Amendment #1 (6/98)
1989 Chesapeake Bay Alosid Management Plan

Introduction

Historically, American shad (*Alosa sapidissima*) supported one of the most valuable fisheries in the Chesapeake Bay. From the late 1800s to the mid-1900s, shad was the most economically valuable food fish harvested from the Bay. Commercial shad landings peaked in 1896 at nearly 18 million pounds. The shad run to the Susquehanna River was essentially eliminated in 1904 with the construction of York Haven Dam at River Mile 54. Commercial harvest from the Chesapeake Bay began decreasing, thereafter. From 1910 through 1930, the commercial harvest of shad from the Chesapeake Bay ranged between 5.0 and 7.0 million pounds. Annual landings during this time period were not recorded so average catch has not been calculated. Commercial landings between 1950 and 1970 ranged between 2.2 and 5.6 million pounds and averaged 4.0 million pounds. Approximately 1.4 million pounds were harvested from Maryland. A viable shad run and fishery continued into the late 1960s and early 1970s in the 10 miles below Conowingo Dam. By the late 1970's, shad commercial landings from Maryland dropped to less than 50,000 pounds.

There has been a moratorium on the harvest of American shad from Maryland waters of the Bay since 1980 and from Virginia state waters since 1994. The Potomac River Fisheries Commission (PRFC) implemented a moratorium on American shad in the Potomac River in 1982 and Pennsylvania has prohibited the harvest of American shad within the Susquehanna River basin. Along the Atlantic coast, American shad are harvested during spring from Florida to Maine. Since 1980, total Atlantic coast commercial landings have ranged from 1.5 million pounds (1994) to 4.6 million pounds (1984, NMFS data). Landings began to noticeably decline in 1990 and reached a low in 1994. Since then, there has been a gradual increase in landings. The 1996 coastal landings were 2.0 million pounds. Of the 1996 total, Maryland landed 132,639 pounds and Virginia landed 238,112 pounds (NMFS data).

Reasons for the decline in shad landings from other coastal rivers and the coast, probably differ regionally and may be due to several factors. These factors could include overfishing, enhanced striped bass predation, changes in abiotic conditions and a drop in commercial fishing effort (Atlantic States Marine Fisheries Commission, Shad Stock Assessment Committee, 1997). Since there is no fishery in the Bay, standard fishery dependent programs are not available to monitor the status of the stock. The Maryland Department of Natural Resources has monitored the shad population in the upper Bay since 1980. Results of the mark/recapture study have produced annual estimates of abundance. Because of some violations of assumptions associated with the mark/recapture methodology, the population estimates indicate trends over time rather than absolute abundance. The most recent data indicate that American shad abundance is increasing. The upper Bay population estimates, however, provide a limited profile of the American shad population in the Bay.

Shad management in the Chesapeake Bay has substantially changed toward restoration of shad runs in tributary rivers through the construction of fish passage and seed stocking of juvenile

shad. As part of the effort to increase American shad stocks in the Bay, the 1989 Chesapeake Bay Alosid FMP recognized the need to coordinate fish passage and restocking efforts. The Fish Passage Workgroup of the Chesapeake Bay Program's Living Resources Subcommittee (LRSc) was charged with the reopening of blocked tributary waters of the Bay to provide access to spawning habitat for anadromous fish. This is being accomplished through the construction of fish passage facilities, dam removals, reconstruction of highway culverts and by creating breaches and/or notches. To date, over 400 miles of stream habitat have been opened. Through the fish passage program, two goals have been set, a 5-year goal (by 1998) to open 731 miles of blocked habitat and a 10-year goal (by 2003) to open 1357 miles. Each Bay jurisdiction has also been responsible for the trapping, transporting and stocking of American shad in river systems throughout the Bay. These efforts have been extensive over the years. Between 1986 and 1996, approximately 159 million fry and fingerlings were cultured and released under restoration programs in the Susquehanna, James, Pamunkey, Patuxent and Potomac rivers. An additional 3 million shad have also been stocked in several other Maryland tributaries in recent years. These restoration efforts substantially increase the expectations about the size of the shad population in the future and require a reevaluation of the threshold/target population size for allowing a shad harvest to resume.

B. Problem Areas and Management Strategies

Problem 1.1

In the 1989 Chesapeake Bay Alosid Management Plan, the Bay jurisdictions agreed on a strategy (#1.1.1) to remove the Baywide moratorium on harvesting shad. Reestablishing a fishery would occur when annual population estimates in the upper Bay increased for three consecutive years and stock size reached at least 50% of historical levels, or 500,000 fish, during one of the three years. The upper Bay shad population was estimated at over 700,000 fish during 1997 and was the second consecutive year of increasing trends. The Atlantic States Marine Fisheries Commission (ASMFC) Stock Assessment Peer Review Panel assessed the upper Bay mark-recapture methodology. They concluded that some assumptions are violated and that the population estimates indicate trends over time rather than absolute abundance. With the fish passage facilities operational on the Susquehanna River, Pennsylvania has adopted a goal of reestablishing a self-sustaining population of 3.0 million adult American shad at Conowingo and 2.0 million adult shad upstream of York Haven Dam. Given these new developments, the criteria for reopening a fishery in the upper Bay need to be reevaluated.

Strategy 1.1

The Bay jurisdictions will reevaluate the criteria for reopening a fishery in the Chesapeake Bay during the Alosid FMP revision process. Until new criteria are determined, the moratorium will remain in place for American and hickory shad in the Chesapeake Bay.

Action 1.1

The Bay jurisdictions will continue the moratorium on American shad in the Chesapeake Bay.

Implementation 1.1
Continue

Problem 1.2
A special target-setting task force was charged to "establish measurable restoration targets" for American shad in the Bay. Eight spawning/nursery areas that historically supported substantial recreational and commercial fisheries were used to develop tributary-specific, quantitative recovery targets. The task force recommended that the stock recovery targets proposed for American shad be incorporated into the Alosid management plan.

Action 1.2
The Bay jurisdictions will incorporate the shad restoration targets into the revised Alosid FMP.

Implementation 1.2
1999

1998Amendment #1 to the 1989 Chesapeake Bay Alosid Plan Implementation Table (updated 2008)

Problem Area	Action	Date	Comments
Strategy 1.1 The Bay jurisdictions will reevaluate the criteria for reopening a fishery in the Chesapeake Bay during the Alosid FMP revision process. Until new criteria are determined, the moratorium will remain in place for American and hickory shad in the Chesapeake Bay.	Action 1.1 The Bay jurisdictions will continue the moratorium on American shad in the Chesapeake Bay	Continue	To date, the 1989 CBP Alosid Plan has not been revised and is slated for the development of an EBFMP in 2010. The moratorium remains in place but the jurisdictions allow for a minimal bycatch.
Strategy 1.2 A special target-setting task force was charged to "establish measurable restoration targets" for American shad in the Bay. Eight spawning/nursery areas that historically supported substantial recreational and commercial fisheries were used to develop tributary-specific, quantitative recovery targets. The task force recommended that the stock recovery targets proposed for American shad be incorporated into the Alosid management plan.	Action 1.2 The Bay jurisdictions will incorporate the shad restoration targets into the revised Alosid FMP.	1999	Several attempts have been made to develop measurable tributary-specific restoration targets for American shad. Although recovery targets could be developed based on historical commercial landings, there is no feasible means to monitor progress towards any target with the moratorium in place. The CBP shad abundance index has been expanded from one source of data from the head of the bay to four areas; including the James, York and Potomac Rivers.