

**PROCEEDINGS OF THE  
ATLANTIC STATES MARINE FISHERIES COMMISSION  
SHAD AND RIVER HERRING MANAGEMENT BOARD**

**The Westin Crystal City  
Arlington, Virginia  
February 6, 2019**

**Approved October 30, 2019**

**TABLE OF CONTENTS**

Call to Order, Chairman John Clark..... 1

Approval of Agenda ..... 1

Approval of Proceedings, October 2017 ..... 1

Public Comment..... 1

Progress Update on Shad Benchmark Stock Assessment..... 3

Consider Approval of the Massachusetts Shad Sustainable Fishery Management Plan ..... 3  
    Review SFMP and Technical Committee Memo..... 3

Update On The Technical Committee Review of Inconsistencies with Harvest and Monitoring  
Requirements of Amendments 2 and 3 ..... 8

Other Business ..... 10

Adjournment..... 11

**INDEX OF MOTIONS**

1. **Approval of Agenda** by Consent (Page 1).
2. **Approval of Proceedings of August, 2017** by Consent (Page 1).
3. **Move to approve the Massachusetts Shad Sustainable Fishery Management Plan (SFMP) update** (Page 8). Motion by Mike Armstrong; second by Justin Davis. Motion carried (Page 8).
4. **Move to adjourn** by Consent (Page 19).

**ATTENDANCE**

**Board Members**

|  |   |
|--|---|
| Pat Keliher, ME (AA)                               | Andy Shiels, PA, Administrative proxy           |
| Steve Train, ME (GA)                               | Loren Lustig, PA (GA)                           |
| Cheri Patterson, NH, proxy for D. Grout (AA)       | John Clark, DE, proxy for D. Saveikis (AA)      |
| Dennis Abbott, NH, proxy for Sen. Watters (LA)     | Craig Pugh, DE, proxy for Rep. Carson (LA)      |
| Ritchie White, NH (GA)                             | Roy Miller, DE (GA)                             |
| Mike Armstrong, MA, proxy for D. Pierce (AA)       | Lynn Fegley, MD, proxy for D. Blazer (AA)       |
| Raymond Kane, MA (GA)                              | Russell Dize, MD (GA)                           |
| Sarah Ferrara, MA, proxy for Rep. Peake (LA)       | Allison Colden, MD, proxy for Del. Stein (LA)   |
| David Borden, RI (GA)                              | Pat Geer, VA, proxy for Steve Bowman (AA)       |
| Phil Edwards, RI, proxy for J. McNamee (AA)        | Chris Batsavage, NC, proxy for S. Murphey (AA)  |
| Eric Reid, RI, proxy for Sen. Sosnowski (LA)       | Mike Blanton, NC, proxy for Sen. Steinburg (LA) |
| Justin Davis, CT (AA)                              | Malcolm Rhodes, SC (GA)                         |
| Sen. Craig Miner, CT (LA)                          | Robert Boyles, SC (AA)                          |
| Bill Hyatt, CT (GA)                                | Doug Haymans, GA (GA)                           |
| John McMurray, NY, proxy for Sen. Kaminsky (LA)    | Spud Woodward, GA (AA)                          |
| Maureen Davidson, NY, proxy for J. Gilmore (AA)    | Jim Estes, FL, proxy for J. McCawley (AA)       |
| Emerson Hasbrouck, NY (GA)                         | Martin Gary, PRFC                               |
| Heather Corbett, NJ, proxy for L. Highty (AA)      | Bryan King, DC                                  |
| Russ Allen, NJ, proxy for T. Fote (GA)             | Derek Orner, NMFS                               |
| Adam Nowalsky, NJ, proxy for Sen. Andrzejczak (LA) | Mike Millard, USFWS                             |
| Tim Schaeffer, PA (AA)                             |   |

**(AA = Administrative Appointee; GA = Governor Appointee; LA = Legislative Appointee)**

**Ex-Officio Members**

Ken Sprankle, Technical Committee Chair

**Staff**

|            |                |
|------------|----------------|
| Bob Beal   | Caitlin Starks |
| Toni Kerns | Jessica Kuesel |
| Jeff Kipp  |                |

**Guests**

|                            |                       |
|----------------------------|-----------------------|
| Arnold Leo, E. Hampton, NY | Mike Thalhauser, MCCH |
|----------------------------|-----------------------|

The Shad and River Herring Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia; Wednesday, February 6, 2019, and was called to order at 1:15 o'clock p.m. by Chairman John Clark.

