting this past spring. We ensured consistent use of categories of habitats by sub-region. We added Marine and Estuarine Shellfish Beds to the Mid-Atlantic sub-region priority habitat list, and added SAV to the South Atlantic sub-region. Kent noted that there wasn't much SAV in SC and GA, except perhaps in some of the rivers.

Kent had highlighted the components on the screen, which had been modified. We identify the Habitat Matrix up-front. This helps to say why we are working on what we are. The team included the Table of all the habitats. The priority habitats stayed the same, except for the additions which Kent had previously noted.

Chris asked if we need to revisit the issue of what North Atlantic is, versus Mid-Atlantic and so forth. Kent noted that we will have the map in the document.

Lou asked if at one point, we hadn't discussed hardbottom habitat, in the North Atlantic.

Lisa indicated that at our spring meeting, we had talked about the fact that ACFHP couldn't do much about corals, or hardbottom, since they were offshore.

Kent moved to the Priority Threats. He noted that we didn't modify any of this text. Everyone felt that this was pretty solid. We did move climate change to the Introduction. All the other threats were retained. We then added a list of priority habitats, and associated threats, by sub-region. Lisa had created this new table. Kent noted that the table was the outcome of our spring meeting deliberations. The threats were identified as priority in specific sub-regions.

Chris asked where sea level rise (SLR) is included. Kent and Lisa noted that it is captured in the climate change discussion, up front. Wilson suggested that we add a footnote to the table, noting again that climate change is pervasive, including SLR.

Kent noted that some habitats, such as intertidal vegetation, will benefit from SLR.

Julie asked about opportunity for marsh migration, as a component of the text. Kent noted that we haven't addressed that specifically, but that certainly could be a component of an adaptation strategy. Kent noted that we aren't putting climate change in there, since it is overarching.

Chris asked if we shouldn't mention SLR, since we will have to accommodate it.

Kent noted that we should review the text again on climate change, to make sure that it is adequate. Kent noted that he isn't a good non-technical writer so that is why someone else needs to review the text and revise it. He noted that he "bio-geeks" too much.

Bob asked why we are listing the priority threats in the plan.

Kent stated that we are putting them in an appendix, but we feel they need to be here because they are of particular concern, and that sentence is in the introduction to this section.

Chris asked again if we didn't need to put SLR in here.

January stated that in the climate change text in the introduction, we say that it is a significant threat. She wondered if we should add it to the table.

Kent explained why we pulled it out, and put it in the introduction. We thought it needed to be there.

Pat stated, to Bob's question, the utility of having these here is to remind us that proposals need to address the threats. Lisa noted that all of our efforts should address the threats.

Lou stated that with regard to climate change, he sees the priority threats list as a list we can address, whereas climate change is not something we as a partnership can do anything about. We aren't going to focus our efforts on SLR, and that is why it needs to stay out of the table.

Chris asked if we are going to consider funding projects that will address SLR. Ginny felt that it should be addressed via BMPs in the plans for each project.

Kent agreed it is a priority threat and a concern for all the priority habitats. He explained again why we moved the climate change information to the Introduction.

Wilson suggested that we may wish to add some links to the climate change text in the Introduction, which reference some of the voluminous literature on the projected impacts of climate change on fish and fish habitats. Kent liked that suggestion.

Julie suggested that in the introduction to this section, we note again that we moved climate change to the Introduction.

Dawn liked Julie's idea and also suggested that we reference the fact that the states are considering the effects of climate change in their programs.

Bob suggested that in the text, ACFHP should acknowledge the importance and severity of climate change on fish and fish habitats.

Kent noted that another issue is that the impact of climate change won't be the same in all the sub-regions. Kent noted that South Florida may have a lot of grouper habitat as condos are submerged.

Bob suggested we reference global and regional effects.

Marek suggested we say the effects will vary by region.

Kent noted that the bottom line is that we state in one sentence, that we will develop adaptive strategies addressing climate change, for everything that we do, especially with USFWS and NOAA, and all of our partners. We can reference the fact that we need to address the resiliency. What we are wrestling with now, is how to address it in the plan. We can put a reference to it here, in one sentence.

Lou asked if we deal with coastal resiliency, anywhere in the new plan. He felt that would better capture living shorelines, and green infrastructure. He noted that it is a good buzzword. Cheri noted that there is dedicated funding for it. Lisa asked Lou to consider a specific spot to insert the language.

❖ **Technology Break 9:53**

9:53 a.m. Kent asked us to take a break and return by 10:05 a.m.

10:10 a.m. Kent reconvened the meeting. He noted Russ will review the On-the-Ground Conservation Team. Kent, Lisa, Lou and Dawn were on the team with Russ.

❖ **Progress Report: On the Ground Conservation (R. Babb) 10:05 Presentation 04**

Russ noted that he found it useful to refresh his brain about why we constructed objectives. The draft will address how ACFHP will achieve our goals. Strategic actions were developed to achieve objectives. We need to look at our realistic opportunities to address the objectives. Russ noted that he didn't delve too far into the strategic actions. They re-stated the Protection, and Restoration objectives. Essentially, they went through Sections and color-coded what they plan to keep and delete. Green we should highly consider keeping; blue completed or ongoing, remove; red, suggest removing; orange, up for discussion. They decided to merge Protection and Restoration objectives into new Conservation Objectives, because that streamlines things; eliminates or downplays areas where ACFHP has been constrained or where actions may be currently beyond our reach; concentrates things for the next five years.

Russ noted that he didn't understand why "Lou" was listed as Option 1. Lisa explained that Lou was the only one who had voted for an option.

Russ noted that the Strategic Actions section is unchanged. Lisa noted what we do with it is up for discussion.

Jessie noted that some of them have been completed already.

Kent noted that some projects address both protection, and restoration, and this new approach will simplify our review.

Russ noted that Conservation Objective 1 now includes the words "restore, enhance, and maintain."

Russ reviewed the two options for wording of the objectives.

Kent noted that if we go with the third objective, water quality and hydrology are things that we can address through projects and he gave several examples. He asked us not to think of it as a big non-point source issue.

Lou noted that the two examples Kent gave, wouldn't be prohibited under the first two objectives. Kent agreed that would be the case. He indicated that he is a lumper, not a splitter. Cheri preferred to see it rolled into the first two.

January confirmed that they had taken the entire document and condensed it to two objectives, but retained all of the strategies.

Lisa noted that this group wanted to hear from the entire Steering Committee, before moving forward.

Lou and Wilson asked that the options for objectives be projected together on the screen, so we could compare them.

January noted that she was nervous about us leaving something out. But, she likes the format. Kent noted that none of the actions have yet been removed. Lisa noted that the ones completed were removed.

Lisa edited things on the screen so that we could compare them.

Dawn noted that we had broken out passage in Objective 1.

Cheri, Lisa and others agreed that fish passage should be separate. Cheri noted that such projects typically are larger and involve more funding. But the projects under Objective 2, could be for any amount.

Kent noted that if we are doing things through the managers' model, we would go to Strategies next, then identify specific actions next, and the latter could go into some sort of implementation plan.

Lou clarified that we could have several strategies beneath each objective.

Jessie asked what it is looks like to obtain each of these objectives. She noted that the objectives are very broad. Wilson asked if she was advocating SMART objectives. Lou gave an example. Jessie felt that specificity should be added.

Kent said there is a component of what we do that is opportunistic, and another component that is more certain. He noted that objectives, strategies, and actions are a hierarchy of things, each of which becomes more specific. He noted that we can make them SMART at any level.

Lisa stated that the level of the text is pretty much at the level it was, in the last plan. She noted that they had discussed putting more specificity into the strategies.

Jessie asked, do we want all of these actions to add up to something. Lou felt that Jessie was right and they should add up.

Bob asked how the objectives relate to ACFHP. He noted that we could relate them to the member organizations, if we wanted.

Kent looked at Conservation Objective 2 and suggested some alternate wording.

Marek agreed with Bob. He doesn't think that the objectives should have specificity. Objectives should just state where you are going.

Chris suggested that we remember that this is a Strategic Plan, from which last time we developed the Implementation Plan. That drills down further.

Marek stated that you can't implement, what you haven't defined as your objectives and actions.

Kent agreed. He noted that there is a certain level of specificity needed. He noted that you don't want to set yourself up for failure, however. There is a fair amount of uncertainty in what we can achieve. If we had guaranteed funding, say ten million dollars a year, then we could set specific targets. We know what we have achieved with our USFWS funding, and we could add that information to the document. The goals wouldn't be lofty, but we know we can achieve them. He suggested that would be better placed in an Implementation Plan. He noted that we should consider the need to keep the objectives flexible.

Jessie felt that these objectives were somewhere in between, with regard to their specificity. Perhaps she is a splitter.

Kent noted that he has facilitated a lot of Strategic Plans, and people sometimes get confused by the levels.

Dawn suggested we see what in the objectives that we think we can achieve, during the next five years, but if we can, make them measurable. We want to work toward achieving something. She suggested that we try to make the Action Plan tighter and work that into the Strategic Plan.

Chris noted that the last time, we put the specific tasks in the Implementation Plan. So those can come later.

Lisa noted that her mind immediately goes to acres, when thinking of specificity. Jesse said we may want to include "ACFHP will affect policy....." Kent and Chris felt that was a strategy.

Chris stated last time we had Objectives, Strategic Actions, and Tasks.

Jessie felt that we should add all of those up and that would constitute our objectives. She felt that there is some way for us to make these objectives more specific, yet not get totally specific. She suggested we consider our vision for each of the habitats.

Kent suggested that we work through the process and see where we can get with the strategies.

Marek noted that Chris had clarified a lot for him. We need to decide whether to call things strategies, or actions.

Chris noted that tasks come later and that is where we wound up last time. The 15 acres winds up in a task. Chris advocated using the same terminology, "tasks."

Marek felt that "action" means we are going to do something, whereas "task" is less definitive.

