## Atlantic States Marine Fisheries Commission

## **TECHNICAL ADDENDUM I**

to

Amendment 1 of the Interstate Fishery Management Plan for Shad and River Herring



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#### **Introduction**

Amendment 1 to the Interstate Fishery Management Plan for Shad and River Herring was approved in April 1999. More than a decade of declines in commercial landings culminated in the development of Amendment 1 to "protect, enhance, and restore east coast migratory spawning stocks of American shad, hickory shad, and river herrings in order to achieve stock restoration and maintain sustainable levels of spawning stock biomass". In order to achieve this goal, the FMP requires a number of fishery-independent and fishery-dependent monitoring programs as well as stocking and hatchery operations. These include, but are not limited to calculation of annual mortality rate, assessment of spawning stocks, and analysis of mixed stock contribution to ocean landings. Implementation schedules require the states to submit fishing recovery plans for approval by the Management Board by July 1,1999. In addition, the states are required to submit annual reports detailing the results of the fishery-dependent and fishery-independent monitoring.

In the fall of 1999, the Technical Committee reviewed both state annual reports and fishing recovery plans. In doing so, the Technical Committee compiled a report which identified a number of technical errors that require correction and/or clarification in Amendment 1. Upon review by the Shad and River Herring Management Board, the Board concurred with the Technical Committee's report and suggested that a technical addendum be developed to address each of the components identified for correction.

As described in detail below, Technical Addendum 1 addresses the following:

- C Removal of the wording in Table 3 requiring Maine to participate in ocean Landings stock composition study
- C Removal of the wording in Table 3 requiring Connecticut to monitor the recreational landings in the Massachusetts portion of the Connecticut River
- C Removal of the wording in Table 3 requiring Rhode Island to monitor the commercial fishery in the Pawcatuck River.
- C Removal of the wording in Tables 2 and 3 that require South Carolina to sample the Combahee, Ashepoo, and Coosawhatchie Systems.
- C Rework language in Tables 2 and 3 to require South Carolina to sample the Santee, Edisto, and Winyah Bay and tributaries.

#### **Technical Addendum Corrections**

Please see the attached Tables 2 and 3

State	System	Sampling Program (annual unless otherwise noted)
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Maine	Androscoggin & Saco Rivers	Annual spawning stock survey and representative sampling for
		biological data
		Calculation of mortality and/or survival estimates
		Recovery of any visibly marked animals
New	Lamprey & Exeter Rivers	Annual spawning stock survey and representative sampling for
Hampshire		biological data
		Calculation of mortality and/or survival estimates
		Recovery of any visibly marked animals
Massachusetts	Merrimack River	Annual spawning stock survey and representative sampling for
		biological data
		Calculation of mortality and/or survival estimates
		Recovery of any visibly marked animals
Rhode Island	Pawcatuck River	Annual spawning stock survey and representative sampling for
		biological data
		Calculation of mortality and/or survival estimates
		Recovery of any visibly marked animals
Connecticut	Connecticut River	Annual spawning stock survey and representative sampling for
		biological data
		Calculation of mortality and/or survival estimates
		JAI: Juvenile abundance survey (GM)
New York	Hudson River	Annual spawning stock survey and representative sampling for
1.0		biological data
		Calculation of mortality and/or survival estimates
		JAI: Juvenile abundance survey (GM)
	Delaware River	Annual spawning stock survey and representative sampling for
	Delaware River	biological data
		Calculation of mortality and/or survival estimates
		JAI: Juvenile abundance survey (GM)
New Jersey	Delaware River	Annual spawning stock survey and representative sampling for
New Jersey	Delaware River	biological data
		Calculation of mortality and/or survival estimates
		JAI: Juvenile abundance survey (GM)
Pennsylvania	Susquehanna River	Annual spawning stock survey and representative sampling for
1 emisyivama	Susquenanna Kiver	biological data
		Calculation of mortality and/or survival estimates Recovery of any visibly marked animals
		JAI: Juvenile abundance survey (GM)
	Labiah Dirror	Hatchery Evaluation
	Lehigh River	Annual spawning stock survey and representative sampling for
		biological data Calculation of mortality and/or survival estimates
	Dalaana Di	Hatchery Evaluation
	Delaware River	Annual spawning stock survey and representative sampling for
		biological data
		Calculation of mortality and/or survival estimates
D.1	D-1 D	JAI: Juvenile abundance survey (GM)
Delaware	Delaware River	Annual spawning stock survey and representative sampling for
		biological data
		Calculation of mortality and/or survival estimates
Maryland	Upper Chesapeake Bay	Annual spawning stock survey and representative sampling for
		biological data
		Calculation of mortality and/or survival estimates
		JAI: Juvenile abundance survey (GM)
		Hatchery Evaluation
	Potomac River	JAI: Juvenile abundance index (GM)

### Table 2. Summary of mandatory fishery-independent monitoring programs for American shad

D.C.	Potomac River	Annual spawning stock survey and representative sampling for biological data Calculation of mortality and/or survival estimates
Virginia	James, York, and Rappahannock Rivers	Annual spawning stock survey and representative sampling for biological data Calculation of mortality and/or survival estimates JAI: Juvenile abundance survey (GM)
		Hatchery Evaluation
North Carolina	Albemarle Sound and its tributaries, Tar-Pamlico, Neuse, and Cape Fear Rivers	Annual spawning stock survey and representative sampling for biological data Calculation of mortality and/or survival estimates
South Carolina	Santee-Cooper system, Eidsto River, Winyah Bay and tributaries (Waccwnaw and Pee	Annual spawning stock survey and representative sampling for biological data Calculation of mortality and/or survival estimates
	Dee Rivers)	* State may elect to sample these systems on a rotational basis (i.e., one system evaluated per year)
Georgia	Altamaha River	Annual spawning stock survey and representative sampling for biological data Calculation of mortality and/or survival estimates
Florida	St. Johns River	Annual spawning stock survey and representative sampling for biological data Calculation of mortality and/or survival estimates