#### **CALL TO ORDER**

CHAIRMAN JOHN CLARK: We will get started right now. This is the Shad and River Herring Management Board; John Clark, I will be Chairing the meeting today, and let's get right into the agenda.

#### **APPROVAL OF AGENDA**

CHAIRMAN CLARK: On the approval of the agenda, some of you may have seen the original agenda had an update on the ESA status of shad and river herring; that has been removed from the final agenda. But other than that, are there any additions to the agenda?

#### **APPROVAL OF PROCEEDINGS**

CHAIRMAN CLARK: And are there any questions about the proceedings from the October, 2017 meeting? Pat.

MR. PATRICK C. KELIHER: Just I've got one item of new business regarding a White Paper Maine is developing. I would like to give the Board a heads up.

#### **PUBLIC COMMENT**

CHAIRMAN CLARK: Is there anything else? Seeing none; we will move on to Agenda Item 3, which is Public Comments for items not on the agenda. We have one person that has signed up; Mike Thalhauser from the Marine Center for Coastal Fisheries.

MR. MIKE THALHAUSER: Thank you, Mr. Chair, members of the Board. My name is Mike Thalhauser; I'm a fisheries biologist with the Maine Center for Coastal Fisheries in

Stonington, Maine. I'm guessing this is probably the first time Stonington, Maine has been brought up somewhere other than an argument about lobster.

I have the pleasure of working with communities in Eastern Maine from Penobscot Bay to the Canadian Border. Several of these communities are active in restoration and monitoring efforts of river herring runs; leading to lakes and ponds within their municipalities. These communities are participating for a variety of reasons.

In some cases people are motivated by childhood memories of streams running black with alewives. For others it's the conviction that local ecosystems benefit greatly from river herring's role in the food web. Marine fishermen see alewives as one of two things; either one, a supplemental lobster bait that could reduce impact of reduced Atlantic herring quotas, or two, bringing back collapsed groundfish fisheries by restoring an important forage fishery.

In all cases, towns are incentivized to be able to prosecute fisheries that support their communities; with food, with bait, and with money. Maine is unique in that river herring are one of two species in our state that are co-managed by municipalities and the Maine Department of Marine Resources. This means if a town can show that they have a fishery that can sustainably be harvested; through years of monitoring, escapement, and collecting biological samples analyzed by the state that they can work with the state to create a fisheries management plan to prosecute that fishery. It sounds pretty good.

The only problem is that current policies put these goals so far into the future that stakeholders are becoming disenfranchised, burned out, and are considering giving up. I think it's important to point out that unlike many other scientists working with

communities and citizen scientists, I didn't come to them with a research agenda and a need for more data, they came to me with a management agenda, and capacity to collect data and provide local knowledge of their own.

They also came frustrated by the fact that they are putting in countless hours; and spending large amounts of money, but what they aren't seeing are the potential benefits of investing this time and money. Here is just one example of the resources that these stakeholders represent. One of the towns that I work with is the town of Penobscot.

Penobscot is monitoring two alewife runs within their municipality; collecting the escapement biological data I referred to earlier. Both of these runs have had habitat issues with century old dams effecting fish passage. They activated local land trusts; and through their own town funds, donations and grant money, raised half a million dollars to remove these dams to provide adequate fish passage for river herring, eels, Atlantic salmon, and other diadromous species.

This small town is working with universities and researchers from the University of Maine, New Hampshire, and California Santa Cruz; to begin to answer questions, and fill data gaps that the River Herring Technical Committee has pointed out as being needed for this Council, to responsibly manage river herring.

Just this last year the town received funding from Maine Sea Grant; to purchase a small purse seine to estimate juvenile abundance, and pair those data with the adult escapement numbers to look at production variability between ponds and lakes. This crucial data is data that state and federal researchers need, and don't have the capacity to collect.

The only other thing I would point out is this town isn't alone. Maine is lucky that river herring that leave our ponds and lakes have

favorable migratory patterns; and ocean conditions that are supporting returns of over a million fish in some cases, to lakes and ponds where they were stocked at a rate of just one to six fish per acre for just several years.