Russ noted that everything we are discussing today, comes down to expanding our reach. How do we get our tools implemented. If we had a lot of funding, this would be much easier, and we could specify river miles restored, and acres. He noted that the Barnegat Bay Shellfish Restoration group didn't really make much progress and get traction, until they got folks talking to legislators. He didn't want to include too much in the plan.

January asked that we circle back to the objectives, and Options 1 and 2. She noted that the second option would further break out hydrology. She is fine with either Option. She was confused earlier, since she didn't realize that the water quality and hydrology were lumped in to Objective 2 of the first option. January asked if we had an Implementation Plan for each year. Lisa noted that we need an Action Plan, which has less than 79 actions.

Kent noted that we can do Action Plans at whatever frequency we wish.

January asked that we consider the objectives and then start working on the strategies.

Kent noted that there seems to be consensus in the room regarding Objective 1. The rest need to be relatable.

Chris clarified that we will go to tasks later.

Lisa asked if it would be more specific, in the first option, to state several ways that we go about accomplishing our objectives.

Jessie felt that the

Cheri said that she thought having concrete, specific numbers was dangerous. If we are going to put something in along those lines, she suggested that we address them in terms of the benefits of the proposals we have received and selected.

Wilson suggested that we consider whether or not there is some advantage, in seeking future funding, to break out the hydrology and water quality. He noted that Environmental USEPA is the primary federal agency with water quality regulatory authority and they dole out a lot of grant funding, so perhaps there is an advantage to breaking out any related items.

Chris clarified again the terminology. Lisa, Marek and Kent agreed that we need to use “objectives, strategies, and actions.”

January suggested that we need to resolve the objectives discussion. Dawn suggested that we can deal with that in the breakout groups.

Lou asked how the breakout groups are organized. Kent indicated that the groups are as organized in the draft teams.

Lou suggested that we should have the objectives discussion as a group. He felt that having the breakout groups be organized by objectives, would be more useful.

Kent showed us the Florida plan as an example. Lisa projected the Florida Fish and Wildlife Conservation Commission Strategic Plan, which has Themes, Goals, Strategies, and Actions. Their actions are SMART. Their objectives are very broad. Chris noted that Goals (which equal Florida’s objectives in their plan) are very broad.

Kent turned back to our plan. He used Objective 1 and stated what some strategies and actions would be, making each subsequent item more specific. That is the level Florida worked from.

Kent noted that some of our Strategic Actions are written as Strategies.

Jessie felt that the first objective works for her, because it addresses a specific threat. Everything else is rolled into the other objective.

Kent noted that she is a splitter.

Lisa noted that on their call, they noted that if you broke everything out, it would be very repetitive.

Kent noted that we need to figure out the objective thing, really quickly. Jessie stated that she didn’t like the second or third objectives. But if everyone else in the room is comfortable, she is good to go.

Kent called for a vote, and the Steering Committee was pretty evenly split between having two, versus three, objectives. Kent asked if the “twos” would agree to go with “three.” They agreed to do so. We noted that we can always change things later, if we decided to do so.

Kent noted that we do need to needle things down, when we get to specific actions. He noted that for our purposes, “short-term” is two to three years. “Long-term” is five years.

Dawn noted that some of the things have been ongoing for more than five years. Kent and Chris noted that we can reconsider whether to keep them.

January asked if we can use the Actions which we already have for given Strategies. Kent felt we could. Lou disagreed thinking that we need to review them all.

Lisa noted that is why they had the color coding. Kent and Chris noted that all we need to do today is get through the Strategies.

Kent felt that we have a good approach moving forward.

Bob stated that he was confused again, about the terminology. Kent clarified that we are taking the Strategic Actions, and making them Strategies. Kent explained that we are changing the terminology.

Kent asked if we wanted to go through the list of Strategies and winnow them down. Everyone did want to do so.

Lou clarified that we are going with Option two, the three-objective model. Yes, we are. We discussed changing the order of the Objectives. Pat suggested that the more comprehensive one be made Objective 1. Kent agreed but indicated that we will address order later. We went ahead and discussed order anyway, and decided to put the broad objective first, follow by the water quality and hydrology one, then fish passage last. We discussed the wording of the objective and agreed some formatting was needed.

11:09 a.m. Kent asked that we go with the review of the Strategies. He suggested we start with the list of ones we propose to keep.

Lisa noted that the wording wasn’t changed at all. Ones completed were removed. We discussed which list to use during our review. Some members liked color-coding. Others were comfortable with using the non-color-coded list. After further discussion, Russ’s team was charged with making strategies from the “Strategic Actions” and bringing them back to the team. Kent suggested the team use the color-coding. If we try to do this as a full Steering Committee, we will never get through.

Russ asked if the drill-down.....

We discussed what to do during the breakout session. Lisa proposed a new approach. We would have a breakout session corresponding to the three objectives, to work on the strategies, then the drafting teams could break out into their groups, if needed.

Kent indicated that we have a strategy, or rather a “process” for the afternoon.

Wilson, Mark, Marek, Jimmy and Lou agreed to be on the hydrology group.

Cheri, Jessie and Russ, and January agreed to be on the fish passage group.

Kent, Bob, Chris, Pat and Dawn, were all on general.

❖ **Progress Report: Science and Data** (*M. Topolski*) 11:18

Marek stated that based on yesterday's discussion, we need to decide whether the Science and Data group is a standing committee, or a project-oriented group. In the plan, there are two objectives. One is to do what ACFHP needs to support them. The other is to assist outside entities. The two kind of bleed into each other. An example of the second one, is the work we are doing with the MAFMC on the BSB project. We have included getting the habitat matrix online, which falls under Objective 1, Strategic Action 1. That is close to being done. The spatial bibliography item, was deemed time and funding intensive to maintain, so we probably should drop it. It is rapidly getting dated. Marek noted that C.1.2 is the action we talked about yesterday that we are trying to jump start anew. C.1.3. is the stuff that we need to do for reporting to NFHP. They discussed whether these things need to be shuffled. We need to first identify who is making the decision on what should be done, i.e., are we asking the SDC to do these things.

Kent thought we were, and that we just need to make the actions conform.

Kent thought that the SDC needs to be maintained as a whole, but we can bring in others as needed for specific projects.

Marek asked if the SDC then should work to say, this is what we are going to do. Or, is the SC going to be top-down, and tell SDC what they should be doing. If it is the latter, then the committee sits there and does nothing.

Pat suggested that the SDC drive what they do. Sometimes the managers do need to say what they need, but often they are not up-to-speed on new tools and so forth.

Marek suggested then that the SDC's actions should be tied back to what all of the other objectives are addressing. That is why this is difficult. Marek noted that C.2.1 could be addressed for a specific area.

Julie noted that if you are going to bring in others as needed, they can't drive the jet, because they aren't linked in with ACFHP.

Bob asked what has happened historically. Has SDC driven the work, or has the SC driven it?

Marek noted that the SC drove the Habitat Matrix idea. The region-wide mapping activity, was a SDC-driven action. It has really been both.

Kent noted that it will always be a little bit of both.

Chris stated in light of our earlier discussions, he likes Objective 2, and C.2.2 would be the strategy, and C.2.1 would be the action. Although we do need to define it further. Kent agreed it can be made more specific.

Marek asked if SDC needs its own section.

Lisa noted that she brought that up in April. She noted that Finance, and Communication also are to be considered. She didn't get a lot of positive feedback on tasking each of the components.

Marek noted that it can be confusing because of the overlap.

Chris asked if we couldn't take the text now, in light of our discussions, and tier them. Marek thought that could be done.

Dawn viewed the Science and Data works differently, but noted that we need to give them guidance. Marek agreed that SDC otherwise would become unruly.

Wilson noted that he felt that the street is two-way, with regard to developing science and data tasks. He agreed with Pat that the SD committee should be primary driver for projects, but also agreed with Dawn that the SC needs to provide guidance to the SDC to help them stay focused.

Marek noted that with regard to fish passage, there aren't many big blockages anymore. Many of the existing blockages are small ones. He suggested that one SDC task could be to dig up information to better define what the reality of blockages is. There may be something SDC can do to better inform reality.

Will felt that Marek had nailed it. From his SARP experience, he noted that the SDC was the most functional component of SARP, but they had good direction from the SC. They had specific targets. The SDC decided what sort of datasets they needed. Their guidance came from the Strategic Plan, but they were then turned loose.

Kent asked if we were going to keep the SDC Section separate, or roll it in with the others. Marek wanted to lump it. Kent noted that we had that discussion in the spring, and we decided to keep it separate.

Marek noted that there is another way to organize them, in Communication, Finance, and Science and Data. He noted that there may be strategies which relate to SDC, but really we want to know who does the action.

Marek suggested that we first come up with actions, then decide who is going to do them.

Kent agreed that we need to go through and decide what the strategies are. He asked that we not mess with the current design of the plan, at this time. That was okay with the SC.

Kent noted that we have had a lot of good discussion. We need to move on to the Communications and Outreach and Finance reports.

Jessie stated that she thought we don't need to do anything with regard to communication. Chris stated that she didn't even know yet what he was going to say.

❖ **Progress Report: Communications and Outreach (C. Powell) 11:35**

Chris noted who was on the team. He noted that he had found a document that he had shared with the group. Pat asked if we wanted to bring Tina in to this discussion. Lisa had texted her. Chris shared their text for a possible general goal. We need to identify our audience. Our goals should help us determine the audience we must communicate with. When we identify our audience, we need to have a good idea of what our audience knows about us. Do our audiences know what and who ACFHP is? Does our audience understand the importance of fish habitat? We need to develop a message. This will be the template for all our communications and outreach (C&O). It should give our audience a reason to care about fish habitats. It should describe threats to fish habitat and who or what is responsible for the problems. It should provide a solution and describe what it is we want to do.

Develop fact sheets is another task. Each fact sheet could be audience-specific. We have already done these for species.

Use language that speaks to our audience. Sometimes what is said isn't what our audience hears. These are some of the guidance principles they got from the document Chris found.