STATE	SYSTEM	SAMPLING PROGRAM
Maine	Inriver	Recreational catch and effort using MRFSS
	Atlantic Ocean	Mandatory reporting of catch (numbers and weight) and effort from commercial fisheries; subsamples shall indicate size, age, and sex composition of catch.
New Hampshire	Inriver/coastal	Recreational catch and effort using MRFSS
Connecticut	Connecticut River	Mandatory reporting of catch (numbers and weight) and effort from commercial fisheries; subsamples shall indicate size, age, and sex composition of catch. Biannually monitor recreational landings in CT - age, sex ratio, and fishing effort (hours fished) until annual catch > 1,000 fish
Rhode Island	Pawcatuck River	Monitor recreational catch and effort every 5 years.
	Atlantic Ocean	Mandatory reporting of catch (numbers and weight) and effort from commercial fisheries; subsamples shall indicate size, age, and sex composition of catch. Participate in Ocean landings stock composition study.
New York	Hudson River	Mandatory reporting of catch (numbers and weight) and effort from commercial fisheries; subsamples shall indicate size, age, and sex composition of catch. Monitor recreational landings, catch, and effort every 5 years.
	Delaware River	Monitor recreational landings, catch, and effort every 5 years. (Cooperative effort between New Jersey, New York, Pennsylvania, and Delaware)
New Jersey	Delaware River and Bay	Mandatory reporting of catch (numbers and weight) and effort from commercial fisheries; subsamples shall indicate size, age, and sex composition of catch. Monitor recreational landings, catch, and effort every 5 years. (Cooperative effort between New Jersey, New York, Pennsylvania, and Delaware)
	Atlantic Ocean	Mandatory reporting of catch (numbers and weight) and effort from commercial fisheries; subsamples shall indicate size, age, and sex composition of catch. Participate in Ocean landings stock composition study.
Delaware	Delaware River and Bay	<ul> <li>Mandatory reporting of catch (numbers and weight) and effort from commercial fisheries; subsamples shall indicate size, age, and sex composition of catch.</li> <li>Monitor recreational landings, catch, and effort every 5 years. (Cooperative effort between New Jersey, New York, Pennsylvania, and Delaware)</li> </ul>
	Nanticoke River Ches. Bay tributary (upstream portion)	Mandatory reporting of catch (numbers and weight) and effort from commercial fisheries; subsamples shall indicate size, age, and sex composition of catch. Monitor recreational landings, catch, and effort every 5 years.
	Atlantic Ocean	Mandatory reporting of catch (numbers and weight) and effort from commercial fisheries; subsamples shall indicate size, age, and sex composition of catch. Participate in Ocean landings stock composition study.
Pennsylvania	Delaware River	Monitor recreational landings, catch, and effort every 5 years. (Cooperative effort between New Jersey, New York, Pennsylvania, and Delaware)
Maryland	Inriver	Monitor recreational landing, catch, and effort every 5 years.
	Atlantic Ocean	Mandatory reporting of catch (numbers and weight) and effort from commercial fisheries; subsamples shall indicate size, age, and sex composition of catch. Participate in Ocean landings stock composition study.
Virginia	Inriver	Monitor recreational landings, catch, and effort every 5 years
	Atlantic Ocean	Mandatory reporting of catch (numbers and weight) and effort from commercial fisheries; subsamples shall indicate size, age, and sex composition of catch. Participate in Ocean landings stock composition study.

# Table 3: Mandatory fishery-dependent monitoring programs for American shad. STATE SYSTEM

North Carolina	Albemarle Sound and its tributaties, Tar-Pam-lico, Neuse, and Cape fear Rivers	Mandatory reporting of catch (numbers and weight) and effort from commercial fisheries; subsamples shall indicate size, age, and sex composition of catch. Monitor recreational landings, catch, and effort every 5 years
	Atlantic Ocean	Mandatory reporting of catch (numbers and weight) and effort from commercial fisheries; subsamples shall indicate size, age, and sex composition of catch. Participate in Ocean landings stock composition study.
South Carolina	Edisto River, Santee River, Winyah Bay and its tributaries (Waccwnaw and Pee Dee Rivers) Atlantic Ocean	Mandatory reporting of catch (numbers and weight) and effort from commercial fisheries; subsamples shall indicate size, age, and sex composition of catch. Monitor recreational landings, catch, and effort every 5 years *State may elect to sample these systems on a rotational basis (i.e., one system evaluated per year) Mandatory reporting of catch (numbers and weight and effort form commercial fisheries; subsamples shall indicate size, age, and sex composition of catch.
Georgia	Ogeechee	Participate in Ocean landings stock composition study. Mandatory reporting of catch (numbers and weight and effort form commercial fisheries; subsamples shall indicate size, age, and sex composition of catch. Monitor recreational landing, catch, and effort every 5 years.
Florida	St. Johns River	Mandatory reporting of catch (numbers and weight) and effort from commercial fisheries; subsamples shall indicate size, age, and sex composition of catch. Monitor recreational landings, catch and effort every 5 years.