Certainly this has context within the discussion that this Council has had and will continue to have; with regards to declines in Atlantic herring fisheries. Stakeholders are seeing these remarkable returns; and the potential that river herring bring, and they're doing the work and collecting the data that we need.

They will continue to do so if the return on their investment happens within a reasonable time. Currently Maine river-herring harvest proposed to the ASMFC, are evaluated by the TC based on one model, with an assumption of very high harvest levels. To show that a fishery is sustainable at these kinds of levels, there is a high bar of ten years of data where escapement thresholds must be met, as well as other metrics. This ten year commitment of work before any benefit is seen is unrealistic, and leaves towns frustrated, as I mentioned before, and the fact that critical river herring spawning and nursery habitat is located in inland ponds and lakes, and unfortunately the fact that the only century old dams in Maine and throughout New England aren't just located in Penobscot.

This requires boots on the ground; local and coastwide stakeholder input and support. I'm proud to say river herring in Maine have this stakeholder input and support in spades. I and others are working with Commissioner Keliher and his department staff to try to find a way to incentivize the support. We believe that this incentive should be in the form of incremental harvest that starts far earlier than ten years; starting out very conservative and building to a full harvest, as fisheries meet data needs to responsibly do so.

If we can find this sweet spot, we can keep these stakeholders involved, add the datasets,

fill data gaps, provide fishing opportunity for our constituents, restore river herring at a coastwide scale, and reap the benefits that restoration would provide. I ask this Council recognize this huge resource that Maine and other states stakeholders represent; and to support innovative ideas that provides benefits to them and capitalizes on their efforts. Thank you.

**PROGRESS UPDATE ON SHAD BENCHMARK STOCK ASSESSMENT**

MR. JEFF KIPP: The Shad and River Herring Stock Assessment Subcommittee met in Providence, Rhode Island back in November for our methods workshop. A little different approach there for this assessment; given that it's been so long since the species has been assessed.

We had this Methods Workshop and the objectives of that were to review some of the data inputs that were being worked on to support the assessment approaches we were considering, make final decisions on our stock structure that we were assessing, and then discuss the actual assessment approaches that we wanted to apply to each of those stock units.

During review of some of the data inputs, it became clear that there were still some data delay issues and data cleaning issues with the data that we had. But we did sit down and define our stock structure into 31 different stock units during that workshop. We did discuss some of the different assessment approaches for each of those stock units; given the input data we had to work with.

But during that workshop it became clear to the Stock Assessment Subcommittee that the timeframe that we were working under wasn't going to work with some of the issues that we encountered. They are suggesting that we modify that timeline from the original intention

to present the stock assessment results at the 2019 annual meeting in October; to the 2020 August meeting. With that in mind, we just wanted to run that past this Board; and if there are any questions on the stock assessment or that modified timeline, I can take those now.

CHAIRMAN CLARK: Thanks, Jeff. That's quite a change in the timeline; any questions for Jeff? Toni.

MS. TONI KERNS: This isn't a question for Jeff; but just to give everybody a heads up that that change in that timeline will impact other assessments, which will come up again tomorrow at the Policy Board. This is your first hit at this; but we'll get one more discussion on it.

CHAIRMAN CLARK: Cheri.

MS. CHERI PATTERSON: I'm sure I know the answer to this question; but any NOAA shutdown, will that affect this timeline also?

MR. KIPP: We do have one NOAA member on the Stock Assessment Subcommittee that is quite involved in the stock assessment itself; so yes, any anticipated shutdowns could potentially affect that timeline as well.

**CONSIDER APPROVAL OF THE MASSACHUSETTS SHAD SUSTAINABLE FISHERY MANAGEMENT PLAN**

CHAIRMAN CLARK: Any other questions? Seeing none; we'll move on to the next agenda item, which is to Consider Approval of the Massachusetts Shad Sustainable Fishery Management Plan. Ken Sprankle is here to review the SFMP and the Technical Committee Memo.

**REVIEW SFMP AND TECHNICAL COMMITTEE MEMO**

MR. KENNETH I. SPRANKLE: I'm going to run through a presentation of the American Shad

Sustainable Fishery Management Plan that was presented to the Technical Committee by Brad Chase in November of 2018. When Brad presented that there were some minor comments for possible consideration that Brad did incorporate into a revision of that plan that got back out to us in November.