We need to use good images.

We need to be specific when using facts. Our messages and image must be backed with specific facts in order to be credible. Don't "stretch the truth" or sensationalize.

Choose appropriate messengers. The messenger will depend on the message we want to convey and the audience who will receive it. We need to “biomagnify” our message to get the most mileage. Use major organizations to help us get out the message.

Evaluate and measure our results. Attendance at meetings, programs, and events, hits on social media and website, readership of publications all could be means to assess our progress. Survey target audiences, do they understand our message. Contents analysis of media, did we reach our target audience.

Highlights of discussion: Chris noted that they developed a basic template or “strawman” as a starting point. Things to consider, what and who is ACFHP. Many of our constituents don’t know who we are or what we do. We discussed “rebranding” ACFHP. They discussed potential target audiences. How do we improve our messaging. Update our website, other social and print media. Some of our communication and outreach needs to be project driven, e.g., the conservation mooring project. Finally, development of our C&O Section will be driven by what the other groups determine to be our conservation objectives and strategies.

Chris asked for questions. There were none.

Wilson noted that Chris was talking motherhood and apple pie here. All of us are onboard.

Kent summarized that once the other groups have completed their work, then the C&O can get more specific.

Russ noted that he agreed with Wilson. Nothing else we do will be effective unless we get C&O correct.

Kent asked if we didn’t already have a list of potential target audiences. They do, but they didn’t want to share that yet. Kent noted that there is a sequence to the work. Some of this can be discussed during the breakout.

Lou noted he had a mixed bag of things. The big question to him, is why does ACFHP matter? That is one of the big messages we need to get out. One thing which we lose sight of is the value of having all of us together, and how that influences what we do and take back to our own agencies. When he is doing activities for work, he thinks about the ACFHP priorities and how they drive his work. Our activities as a partnership should influence and sometimes guide what we are doing in our agencies. He hopes that can be captured in the strategic plan. Perhaps we should have an action that addresses that action.

Chris

Julie thought that Lou had made a good point. We need to do better inreach to our own agencies, and be intentional about it. We should perhaps include that in the plan. Lisa noted that is especially true for the partners not part of the SC.

Chris suggested one of our audiences should be ourselves.

Wilson asked if they had considered the need for different audiences, i.e., technical versus lay. They did. Lisa and Chris read the list of those. They agreed that the messages for each type of audience will have to be different. Lisa noted that C&O has the potential to be very cost-effective. If we want to concentrate more on C&O, we may wish to ask Finance to seek funding for a C&O person. If we decide that we want to focus more on that aspect, we can focus more on funding it.

We moved on to the Finance report.

❖ **Progress Report: Finance** (*P. Campfield*) 11:45

Pat asked Lisa to pull up his presentation. Pat noted that they had a pretty productive call two months ago. Mark, Lisa, Kent, and Callie were all on the call.

Pat noted that the first objective is pretty straightforward. The last Strategic Plan basically had a paragraph. They have expanded it to four objectives in the current draft. There is a new Objective 1, to maintain infrastructure and mechanisms for managing ACFHP finances. There have been some additional projects above and beyond core operations. Patrick reviewed the specific text of the Objective. We are the first FFP to use the National Fish Habitat Fund, “Beyond the Pond” which is a 501c3 established to receive funds from a variety of sources. The Strategic Action 1.1 speaks to working with the NFHP Fund operatives to establish financial capacities for managing grant proposals and awards.

Objective 2 is to utilize NFHP funding to achieve the greatest overall benefits for on the ground conservation and Partnership productivity. This one has several strategies: 2.1 is to continue improvement through the ACFHP annual RFP process. We have received almost \$480,000 dollars, for 15 on-the-ground projects. Our overall leverage was 4.1:1, Lisa reported, so it is really good. Last year’s operational was above 3:1, so hopefully that criterion will not hold us back this year. The second strategy is to enhance ACFHP’s Tier Status in annual NFHP funding determinations. We want to get to the higher tier.

Pat and Lisa commented on this one briefly. Pat noted that the actual language may depend on what we think we may receive from other contributors.

Strategic Action 3 is support the National Fish Habitat Conservation Act. Pat noted that we need to emphasize this in our plan, and we need to support the act however we can do so. Pat noted that some of our agencies or organizations may be limited in their ability to support the act. Kent suggested that we may want to edit the language to reflect the fact that not all of our SC members can function in this regard, although Mark, and Dawn can do so.

Ginny noted that all the action says, is “provide supporting evidence” and we should be able to do that action. Julie noted that we are allowed to provide information to Congress and others.

Pat noted that those cover the NFHAP-specific activities.

Objective 3 is to leverage new funding for restoration projects and ACFHP. Strategic Action 3.1 is to finalize a business plan. Strategic Action 3.2 is to pursue private donors for funds to support on the ground projects. This can be accomplished through: develop an ACFHP elevator speech; develop and maintain a bank of conservation projects, lists of shovel-ready projects to provide to donors; create a private donors list; conduct hand-shake meetings (i.e., refine a targeted donors list). Pat indicated that TNC may help us with some of these. Pat went through the list individually.

Pat noted that he wanted to ask SC members if their agencies have lists that could be shared with ACFHP. He noted that the list of actions is somewhat sequential. The private donors list may be individuals or corporations who we know have funded conservation actions in the past. We should update the list. That updating should then lead to a list of desired meetings with such individuals.

Chris suggested that was a great example of a very targeted audience. The message would be tailored to that very specific group.

Pat noted that the next action was to leverage additional funding building from FWS NFHAP and NOAA support. Pat noted that our total amount has to be around three-quarters of a million dollars by now.

The action highlighted in red says, hire consultant to solicit funds for ACFHP projects. Pat wasn’t sure what we could reasonably do with this one. Jessie wondered if we needed to hire someone specifically to do just this one task. Pat and Kent, and Chris, felt that realistically we do need to hire someone.

Kent wondered if anyone writes grants for that sort of work.

Jessie suggested this one would be good to pitch to an individual donor or corporation.

Chris suggested that we need to change the language to say “look for funds to hire a consultant.” The strategy should read something like “increase capacity for fund-raising” per Jessie.

Will noted that there is also a component of accessing the skills of other organizations. That is a nuance, but an important one. Not everything written in the plan, needs to be undertaken by ACFHP.

Kent noted that was a good point. We can certainly try to find such expertise.

Wilson noted that a lot of those sorts of people reside in the alumni relationship branches of major universities. While we may not be able to directly employ their skills in working for ACFHP, we may be able to tap into their expertise.

We had some discussion regarding whether we could use ACFHP funding to conduct fund-raising activities. Probably not, but we might be able to use other funds.

Another goal is to recruit and set up an ACFHP Board. We can network with NGOs (CCA, Surfriders) to collaborate on conservation projects, including potential matching/in-kind funds. We are not aware of any other NFP that has such an organizational component.

Kent noted that if we do this, it would be unique. Perhaps we could tap into retired individuals, although we may not be able to cover their expenses.

Pat noted that this one is a question mark.

Chris stated if we have a business plan, this could be part of it. Kent agreed.

Pat noted that they weren't really sure where the NGO relationships fit. We have had one conversation with CCA.

Strategic Action 3.3: Continue to pursue additional restoration project funding opportunities. Pat noted our other funds which have come from various sources. There are probably others we can include in the short list provided.

Strategic Action 3.4: Continue to secure operational funding. Pat addressed the specifics. He noted that one question is whether to try to secure funds for website re-design. Bob indicated that funds may be available from his organization which could relate to the website re-design.

Objective 4: Fund Science and Data Projects. Pat noted that one project here is to get the matrix put online. George had indicated that TNC would fund the first iteration. We can apply for more NFHAP and/or NOAA funding, to complete the northeast habitat mapping tool and online publishing of the Matrix. These will require a small amount of funding.

Kent noted that now we need to think some more on these things. He congratulated the teams on the work they have done. Some of the strategies need more development. Kent felt that the strategies are perhaps too general, and need to be made more specific. He felt that this was great.

12:30 p.m. Kent asked that we be back by 1:15 p.m. He noted that when we return, we will break out into the groups that we organized earlier and work on the strategies. He indicated that we could get lunch and bring it back here, or eat out back where there are a couple of picnic tables.

❖ **Lunch 12:30-1:30 pm**

Kent reconvened the meeting.

❖ **Breakout groups 1:30 pm**

- *the SC decided to work in subgroups to determine if existing strategic actions remain or should be deleted; revised provided strategic actions to strategies. Make sure strategies link to priority threats and habitats.*

Groups were staffed by volunteers as follows (in order):

Objective 1: General Restoration: Chris, Pat, Dawn, Bob, Lou, Ginny

Objective 2: Water Quality and Hydrology: Wilson, Jimmy, Marek, Mark, Will

Objective 3: Fish Passage: Cheri, Jessie, Russ, January and Julie

Kent explained why we had changed the agenda and are going to take this new approach. He noted that means that the draft sub-teams will have to do more work, outside the meeting.

Kent indicated that we would work on an Implementation Plan during the spring meeting, every other year.

Lisa noted that for the Habitat Committee, since ASMFC does annual planning, they can plan each year.

Kent noted that we will convene in the breakout groups, until 3:00 p.m. Then we will reconvene as an SC, and have further discussion. We do have several other items to discuss this afternoon.

Kent asked that we elect team leaders for each of the breakout teams. For Objective 1: Dawn declined; Lou agreed to do it after Chris also declined; Objective 2: Wilson will do; Objective 3: Russ will do.

Kent reviewed our assignment [see above]. Highlight things in red if we think it should be deleted. Turn Strategic Actions, into strategies and re-word as necessary. All nomenclature should be “Objective, Strategy.” We can classify things as “Actions” and so label them, if we want to retain them. Kent noted that Actions would really be captured later in the Implementation Plan.

Lisa received documents from each of the subgroups that will be compiled into the Conservation Objectives draft.

❖ **Technology Break 2:50-3:10 pm**

Kent reconvened the Steering Committee at 3:13 pm.