The TC had a consensus recommendation for approval of this plan with the revisions. The proposed plan maintains the same fishery regulations for harvest. I just want to start with that; and also maintains those same regulations in the same rivers, so there aren't any changes there. There are some changes that I'll go through with this presentation; relative to benchmarks that were modified, improvements essentially that we can discuss.

Going back pre 2012 and the requirement for SFMPs, in 1987 the Commonwealth of Mass instituted a commercial harvest net ban. It's recreational harvest only by hook and line; again this is back pre 2012, and a recreational limit of 6 shad per day. Following the development of the first sustainable fish management plan, the state was closed to the recreational harvest of shad; with the exception of the Merrimack and Connecticut Rivers.

That's inclusive of those two system's tributaries. They also reduced the bag limit from 6 to 3 fish. They have several small rivers that are managed for catch and release only; and I'm going to describe those in a moment. That initial plan also included the use of a 25th percentile for using fish lift data. The 25th percentile for various metrics has been commonly used in a lot of the river herring and shad SFMPs.

We'll talk some more about that. That 25th percentile becomes important when the threshold falls under that for a period of three consecutive years. If anyone has any questions please raise your hand and I'll address it. This slide shows the shad-runs in the

Commonwealth of Massachusetts. You can see the Connecticut River of course is the largest river basin in New England. That is a mean annual discharge in the far column; the Merrimack River is also quite large, it is the fifth largest basin in New England. Then we have the smaller coastal river systems in the Commonwealth, Neponset, Charles just gives you a sense for the relative size of these systems. The Connecticut River, as I said it's the largest river in New England as folks know.

We've been working cooperatively to restore anadromous fish in the Connecticut River since 1967. That was with the state and federal agencies, the four basin states, U.S. Fish and Wildlife Service and National Marine Fisheries Service. Beginning in 1983 that was more formally recognized by Congress; with the creation of the Connecticut River Atlantic Salmon Commission, and so that's the group that works cooperatively on restoration and management activities in a coordinated way.

This figure shows four main stem dams. You see Holyoke Dam is located at river kilometer 138; followed by a series of dams. We've got a lot of dams in this river. We've been working of course on upstream and downstream fish passage. We have FERC relicensing going on at the time. Holyoke Dam actually had the first fish lift in operation.

That started in 1955. A second lift was added to that facility in 1976. The CRASC that I had mentioned, we just recently developed and updated American shad management plan that was approved by the CRASC Commissioners in 2017, it's a habitat-based plan. In the Connecticut River we have several sources of fishery independent data; the fish lifts of course, Holyoke Fish Lift is an important source of information. I'm going to show you some data on that.

The state of Connecticut, the Connecticut DEEP, the Department of Environmental Energy and



Environmental Protection since 1978 has conducted a juvenile abundance index using seven index sites, all located downstream of Holyoke. In addition to that Connecticut has a longstanding data time series for biological data that is included both sub-sampling from the commercial fisheries, as well as weekly samples that have been collected at Holyoke Fish Lift to represent the temporal span of the population in the course of a single run year.

This figure shows the annual count passage totals at Holyoke Fish Lift. This is one of the changes I had mentioned with this proposed plan. The Commonwealth of Massachusetts shifted the benchmark; which had been going back for the entire data time series to restrict it to the period 1976 to the current, because that's when a second fish lift was added.

It's really a dramatic change at that facility; and so the 25th percentile we see here shown in the figures the blue line, and that is representing 194,000 fish. You can see we've had some nice increases in the number of fish that have been passed there in the past couple years. It doesn't show 2018.

In 2018, we had about a 50 percent reduction of what we observed in 2017; 2017 was the second highest run-count in a data time series. We had, again looking at the figure you can see for the period 2012 through 2017; all those values are above the 75th percentile. I'm going to switch over to the Merrimack River portion of the plan if there are no questions on the Connecticut.

CHAIRMAN CLARK: Any questions on the Connecticut? Seeing none; please continue, Ken.

MR. SPRANKLE: In the Merrimack River shad are also cooperatively managed by state and federal agencies. As you can see in the figure it includes obviously Massachusetts and New Hampshire, as well as the federal agencies, the

U.S. Fish and Wildlife Service and NOAA. That basin going back in time to 1987 was angling only. It is a 3 fish bag limit under the current plan.