Kent asked that the Water Quality and Hydrology Team go first, since Lisa already had the Team’s document. Kent noted that we would continue this discuss

❖ **Updates from Breakout groups 3:20**

Wilson reported for the Water Quality and Hydrology Team. *[See the draft document and comments]*

Bob asked, do these actions make us special, or is someone else already doing these? We all agreed that was a good litmus test.

Wilson suggested that Bob’s criterion be one that we employ when we vet actions in the spring.

Wilson reviewed the possibility for creating another strategy for restoration and reestablishment of riparian buffers. After some discussion, we decided to wait until we hear from the General Team, before we decide to pursue it. Kent noted that it is one thing that we can actually do that would have a positive impact on Water Quality.

Dawn noted that was something that the respondents to our survey highlighted as a need.

Kent moved to Lou and the General Objective Team. Lou reported for the Team. They refined Conservation Objective 2. They got rid of the list of examples. They developed a new Strategy 1. They had a lot of conversation about adding benefits. Certain ones they think are important buzzwords, like resiliency. They brainstormed some possible actions. One could be to use agency funding on projects that address aquatic ecosystem resiliency. They put the old invasives strategy here, as a possible action, feeling that it was a more general need.

We did some word-smithing on new Strategy 1. Julie asked about using the word “conservation” which their team felt was more all-encompassing. We also edited the text to read “Conduct conservation activities...”

Kent noted that all of the actions we have already identified could fit under this section. It isn’t something that we need to worry about at present. Dawn noted that we are using “conserve” instead of restore, conserve and protect.

Kent suggested some additional wording changes which the Steering Committee preferred.

Lou suggested that we add “on-the-ground” in front of “conservation activities.”

Lisa noted that one issue we had with our RFP, is that dam removals get a lot of credit for this strategy, as well as for removals. Kent suggested that we could specify that dam removal projects be separately reviewed.

Lou suggested that we re-word the RFP to address actions, rather than strategies.

Julie suggested that we make this one more specific.

Lou noted that we lost the concept when we eliminated the list of examples. We need to perhaps add it back in to qualify our statements.

Kent noted that we might want to include some language regarding using the most up-to-date techniques, etc. Some language that qualifies it more. We don’t want to use antiquated criteria.

Lou and Jessie suggested that we modify this language of this strategy to specify that it doesn’t include fish passage.

Kent noted that it is fairly broad, but asked us to remember that strategies need to be fairly broad. He noted that the Eastern Brook Trout Joint Venture objectives are fairly broad.

Julie noted that the sturgeon spawning habitat fits under this one as well.

Lisa and Jessie, and Lou, suggested that we add the term “non-barrier” to Conservation Objective 2.

Lou noted that A.3.3 was revised. They struck the examples again. It is more of a pro-active, non-regulatory activity. Kent noted that living shoreline projects could go here.

Lou noted that they added a new strategy. They added several actions, including: conduct a workshop/outreach to transfer conservation mooring to other regions; conduct outreach to transfer living shorelines BMPs. Dawn noted that we already have some guidance here.

Lou noted that they went from four strategies, down to three. They combined one of the previous ones, with the first one. They also moved something into the objective.

There was some discussion of our use of the term “coastal” and how that was defined. Cheri noted that for diadromous fish, our consideration is further inland.

Jessie asked where sedimentation fits. Jessie wanted to make sure that we have all the strategies covered that we need to have included in the document.

We turned to the Fish Passage group. Jessie led the discussion. With regard to the first strategy, we need to have some discussion about the various prioritizations we discussed, and how fish passage priorities relate to those. Their group captured some potential actions as well. Wilson noted that Action 1.1.1 has already partially been done by the ASMFC Fish Passage Work Group.

Will Duncan noted that ACFHP may be one of the few FHPs which have the dams already mapped to a large degree. Cheri noted that there isn’t a complete list of dams out there. We discussed the fact that the only true way to get complete barrier inventories for stream systems is to walk the stream banks. Also, Marek noted that counties usually may have more complete information. Wilson noted that the Dam Safety offices in each state also tend to have more comprehensive lists.

Jessie continued to review their strategies. We debated whether to change the wording of Strategy 1.3. Lou asked who has identified barriers as priority for removal. Wilson noted that we have multiple lists, developed by multiple partners. Lou wondered if we were shooting ourselves in the foot by specifying “...identified as a priority...” He wondered if it might be taking away some of our flexibility. Julie indicated we could specify that it had to be identified as a priority by an ACFHP partner.

Pat asked if for the fish passage projects we have identified to date, were identified as priorities by some partner. Julie noted that in the RFP, we do ask them if projects have been ranked. There is a list for the northeast, and also a list for the Chesapeake Bay watershed. Lisa noted that there is also a list for the southeast.

Kent suggested that we refine the language here. Lisa liked Julie’s suggestion to add “identified by an ACFHP partner.”

Strategy 1.4 was edited by addition of the words “...to ensure adequate fish passage.” We had some discussion about the change. Wilson noted that restoration of hydrology in Merritt Island National Wildlife Refuge by eliminating mosquito control dikes as a good example of this type of project.

Chris asked if we should say “movement” instead of “passage.” There was some discussion of that point.

There were several potential actions added to the text, something about culverts and berms, and so forth.

Kent noted that we have five minutes to wrap up this discussion. He noted that the strategy says “fish passage.” Ginny suggested that if we are reconnecting components of an ecosystem, we should put it as an action under Objective 1.

Kent congratulated the teams on doing good work.

Pat wanted to go back to the Fish Passage objective.

Jessie noted that they had kicked Strategy 1.5 back to the hydrology group. We read the language of that one.

Wilson noted that there is often some degree of overlap between groups and strategies. Some address multiple objectives.

Jessie noted that they recommend deleting the last two strategies, 1.6 and 1.7. Everyone was comfortable with deleting them.

Kent noted that we now have the tools and information for the C&O and Finance teams, to consider how to proceed. Science and Data also needs this information to finish their tasks. He asked the leads for those sections of the Strategic Plan to draft some objectives and strategies, send them out to their teams, and then meet to discuss them. Kent noted that he was trying to get a timeline for having a complete draft for review.

Cheri suggested that mid-December was a good deadline. Lisa noted that she wasn't going to be gone long after her wedding. They will be honeymooning next June.

Kent noted that the formatting will be done by Tina, later. Chris noted that we need good editing. There is a subgroup for editing and formatting. Pace is the lead for that group. Chris noted that we need a glossary. Kent was pretty sure that there is a glossary in the document already. Chris felt that we needed to update it.

Kent thanked the group again for the work done today.

❖ **ACFHP Operations** (*P. Campfield*) 4:35 Presentation 05

Pat noted that he had one slide. He noted that we are essentially in the same condition we were last year at this time. Currently we are fine. We have almost \$72,000 in funding. For January-June 2017, we have about \$77,000. That is the operational status of the program. The A funds for FY15 funds expire in December of this year.

Julie asked if the expectation is that the NFHP funds from FY16 will be expended in 2017. Pat wasn't sure. He noted that it depends on what we do with the SDC.

Will asked what the most funding we have had was during a six-month period. Pat indicated at one point we had almost a half-million dollars. Kent noted that there is potential for a future multi-state grant. He asked if we needed to decide whether some of this funding should be used, or not.

Pat noted that we have in the past decided that whatever was needed for operational funding. Julie noted that we have routinely requested \$75,000 for operational funds, each year. She explained the numbers and how the funds can be used.

Chris suggested that if we can hold on to the funds, it doesn't make any sense to him to have a SDC workshop. That isn't cheap and we simply aren't ready yet.

Lou asked if about \$25,000 is available for projects, if \$50,000 goes to operations. Julie indicated that we only had \$15,000 this year.

Kent noted that we need to bring the SE mapping folks together. We need as part of our obligations to NOAA to do a good job on that project. We should leave that on the table as a possible project for implementation.

Pat asked when our next tier determination is scheduled. Lisa indicated it is due in January, and we usually find out in April or May how we fared.

Pat noted that he hopes that we would get back to Tier 2. Lisa indicated that is looking promising. She noted that our leverage looks good/okay, and we should score well. As far as she knows, the criteria will stay the same this year. Kent noted that much of the work that we plan to do this year, may not influence our tier status.

Chris noted he didn't want to do away with the mapping workshop, but just postpone it, until we know more.

Lisa noted that the timing of the Science and Data face-to-face meeting is flexible. Kent and Chris noted that we should be able to hold the meeting where it won't cost as much.

Kent stated that we have a plan for moving forward.

Chris stated that the halos around the conservation moorings we installed are now down to one foot or less. Several additional marinas are now installing conservation moorings as well. Chris noted that he hasn't driven by the sign once, when there hasn't been someone there reading it.

Kent suggested that we need to document this information for NOAA. Chris noted that he is working on compiling the information for Lisa. We also he suggested need to do a press release. It could go into the Habitat Hotline as well.

Lisa noted that she needs articles for the Habitat Hotline. She will discuss that tomorrow.

Kent noted that in the hotel where many of us are staying, there is a big TV screen, so we could all watch the Presidential debates together if we wish.

Kent noted that tonight, the plan is to walk to the Lobster House, where we can eat outdoors. Meet at six pm to walk to the lobster dinner. Kent stated he will pull up the pre-debate SNL material.

❖ **Overview, Conclusions, Action Items** (*K. Smith*) 5:17

Marek gave us a brief presentation on communication (*Presentation 06*). He noted that he taught ninth grade for several years, and the typical reading level was sixth grade, and sometimes fourth grade. His wife has worked in academia since graduate school. She works at a local community college in the same neighborhood where he taught school. It is normal for these students to NOT be ready for college, and they have to take remedial courses. Periodically, his wife gets students who test very low. He noted that nothing he will say to us is meant to be condescending. He just wants us to get reality. He asked us to take ourselves out of the science realm, and put ourselves in a context where we are not the experts. He noted that the general public is not well-informed on any general topic.