The first barrier on the Merrimack River is known as Essex Dam; it is at river kilometer 48, which is shown on the figure. It would be the second upstream red dot. Yes, Haverhill for some reason is identified on there. Lawrence is where the Essex Dam is located, and that has a fish lift facility to pass fish.

Here we have annual count data for the Essex Dam; that's the first barrier in Lawrence. This is another figure that shows a change from the previous plan; in terms of the benchmarks. The change made here is the use of a shad per lift day metric. In the original plan it was simply based upon the number of fish passed over the data time series.

They've incorporated the number of lifts that occurred relative to the fish that are passed. As many of you I think are aware, fish passage facilities are greatly influenced by whether or not there is spill, other environmental conditions, temperature, and of course the facility operations themselves.

Oftentimes all these things are very dynamic, they change within year of course and they are different from year to year. The value we see here in terms of a benchmark, the blue line. That is again a 25th percentile, and that blue line is 210 fish shad per lift day. That value again, I had mentioned how at Holyoke we've seen that nice increase in the number of shad passed.

You see that somewhat similarly reflected here for the period 2013 to 2017. With this inclusion of the additional years that metric has actually been shifted upwards. I'll also point out to you that this figure again goes to 2017. For 2018, like Holyoke there is about a 50 percent reduction in the number of shad that were

counted passing. In 2018 that value was down around 28,000.

There is also fishery independent data that's gathered for the Merrimack River out of the Essex Fish Lift; fish that are sampled there. There is biological data that are obtained; shad size, age, these are all similar things that are collected at Holyoke as well. By using scales Mass DMF is able to determine the repeat spawning history component of the fish; that information has been available since 2004.

They've also in this plan provide information on those data as well as mortality rate estimates, and those are based on using the repeat spawner data in conjunction with the age data. Age data for Mass DMF is obtained by the use of otoliths.

There are different datasets on that; the repeat spawner data, again if you refer back to the plan, the scale data that goes back to 1991. Mortality rates are reported in the plan. They are proposed to be used only as a warning threshold metric by Mass DMF, so it's not going to be an official benchmark.

I was remiss in mentioning that for the Connecticut River that is part of this plan update as well, we had suggested better incorporating the state of Connecticut's plan, and so the state of Connecticut benchmark metrics are all adopted in this plan and are being proposed to be used as a warning threshold. The state of Connecticut, we're not discussing the state of Connecticut's plan; but it's mentioned in here to trigger warning thresholds, include thresholds based upon recruitment through their Juvenile Abundance Index that's been conducted over the past many decades, as well as spawner escapement.

The spawner escapement metric is based upon the number of fish that are removed, based upon their monitoring of commercial fisheries and estimated recreational harvest, relative to

the number of fish that are passed at Holyoke. If it falls below 90 percent, it's a very high bar that would trigger consultation.

Lastly, the state of Connecticut has set a 25th percentile, actually it's not 25th percentile it is simply a benchmark of 140,000 fish being passed at Holyoke. The Massachusetts Plan proposes to include those Connecticut measures as a warning threshold. This slide shows some of the comparisons between the timeframes 1983 to 2011 versus the full time series since the previous sustainable plan through 2017.

You can see just based upon total counts the median values on the Merrimack River at Essex Dam. You see that's increased from 16,000 to 20,000. Then you see the complimentary increase there in the 25th percentile value. Using lift days again that is the new proposed metric at Merrimack for the period only up through 2011, that value would be 174.

We've seen those increased passage rates in the most recent years; and so that value has been increased to 2010. I'll also point out that these benchmarks are being proposed to be maintained for the duration of the SFMP plan; so they won't be adjusted from year to year, they're proposed to be set.

On the Connecticut River, as we talked about, we've seen increases as well, so you can look at the median values there and how they've increased. To summarize, the SFMP the primary targets for both open harvest rivers is the fish lift count data distribution. On the Merrimack River we have that shift to shad per lift day value.

We also have on the Connecticut River simply the annual count metric. We also have warning thresholds as I discussed for the Merrimack River; based upon repeat spawners. When I say warning metrics, if you look in the Plan, the

concern there is the sample sizes. You know they're sampling between 100-200 fish, say.