What he presented to the O&C Committee is how to get general concepts through. He noted that he has two slides, as examples of how to teach with science. He noted that he could teach many students ecologically, but could rarely teach them the vocabulary. They get the concepts of predator-prey, but they don't get omnivore, or carnivore, the specific terminology.

First, some thoughts. What partly kick-started this in Marek's head, is the Maryland Institute of Community Art (MICA). Their students need projects. He asked us to jump outside the box of our brains. Marek's thoughts:

Do NOT think like a scientist (the vast majority of people—tens of millions of them—are not scientists. Audience = disengaged general public. Fish habitat issues are not “on their radar.” Many have never thought about fish habitat. Many people would be hard-pressed to name three or more fish habitats. We have to take the message directly to people: out in public spaces; easy and effortless learning; make it fun, whimsical, enjoyable, humorous, etc.; tactile and kinesthetic—bring out everyone's inner child. Not technical; if your numbers are into the high school range, you're writing it too complicated. Limit text to three to five sentences.

Marek asked us if we remembered the Chicago Cow Parade. Some did. He showed us a number of photographs which illustrated his points. These included free-standing sculptures; outdoor wall sculptures; and three-dimensional sidewalk art. Marek asked Lisa to play one of the videos he had referenced.

Marek noted that MICA is a source of students who may want to work on some of these projects for us. Marek noted that advertisers make commercials the way they do, to sell project. The video he showed was the one for Nature.RX.org. The point is that fish habitat message can be communicated in very simple ways, to teach something relatively effortlessly, and also may be free. Part of this is to NOT say what sort of content you want, so as not to stifle creativity. Marek noted that this material represented his brain firing in many different directions at once. That is what he wanted to say.

Cheri and Kent noted that the information was good. Kent noted that their folks in FL are using a lot of these strategies now. He noted that a lot of us are rather jaded now. They actually have a priority in their plan, that says “bring in new supporters of wild systems.” He noted that hunters have been going down, but anglers going up. The conservationists are already bought in to our concepts.

Marek noted that his point is that we need to get away from the traditional concept of our stakeholders. He noted that one example is that there is a lot of dog feces getting in the water, if we have many dog owners in a given watershed. In one case, kids could answer more questions about the Jersey Shore, than they could about American History. We do have MICA, and we can use them. You write a classified ad essentially, and then advertise as a student, professional, professor, anyone can use it. It is like a free RFP. Marek noted that MICA is huge and they do the full realm of communications.

Pat asked if one potential application is to take one or more of those actions, and ask them to assist us. The conservation mooring project comes to mind as a possibility.

Marek noted that historical markers are very short only a few sentences. With regard to MICA, we could have an action item to pursue a student volunteer, or some other language indicating that we are seeking out creative professionals. It is no different than getting a graduate student for some fishery project. It is the same sort of kid, just a different kind of project.

Bob noted that surveys have shown, for visitors to a zoo, there is no increase in affinity for wildlife.

Marek agreed with Bob there is no panacea. He noted that zoos are not exactly the prime example of places to go to learn about wildlife. He noted that they might be compared to going to a circus freak show, to learn about society. Marek noted that the only reason his parents began recycling was that he was collecting bottles to get the refund. We need actions that will trigger follow-up action or education. It is free.

Kent suggested that this be considered by the C&O Committee. Kent asked Marek if he had specific recommendations in mind. Marek noted he didn't. This presentation was just for our consideration. He noted that at one event he attended, there was discussion of other ways to engage, outside of our normal channels. The challenge is to get folks to engage.

Kent noted that from a general perspective, you can use both a top-down, and bottom-up, approach.

Marek noted that when we begin to discuss where the rubber meets the road, the lower levels of the communications pyramid are where the action takes place.

Kent noted that he would not be the one jumping naked off the dock (as in the Nature.RX video).

❖ **Field Trip Overview** (*L. Havel*) 5:17 p.m.

Lisa reviewed the field trip logistics. We need to meet in the lobby at 7:45 am. Several people will be able to drive. Lisa noted that we need to be back by 12:15 pm. Ginny and Will are not planning to participate.

Kent noted that Pace has been with us in the meeting, via telephone.

❖ **Other Business 5:19 pm.**

• **Next meeting location/time**

The fall meeting will be in Virginia, likely in the Virginia Beach/Norfolk area.

Kent asked for spring meeting recommendations. January noted that we could meet in Brunswick at GA DNR. It was noted that at least at present, we can't meet in NC because of HB2, since some of the states (NY and CT) have banned travel to NC. Other venues discussed were Providence and Newport. We don't need to finalize anything at this point.

Wilson noted that if things are clarified in NC, and we were able to meet there, the Visitors' Center at Alligator River National Wildlife Refuge would be a good meeting venue.

Lisa was congratulated on her impending wedding and being the ultimate planner. She indicated that they will have a drone taping the event.

Kent thanked us for all coming and working hard during the meeting. He noted that we do have more work to do, but we should be able to finish by the first of the year.

We will meet, for those who wish to do so, in the hotel lobby at six o'clock and walk to the Lobster House.

❖ **Adjourn for day 5:00**

Action Items

Page 9

Action Item: Lisa will share the list of current Science and Data Committee members with the Steering Committee for more suggestions. *Completed.*

Page 12

Action Item: Lisa will add the Conservation Moorings project to the ACFHP website. *Completed.*

Statement of Work

Spatial Prioritization of Diadromous, Estuarine and Coastal Fish Habitat in the Southeast Region

Purpose: The Greater Atlantic Regional Fisheries Office and the Southeast Regional Office are seeking funds to support a pilot project led by the Atlantic Coastal Fish Habitat Partnership (ACFHP) through the Atlantic States Marine Fisheries Commission (ASMFC) to spatially prioritize fish habitat protection and restoration sites through GIS mapping and analyses for the southeast region of the U.S. from North Carolina to Florida. The resulting maps will help ACFHP identify where best to invest effort and future NFHP funds. The southeast region comprises three of ACFHP's subregions: the mid-Atlantic (North Carolina portion only), South Atlantic, and South Florida subregions, corresponding to the Virginian, Carolinian and Floridian marine ecoregions. The requested funds would pay for a scientist and GIS technician contracted by ACFHP to lead the GIS analysis, cover supplies, incidentals, and indirect costs. The results from this pilot project would be expanded to the entire ACHFP region pending additional funding.

Background: As part of the National Fish Habitat Partnership (NFHP), ACFHP is expected to prioritize habitats for both protection and restoration. Habitat prioritization is also an essential element of ACFHP's Conservation Strategic Plan, which is in the process of being updated for the next 5 year cycle. Finally, habitat prioritization is needed to objectively evaluate proposals to ACFHP's annual RFP to fund on-the-ground restoration projects. To date, the Science and Data Working Group of ACFHP has made progress on habitat assessment and prioritization as follows: first, we convened experts to a matrix of priority fish habitats for each life stage of select diadromous, estuarine-dependent, and coastal fish species (accepted, Kritzer et al., *Bioscience*). The matrix reviewed 7 habitat categories and 25 habitat types. The matrix habitat categories comprised the following: Marine and Estuarine Shellfish beds; Other Sessile Fauna; Macroalgae; SAV; Tidal Vegetation; Coastal Inert Substrate, and Riverine Habitat. Second, we contracted with the National Oceanic and Atmospheric Administration (NOAA) to produce an assessment of existing habitat information (<http://www.atlanticfishhabitat.org/planningresources/database>). The assessment of existing habitat information provided a summary of the top identified threats and recommended actions for freshwater, estuaries, and coasts. Third, we worked with the North Atlantic Landscape Conservation Cooperative (NALCC), Downstream Strategies, LLC, and The Nature Conservancy (TNC) to develop decision support tools for select fish species (winter flounder, brook trout, and diadromous fishes). This product is available at www.fishhabitattool.org. In September 2015, the ACFHP Science and Data Working Group met for a two-day workshop to consider multiple approaches and develop a plan for prioritizing habitat protection and restoration.

Geographic Scope: This pilot project is limited to the three southern ACFHP subregions only: Mid-Atlantic (the North Carolina portion only) South Atlantic, and South Florida.

Objectives: Our two objectives are:

- To spatially determine which riverine, estuarine, and coastal sites are optimal sites for fish habitat protection
- To spatially determine which riverine, estuarine, and coastal sites are optimal sites for fish habitat restoration

Work plan:

PHASE I

- Identify Species of Concern: Our target species are diadromous fish, estuarine-dependent fish, and the coastal components of commercially-important marine species¹.
- Prioritize spatial locations for the protection and restoration of the following habitats, considering the top 5 habitat categories for each of the three ACFHP subregions as determined by ACFHP's matrix of priority fish habitats: Coastal Inert Substrate, Riverine Habitat, SAV, Marine and Estuarine Shellfish Beds, and Tidal Vegetation, Other Sessile Fauna (coral reef, patch reef, live rock), and mangroves.
- Compile/review/select existing GIS layers/maps of threats, indicators, presence/absence data (where possible), existing or historical habitat maps, and existing habitat prioritization maps.

PHASE II

- Present findings to the ACFHP Steering Committee for review.
- Prepare map(s) and final report.

The Science and Data Working Group determined that ACFHP may not need to develop new GIS layers or maps, but might be able to compile and use existing GIS layers/maps from other organizations and agencies. Since the inception of ACFHP, numerous entities have developed maps used in coastal and marine spatial planning, including the NFHP Estuarine Stressors Map, NOAA Coastal Change Analysis Program (C-CAP), NOAA Eutrophication Assessment, Environmental Protection Agency (EPA) National Coastal Condition Report, Ocean Biogeographic Information System (OBIS), TNC NAM ERA maps and weighted persistence maps, South Atlantic Landscape Conservation Cooperative (SALCC) Conservation Blueprint, the South Atlantic Fisheries Management Council (SAFMC) Atlas, SEAMP-SA Coastal Survey, Marine Resource Monitoring (MARMAP) Assessment and prediction program, various NALCC mapping efforts, *Mid-Atlantic Regional Council* (MARCO), Northeast Regional Ocean Council (NROC), AquaMaps (FishBase), Ocean Marine Cadaster, U.S. Fish and Wildlife Service (USFWS) National Wetlands Mapper, U.S. Geological Society (USGS) Coastal Vulnerability Index, and Seagrass.net, among others. We will review the existing maps first so that we do not repeat existing efforts.

The work will be completed by a subcontractor hired by ACFHP, with the in-kind assistance of a graduate student. The work will be reviewed by an in-person two-day ACFHP Science and Data

¹ The species of interest have been previously identified through the matrix effort.

Working Group meeting, followed by a one-day session prior to ACFHP's spring Steering Committee meeting.

Expected Outcome: We expect that this project will lead to an expanded ACFHP habitat prioritization effort for the entire east coast (pending additional funding), be utilized in updating the ACHFP Conservation Strategic Plan for ACFHP, inform on the ground restoration and protection, and provide the opportunity for ACFHP to subsequently track habitat progress in the region. The maps should be useful for NOAA, state partners, and nonprofits as well. The results and report will be made available to the public on the ACFHP website; we will also seek additional outreach opportunities for broader dissemination.

Deliverables:

PHASE I

- 1) Maps of habitats, threats, and presence/absence data.

PHASE II

- 1) A map or maps of priority habitat restoration and preservation sites for the southeast region.
- 2) A report describing the process used in habitat prioritization: a description of the existing maps and tools considered, the metrics and scoring methodology used to prioritize habitats, a summary of newly identified priority areas for protection or restoration, and findings such as acreage of optimal protection sites by habitat category.

Budget

Category	Cost		
<u>Phase One:</u>		Proj	GIS
<i>Personnel: Subcontractor (Project scientist, GIS analyst)</i>		Scientist	Analyst
	\$28,932.44	(hours)	(hours)
			Total Cost
Review/compile existing data layers & maps		75	130
			\$9,094.83
Review variables, create draft metrics		45	90
			\$5,937.69
Prepare variable maps for scoring		0	30
			\$1,201.98
SUBTOTAL		120	250
			16,234.50
<u>Phase 2</u>			
Lead Science and Data workshop review		50	0
			\$2,590.84
Score		40	40
			\$3,675.31
Prioritize locations at higher resolution.*		30	40
			\$3,157.14
Prepare maps of priority restoration sites		0	30
			\$1,201.98
Prepare report		40	0
			\$2,072.67
SUBTOTAL		160	110
			12,697.94
TOTAL		280	360
			\$28,932.44
<i>Supplies: Subcontractor (Printing and copying)</i>	\$2,000.00		
Direct Cost Totals:	\$30,932.44		
ASMFC overhead (20%)	\$6,186.49		
Total Request:	\$37,118.92		

* Time permitting

Funding: This proposal is submitted, and supported by, both Habitat Conservation Divisions in the Greater Atlantic Regional Fisheries Office and the Southeast Regional Office. The results of this pilot project will be used to develop coast-wide information critical to fish habitat conservation, protection, and restoration. As such, the Regions request \$25,000 from NOAA Fisheries to partially support this effort. The Southeast Region Habitat Conservation Division will provide the remaining amount of \$12,199.53 to be added to the award.

Match: As part of its funding request to the National Fish Habitat Partnership, ACFHP is seeking funds to convene two meetings of the Science and Data Working Group in the amount of \$10,800. These meetings will support the efforts under this ACA. One two-day meeting of the Science and Data Working Group will consider other habitat prioritization efforts, agree on the geographic scale to be used, and develop methods for prioritizing restoration and protection areas. Variables considered in prioritizing could include, but not be limited to: water quality condition, percentage of impervious surface, extent of habitat, resilience to climate change,

habitat condition, presence/absence data, development pressures, connectivity, heterogeneity of habitat, etc. For the priority locations only, and if time permits, iteratively prioritize locations for habitat protection and restoration at a finer resolution, using data from states and NOAA's C-CAP. The second meeting of the Science and Data Working Group will be a one-day meeting prior to the ACFHP Steering Committee meeting to review project progress.

Contractor: The Atlantic States Marine Fisheries Commission, which serves as the funding agency for ACFHP, and is also represented on ACFHP's Steering Committee. For over 70 years, ASMFC has served as a deliberative body of the Atlantic coastal states, coordinating the conservation and management of 25 nearshore fish species. Each state is represented on ASMFC by three Commissioners: the director of the state's marine fisheries management agency, a state legislator, and an individual appointed by the state's governor to represent stakeholder interests. These Commissioners participate in deliberations in ASMFC's main policy arenas: interstate fisheries management, fisheries science, habitat conservation, and law enforcement. Through these activities, the states collectively ensure the sound conservation and management of their shared coastal fishery resources and the resulting benefits to the fishing and non-fishing public.

Subcontractor: The Atlantic Coastal Fish Habitat Partnership (ACFHP) is an assembly of 33 governmental, non-profit, tribal, and conservation entities interested in the conservation of habitat for Atlantic coast diadromous, estuarine-dependent, and coastal fish species. The Partnership was formed in 2009 under the auspices of the National Fish Habitat Action Plan. Numerous human-derived threats are impacting Atlantic coastal drainages. ACFHP works to address these threats with a broad coordinated approach, and to leverage resources from many agencies, organizations, and others to make a difference for fish habitat along the Atlantic coast.

Qualifications

Dr. Caroly Shumway is the Chair of the Science and Data Working Group for the Atlantic Coastal Fish Habitat Partnership. A fish biologist by training, she has 25 years of experience in conservation and natural resource management, policy, and environmental education in the U.S., Africa, and Asia, working on marine habitats, coasts, estuaries, large rivers, lakes, wetlands, and forests. She is currently the Executive Director of the Merrimack River Watershed Council (MA). She was the Director of Conservation Science for TNC (RI), where she was co-science lead for TNC's Northwest Atlantic Marine Ecoregional Assessment. She worked closely with GIS specialists to synthesize maps of the habitats and species distributions for the marine ecoregional assessment, and prioritize New England's coastal and marine habitats for protection with several decision support tools. She was co-author of the benthic habitats, coasts, and large pelagic fish chapters. She was an Ocean Science Advisory Task Force Member for RI's Ocean Special Area Management Plan (SAMP) and a member of the COMPASS Steering Committee, Ecosystem Health in the Gulf of Maine workshop. She is author of 23 publications. She holds a BA in Biology from Wellesley and a Ph.D. in Marine Biology from Scripps Institution of Oceanography.

Atlantic Coastal Fish Habitat Partnership (ACFHP)
Progress Report: January 2017

Project: Hab in the Mab: Characterizing black sea bass habitat in the Mid-Atlantic Bight.

Date: January 2017

P.I.: Bradley G. Stevens, University of Maryland Eastern Shore, Princess Anne, MD, 21853
bgstevens@umes.edu

Ph.D. Student: Cara Schweitzer (UMES)

M.S. Student: Andre Price (UMES)

Goals and Objectives:

The objective of this study is to improve our understanding of the relationship between black sea bass (BSB) abundance and habitat characteristics in the Mid-Atlantic region.

- 1) Determine the preference of BSB for particular habitats by assessing their abundance, size structure, and feeding ecology within natural and artificial reefs;
- 2) Improve the understanding, and other habitat characteristics of natural and artificial reefs;
- 3) Determine if reduced fragmentation and increased connectivity of habitats increases fish recruitment, by experimentally manipulating corridors between isolated patches.

Study Sites

To date we have surveyed four sites consisting of artificial reefs (ship wrecks) of varying age (Fig 1). These sites have been surveyed for abundance, biogenic epifauna, and stomach contents (Table 1). All sites are within coastal portions of the states of Delaware, Maryland, and Virginia, between the latitudes of 37° N and 38.5° N, at depths of 16 to 30 m.

Table 1. Summary of sites surveyed in 2016

Site Name	Type	Date Sunk	Depth (m)
Pharoby A	Wreck-North	1980	16
Pharoby B	Wreck-South		16
Pharoby C	Open Bottom		16
Riggins A	Wreck	1991	16
Riggins B	Wreck-Debris		16
Riggins C	Open Bottom		16
Vandelay	Wreck	Est 100 yrs	23.5
Palmer	Wreck	1915	23.5

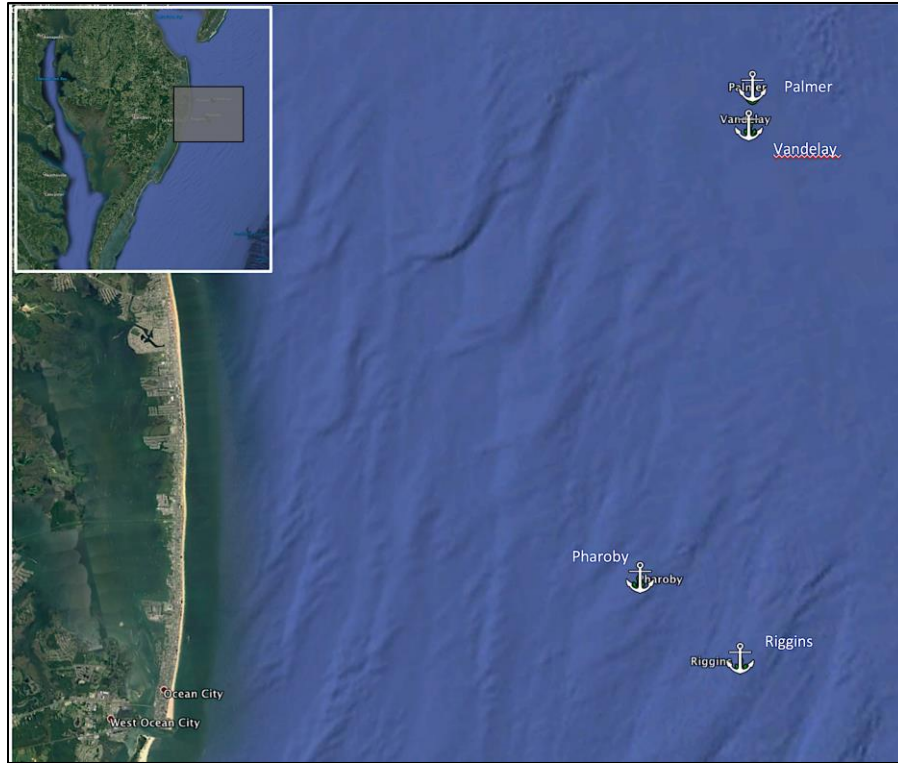


Figure 1. Map showing the study sites of the four shipwrecks.