What you can actually determine from scales viable data, those sample sizes go down. In order to run the analytical programs using a Chapman-Robson, the sample size would become very small. There is a lot of uncertainty. There was less confidence in using that information, other than for a warning.

As I mentioned on the Connecticut River, the Connecticut DEP benchmarks will all be used as warning thresholds. In conclusion, the SFMP just states that we've seen increasing passage counts in the most recent time period since the last 2012 to 2017. They're well above the benchmarks, and the 25th percentile benchmarks have been increased as well for both river systems. This illustrates some more of the actual detail values; comparisons between the two rivers. You see the benchmarks, warning there is a lot of text on there, but it's just illustrating the fact that there are both the benchmark count metrics as well as the warning metrics. That's my final slide. I would be happy to take any questions.

CHAIRMAN CLARK: Thank you Ken that was a very thorough presentation of the Massachusetts SFMP for shad. Are there any questions for Ken? Justin.

MR. JUSTIN DAVIS: Thanks for that presentation, Ken. You know I noticed that essentially what is missing is estimates of recreational harvest from the two river systems in Massachusetts that are currently open for harvest. I know in the Connecticut portion of the Connecticut River our agency used to do creel surveys.

Then it got to the point where essentially the fishery dwindled to a level where it was difficult to even find people fishing for shad, and that was why we discontinued the surveys. Is it your understanding that for the Massachusetts

portion of the Connecticut River and the Merrimack it's sort of the same situation; the fisheries have become so low level that surveying them isn't really efficient or possible anymore?

MR. SPRANKLE: I work closely with the Mass Division of Fisheries and Wildlife, the inland counterpart to our Division of Marine Fisheries folks from the Commonwealth. They are unable to propose doing any monitoring on that. It's difficult to say. Because I work on the river I know that there are areas that receive attention; below the dams obviously are popular. It's something that we've recognized in the CRASC shad management plan; and we know it's a challenge, as we've talked about the costs for monitoring. They have no plans. It's hard for me to say what's going on, because I don't have a basis just anecdotal.

CHAIRMAN CLARK: We have a question from Eric.

MR. ERIC REID: It's just a curiosity to me. What if anything competes with the shad for lift space?

MR. SPRANKLE: That's a good question, because in other river systems there are issues. In the Susquehanna River there is a real issue with gizzard shad. On the Connecticut River, interestingly the gizzard shad showed up in the '80s, and those numbers never climbed to a crowding issue.

To answer your question, we've seen a terrible decline in blueback herring. People are familiar with that where there was a time where we were passing over half a million blueback herring at that facility. We just broke a thousand this year. Over 15 years it's been under a thousand fish. Shad are the most abundant fish utilizing that facility.

Then we see, again under a thousand blueback herring. There are usually a couple hundred

small striped bass that will utilize the facility. I'm going to get a little off tangent here; but there were significant modifications made that I'm quite proud of with a lot of other people, to pass shortnosed sturgeon. In the past three years we've been averaging about 85 shortnosed sturgeons being passed upstream to access spawning habitat. That facility is the only facility we're aware of that is designed to pass shortnose sturgeon.

CHAIRMAN CLARK: Any further questions for Ken? Mike.

MR. MICHAEL ARMSTRONG: Mr. Chairman, I would like to make a motion if I could.

CHAIRMAN CLARK: Please do.

**MR. ARMSTRONG: I move to approve the Massachusetts Shad Sustainable Fisheries Management Plan Update.**

CHAIRMAN CLARK: Second by Justin Davis. Is there any discussion of this motion? Seeing none; I'll read it into the record. Move to approve the Massachusetts Shad SFMP Update; motion by Mr. Armstrong, second by Mr. Davis. **Do we have any objection to the motion? Seeing none; the motion is passed by unanimous consent.**

**UPDATE ON THE TECHNICAL COMMITTEE  
REVIEW OF INCONSISTENCIES WITH HARVEST  
AND MONITORING REQUIREMENTS OF  
AMENDMENTS 2 AND 3**

CHAIRMAN CLARK: Thanks, and Ken you're up for the next agenda item; the Update on the Technical Committee Review of Inconsistencies with Harvest and Monitoring Requirements of Amendments 2 and 3.

MR. SPRANKLE: Okay so we have an update we've developed; again on inconsistencies with harvest and monitoring requirements. The Board's last meeting was in October, 2017. It

tasked the Technical Committee with developing proposed improvements to both Amendment 2 and 3; with regard to five items that I'll read through here.

The first is management and monitoring of rivers with low abundance in harvest of shad and river herring. Second, standardization of sustainable fishery management plan requirements: the contents, metrics, management responses to triggers. Third is incorporation of stock assessment information into SFMPs and discussion on timelines for renewing plans.

Four, clarification of de minimis requirements as they pertain to SFMPs; and lastly Number 5, review the number of years of data that are required before developing an SFMP. We just heard the gentleman from Maine speak on his concern with that; as well as the types of data. These are all; I think they're good questions.

The Technical Committee is aware that these are our charges. We are at the current time focused on Number 1; that's why it's highlighted in green. There are a number of these other items; specifically Number 2, 3, and 5, we believe will be best handled once the shad benchmark stock assessment is completed. That information will really be of value and importance to properly address those items.

Now Item Number 4, the clarification of de minimis; we believe that is something that we might be able to tackle. We'll have to see how we proceed on that. In terms of background again, in October of 2017, the TC had been working on reviewing a lot of SFMP plans, and we identified inconsistencies between the SFMPs and the requirements of Amendments 2 and 3. Amendments 2 and 3, to remind you, require all states and jurisdictions to submit sustainable fish management plans for all systems that remain open to river herring or shad harvest, and that the SFMPs must

demonstrate fisheries are sustainable, with quantifiable sustainability targets and annual monitoring. This fall, beginning in September we've had conference calls, the Technical Committee, and we began work on trying to address the Number 1 item. We started developing a database. Caitlin has been tremendously helpful in this effort.

The inconsistencies with the amendments include; and we'll get into some permutations on this, but that there are tributaries of river systems that do have SFMPs and monitoring, but the tributaries are not explicitly addressed in the SFMP. We have rivers that are legally open to harvest without an SFMP or monitoring; but where no harvest of shad or herring is suspected. We have rivers with harvest addressed by an SFMP; but without monitoring to support sustainability, so those are some examples there of some of the inconsistencies.

That work to begin to gather that information again; that began in September. We had a second TC call in November; where people volunteered to form a task group, so we've got six people. Caitlin as I said has really been instrumental and helpful on this. We began work on developing a harvest and monitoring database; to begin to assemble the information that is available in a single place, where we can begin to look at it.

As we began to do that we came to realize that there should be additional information as well included; not just what is based out of the SMFP, but more nuance questions, questions that will help us better frame and address, provide some context to what we're trying to do here. This is an example taken from the database that is in development.

The first column is missing. That would be the state or jurisdiction. We didn't want to include that just for this presentation. You see the next data field is System. Systems are obviously that

can be very inclusive of a number of river systems. The next data field over, you see rivers or tributaries. We begin to get a little more specific.

Whether or not the regulations allow any shad harvest, yes or no, it just goes right across the field here. Any shad harvest confirmed, suspected, or no; to describe any suspected shad harvest. You can see we're trying to get some context for this. Then the last data field on this slide, I'll have another one after this, what are harvest regulations for shad? You can see that information now.

You can see the first red cell there; it's the Delaware System in Green Creek, so that would be a small tributary in the Delaware System. We'll just go across. You can see that in fact the regulations do allow shad harvesting to occur. Then when we dug in a little further with TC members, is there any shad harvest confirmed or suspected, no, and so on. Again this is continuing right across a row here. You see the system, river tributary, so next thing whether or not monitoring is occurring, yes or no. We wanted again context.

What type of monitoring is occurring? Is there a shad SFMP in place? Again, if we would go down to the Green Creek, you can see that monitoring is not occurring; it's not specifically noted in the shad SFMP. Whether or not there has been confirmed shad spawning in this case, no. This is where we get into the TC members specific knowledge; and whether or not there is a known commercial fishery past or present, the same for recreational fishery. These are just a few examples here. Utilizing that database as it stands at this time; this table helps to provide some summary information that we thought we would share with you, based upon inconsistency type. You can see again, these get into some of the permutations. The first row you see no SFMP, no monitoring, no SFMP in the second row, no monitoring, or not a spawning river and so on.

We developed that again for both river herring and shad. As currently shown for river herring; the highest frequency occurrence is harvest allowed with no SFMP and no monitoring. You can see that is 12 out of 30. For American shad the highest frequency occurrence is harvest allowed without and SFMP, no monitoring, but noted as possibly could be included in an existing SMFP.

This gets down to what you folks had brought up at your last Board meeting; it's the definition of systems. That's an obvious recognition here. That is 31 out of 46. One thing we wanted to make an important point on this that these numbers are for counting rows; it's just the way the database is set up.

Each row is at that river tributary level, so that's why we've got many, many rows, and that's why these numbers seem to be quite large. These counts may be considered part of a larger river or a system; so that's just something to bear in mind when you look at those values. Are there any questions to this point?

CHAIRMAN CLARK: Thank you, Ken. That was a lot of inconsistencies. Lynn.

MS. LYNN FEGLEY: Yes, wow. Could you go back to that final summary table slide? Just because out of curiosity, what is the total N on these areas? This is a subset of areas with inconsistencies; but how many areas are in the total universe of possibility for SFMPs?

MR. SPRANKLE: That's a good question. Actually, I can't off the top of my head give you, Caitlin can you?

MS. CAITLIN STARKS: It's between 70 and 90; depending on shad or river herring. This is looking at pretty small scale. That is one of the issues we've been encountering is that it's such a huge breadth for the species; so it's been very hard to track down this information for these

smaller tributaries that might not be mentioned anywhere in the SFMPs.

CHAIRMAN CLARK: We actually hadn't gotten to the end of the presentation; so let me let Ken finish the presentation, and then we'll take more questions. Thank you.

MR. SPRANKLE: Sorry, we were covering a lot of information, so I thought I would give an opportunity to have a question. I'll go on to the final slide. I apologize for that. We will continue to work on the database again. We're working with the full Technical Committee, again the smaller task group, to fill in additional data fields to get better context for many of the identified fields and rows.

That is in process. We've also started initial consideration; some discussions to develop potential options for resolving conflicts. That is in a very early stage. We want obviously; we'll be working through the full TC. We're going to present all the conflicts and potential solutions to the full TC; and we'll have discussions certainly on that in the coming months, and possibly look towards this coming summer to be able to provide a report again to the Board.

CHAIRMAN CLARK: The TC has a lot going on there. Thanks. Do we have any further questions for Ken on this topic? Okay seeing none.

#### **OTHER BUSINESS**

CHAIRMAN CLARK: We move on to our next agenda item; which is Other Business, and Pat Keliher, you had something from Maine?

MR. KELIHER: Yes I'll be brief; thank you, Mr. Chairman. Mike's comments at the beginning of the meeting really are the key to what we're looking at within Maine. We have had tremendous success with our river herring restorations within the state; but we are reaching a point when we have very passionate groups of both NGOs and just groups of folks

from the municipalities, trying to engage in restoration.

They are running up against this ten-year-time-limit wall; and start to lose interest very fast. This is a request for a conversation at the next meeting to discuss a White Paper that Maine is developing; and the possibility of the creation of some sort of a pilot project, where we could take some very select runs and work with communities and NGOs to see if we can use social engagement as a potential metric to actually speed up some of the recovery work that's being done in particular watersheds.

CHAIRMAN CLARK: Are there any questions for Pat on this effort up in Maine? Seeing none; oh sorry there's Toni.

MS. KERNS: Pat is it a White Paper, or is the state going to ask for a change in their sustainable fishery management plan to do something a little different for some of these rivers?

MR. KELIHER: My thinking is what we should do is to use it as a pilot project. Instead of moving forward with an addendum to change the sustainable fisheries management plan process, really focus it down into a pilot project to see if this type of system might work.

MS. KERNS: We'll have to read through the plan to see if we can do a pilot project; because I believe the Plan says you cannot have any harvest unless there is a sustainable fishery management plan. Therefore, we'll have to double check to see if that's something that's even viable in the Plan.

CHAIRMAN CLARK: Yes, Pat.

MR. KELIHER: Yes that is fine. We can work with staff between now and the next meeting; and figure out what the right approach is.

## ADJOURNMENT

CHAIRMAN CLARK: Thanks, any further questions? Is there any other business to come before the Board? Seeing none; we are adjourned.

(Whereupon the meeting adjourned at 2:00 o'clock p.m. on February 6, 2019)