Accomplishments to Date:

Abundance: To determine if BSB abundance varies with habitat types we designed two tripods (approximately 1 m in height) that each support two GoPro[®] *Hero3+* cameras, facing at 90° angles to each other (Fig. 2). Tripods are set by divers so that the cameras are facing the targeted habitat. Open bottom surveys were conducted on the Riggins and Pharoby wrecks only. This was because those wrecks are separated into two sections with 30-122 m respectively of open bottom in between. The 2016 open bottom video surveys served as control for the habitat corridor experiment. Tripods were set approximately 12-18 m in the direction of the second section of the wreck, facing away from the main wreck. Once tripods are set up, the cameras are set to record for 1 hr before retrieval to ensure at least 30 min of undisturbed footage. Anywhere from two to four videos are taken each day. Surveys were conducted in three sampling series, which is summarized in table 2. Videos were deemed unusable if tripods were knocked over shortly after recording or if visibility was too poor.

For analysis, 30 min of undisturbed video were sampled by selecting individual frames at intervals of 30 seconds, and counting all fish within selected frames (Fig. 3). Counts were used to determine minimum, maximum, and average number of fish for that day (MeanCount). Surveys will be compared between sampling series and between years. We are currently analyzing 50 videos collected during the three sampling series in 2016 (Table 2).

Analysis of abundance was attempted via two complementary methods (video and timed controlled angling; TCA) however TCA was concluded to be ineffective. TCA was conducted using three anglers with identical rigs (rod, reel, 3 hooks and sinker), who fished for 3 min,

during a drift past habitats of interest; this was repeated 8 times at each site fished. However, due to some habitats having high vertical relief, snagging of fishing lines became an issue rendering a TCA ineffective. Therefore, TCA was dropped from the abundance analysis.



Figure 2. Graduate Student Cara Schweitzer with underwater video tripod.

Biogenic epifauna: Quadrat surveys were conducted to determine composition of epifauna and fouling organisms, and to test for differences between different habitat types (natural and artificial) and age. For this purpose, we constructed a 65 x 65 cm quadrat sampling frame with a camera suspended at a height of 61 cm (Fig. 4). A 30.5 m tape measure was attached to the anchor line and elongated along the long axis of the wreck. Quadrat images were captured every 2 m along the tape measure with up to five consecutive images of open bottom at each end. This was repeated in both directions. Biogenic epifauna will be identified to the Family or Genus level and if possible, species. Percent cover will be calculated as the proportion of total pixels for each species. We are currently analyzing 125 quadrat images from the four wreck sites (Table 2).

Feeding ecology: To better understand BSB feeding ecology and to determine if BSB feeding habits are dependent on habitat, stomach contents and stable isotopes (SI; of $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$) will be analyzed. BSB were caught using hook and line baited with squid at the four sites previously mentioned. Fishing was conducted either in the morning or afternoon, however afternoon trips resulting in low catches and were discontinued. Once captured, fish were placed on ice then brought back to the lab where they were measured, sexed, stomach removed and preserved for analysis, and muscle and liver samples were collected for stable isotope analysis. All stomachs were initially preserved in 10% formalin for a minimum of 2 weeks and transferred to 70% ethanol for tissue fixation. To analyze stomach contents, prey items were removed, weighed, and identified to the lowest possible taxonomic level. Approximately 90 stomachs have been processed, with crustaceans constituting the majority of the diet. A total 107 BSB were caught for analysis in 2016 (Table 3). Muscle and liver samples were sent to UC Davis for SI analysis in early February 2017.

Table 2. Series, dates, and number of video and quadrat samples collected in 2016.

Date	Series	Site	Videos	Quadrats
6/15/16	1	Riggins	2	
6/15/16	1	Riggins-open	1	
6/16/16	1	Pharoby-open	3	
7/8/16	1	Pharoby	4	
7/15/16	1	Palmer	4	
7/15/16	1	Vandelay	4	
7/23/16		Pharoby		61
8/19/16		Riggins		19
8/24/16		Vandelay		25
8/24/16		Palmer		61
9/9/16	2	Riggins	3	
9/9/16	2	Riggins-open	2	
9/13/16	2	Palmer	1	
9/13/16	2	Vandelay	3	
9/18/16	2	Pharoby	4	
9/18/16	2	Pharoby-open	2	
10/19/16	3	Pharoby	2	
10/19/16	3	Pharoby-open	1	
10/30/16	3	Riggins-open	2	
10/30/16	3	Riggins	4	
11/12/16	3	Palmer	4	
11/12/16	3	Vandelay	4	



Figure 3. Frame from video abundance survey on 06/15/2016 at 90-second mark. Eleven fish are identified with white circles.

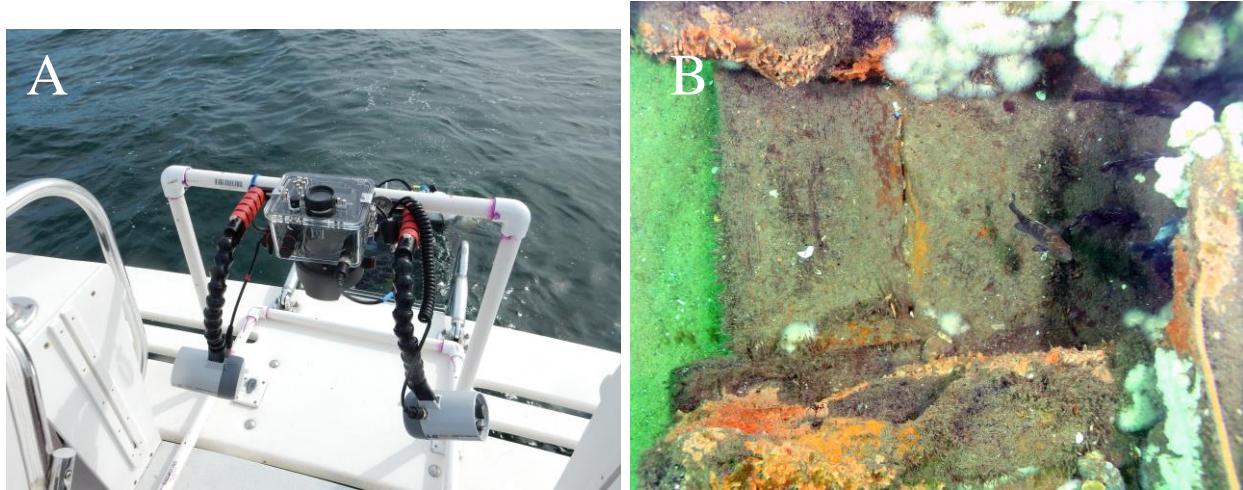


Figure 4. A) Quadrat frame with camera and strobe lights; B) quadrat photo looking down into gap in wreck, showing stony corals (white) *Cliona* sponge (orange) and black sea bass.

Table 3. Summary of BSB sampled for stomachs and stable isotopes in 2016.

Site Visited	Date	N Fish	Time	Series
Riggins	6/11/16	3	-	1
Riggins	7/7/16	13	Morning	1
Pharoby	7/20/16	1	Morning	1
Vandalay	7/21/16	3	Afternoon	1
Palmer	7/21/16	1	Afternoon	1
Pharoby	9/13/16	47	Morning	2
Riggins	9/13/16	17	Morning	2
Pharoby	11/5/16	22	Morning	3
Riggins	11/5/16	17	Morning	3

Habitat Connectivity: In order to test whether increased habitat connectivity produces increased BSB abundance, artificial habitat was placed between existing habitats in a “mosaic stepping stone” pattern (Fig. 5). The Pharoby wreck was selected as the experimental site, and the Riggins wreck will be the control site. Oyster castles were used to construct pyramids of varying size to act as the “stepping stones” of the corridor system (Fig. 6). Twenty-nine pyramids of different size and shape were constructed using 335 blocks and placed between the two Pharoby sections on Dec. 21, 2016 (Figs. 4, 5). Four pyramids were constructed using 30 blocks in 4 layers (16,9,4,1), ten using 14 blocks in 3 layers (9,4,1), and fifteen using two layers (4,1).

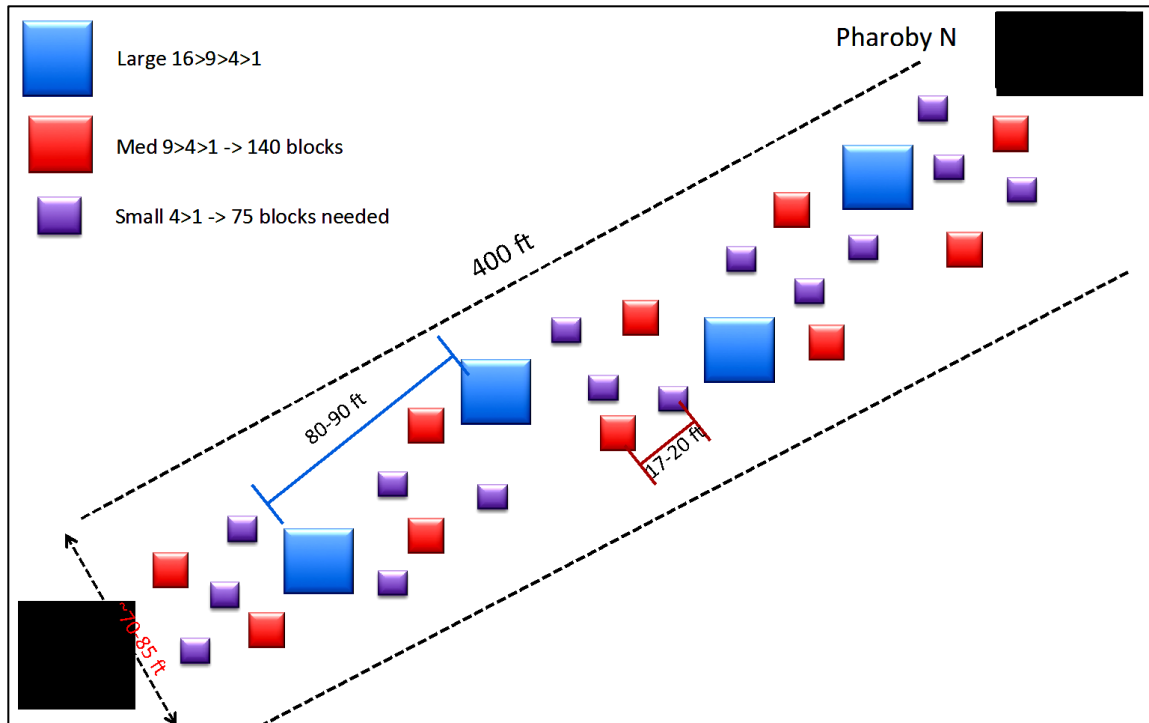


Figure 5. Conceptual diagram of the mosaic stepping stone pyramids (blue, red, and purple squares) corridor between the two Pharoby sections (black squares).



Figure 6. Oyster castle pyramids being deployed.

Future Directions

Abundance: Video surveys will be continued throughout 2017 and 2018 with three sampling series per year at the same four wrecks. Some difficulties were experienced with tripod instability, however modifications have been made to help increase stability. Continuous swim-transect video surveys will be incorporated to validate static video surveys since TCA was concluded to be ineffective. Once tripods are set, a diver will swim 30-40 m along the long axis of the habitat recording with a GoPro® Hero 3+ at approximately 2.5-3 m above the habitat. Total fish will be counted for the duration of the video. Furthermore, habitat rugosity and vertical relief will be measured to determine if specific characteristics are important for BSB abundance.

Biogenic epifauna: Quadrats of the four sites: Riggins, Pharoby, Vandelay, and Palmer will be surveyed in 2017 and 2018 to determine any habitat succession. We intended to include natural bottom in our sampling sites, but all locations of putative “natural” bottom that we inspected were found to be old wood wrecks (e.g. Vandelay wreck) or too sparse for divers to find. There are patches of natural bottom in waters ranging from 30-35 m of depth. This will require diving with O₂ –enhanced air (EAN32, or Nitrox); we plan to obtain training in that this year so we will be able to survey those sites in 2017 and 2018. In addition to incorporating natural bottom in the quadrat surveys, additional sites will be incorporated some of which are known to have high fouling rates of blue mussel and other bivalves.

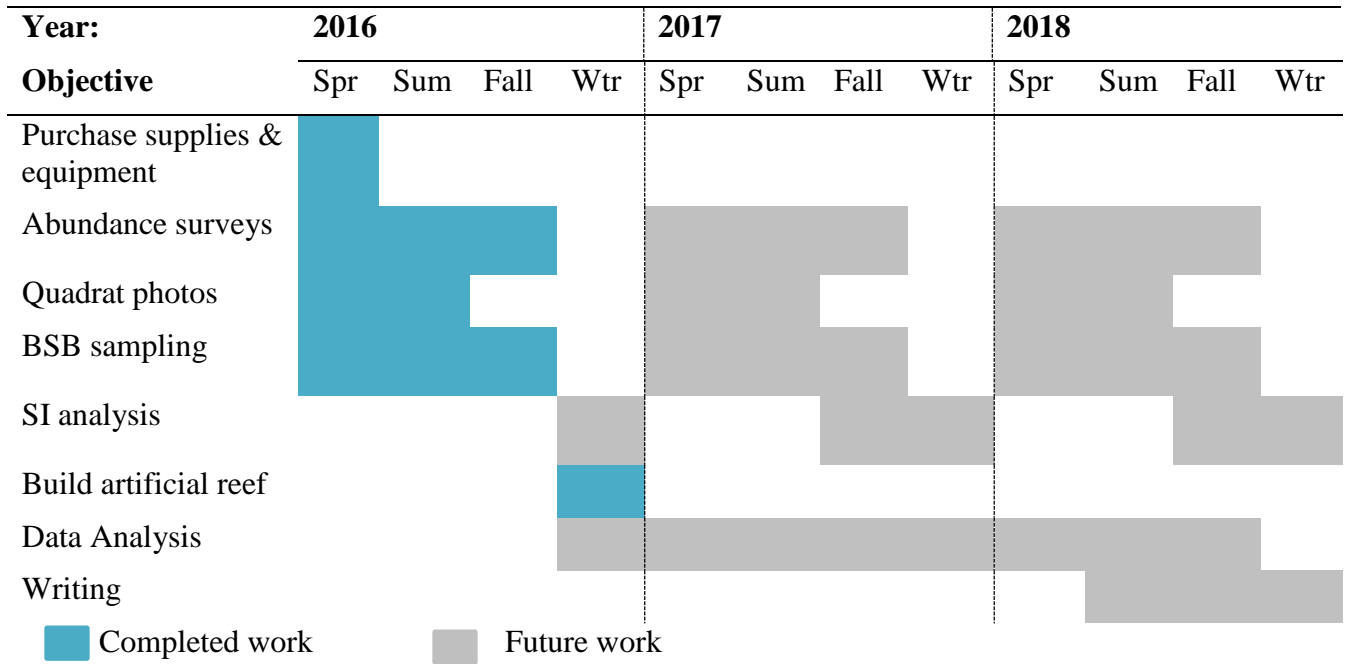
Feeding ecology: The fishing sites for 2017 will change from the original four wrecks. New sites include a relatively new artificial wreck reef that was sunk in 2014, a site showing high densities of bivalves, and natural bottom. In addition to these sites analyzed via quadrat analysis, BSB will be collected as previously stated. The stark differences in these habitats could help answer the research question: are BSB diets dependent on habitat? BSB will be analyzed for stomach contents and muscle, liver, and mucus samples will be collected for SI analysis. Each tissue has a different time stamp of feeding data where mucus shows approximately 30 days, liver is 4 months, and muscle >6 months. BSB will be collected will occur in sampling series as in 2016.

Habitat Connectivity: Abundance video surveys will be conducted through out 2017 and 2018 on the corridor system as previously mentioned. Annual photographs (2017 and 2018) will be taken to determine if any succession occurs within that period.

Presentations Made

C. Schweitzer, B.G. Stevens. “Effects of Fishing on Black Sea Bass Essential Fish Habitat.” Presentation. Maryland Coastal Bays Program Science and Technical Advisory Committee. January 2017.

Timeline for Remaining Work





MARACOOS-ATN Mid-Atlantic Animal Telemetry Workshop

Defining Stakeholder Needs and Observing Priorities, Identifying Assets, Showcasing Data Management and Sharing Strategies

**Chesapeake Bay Foundation, Annapolis, Maryland
February 21-22, 2017**

DAY ONE

9:00 Welcome

- *Peter Moore, MARACOOS*

9:15 Overview of the U.S. National Animal Telemetry Network

- *Bill Woodward, NOAA IOOS*

9:30 Commercial and Resource Management Perspectives

Representatives from the commercial sectors and resource management agencies discuss regional telemetry applications and stakeholder needs.

- *Scott Whitehurst, Virginia Port Authority*
- *Robert Newberry, Delmarva Fisheries Association*
- *Melanie Gearon, Deepwater Wind LLC*

Break

- *Sean Hayes, National Marine Fisheries Service*
- *Brian Hooker and Jake Levenson, Bureau of Ocean Energy Management*
- *Lisa Havel and Kristen Anstead, Atlantic States Marine Fisheries Commission*
- *Mike Weise, Department of Defense*

12:30 LUNCH (hosted)

1:30 Research Perspectives

Representatives from the research community will showcase telemetry projects focused on a range of species, discuss current telemetry assets in the Mid Atlantic, and highlight innovative technologies and methods

- *Dewayne Fox, Delaware State University*
- *Dave Secor, University of Maryland Center for Environmental Science*
- *Matt Ogburn, Smithsonian Environmental Research Center*

Break

- *Matt Breece, University of Delaware*
- *Jeff Kneebone, New England Aquarium*
- *Dan Engelhaupt, HDR Inc.*

4:30 Group Discussion on common themes, needs, appropriate next steps, etc.

5:00 Adjourn

DAY TWO

9:00 Recap of first day and agenda setting for day two

- *Kevin Schabow, NOAA Chesapeake Bay*

9:10 MATOS Overview and Demo

The Mid Atlantic Acoustic Telemetry Observing System, a web tool for telemetry tag and receiver data, will be demonstrated. Developers will discuss the tool's current functionality, such as password protection features and interfacing with the Ocean Tracking Network's database. They will also demo other planned capabilities, such as mapping and MARACOOS-CBIBS environmental data integration

- *Doug Wilson, Caribbean Wind LLC*
- *Rich Balouskus RPS-ASA*

10:30 Great Lakes Case Study

Highlighting telemetry research in the Great Lakes and how GLATOS fosters communication and informs fisheries management decision making

- Darryl Hondorp, USGS

11:00 Breakout Sessions

Facilitated break-out sessions will focus around topics including prioritizing observations and research questions, opportunities for partnering, MATOS feedback, etc.

12:30 LUNCH (hosted)

1:30 Reports from break-out sessions, group Q&A

2:30 Next Steps, Final Thoughts

3:00 Adjourn

Workshop Partners:

