Atlantic States Marine Fisheries Commission

PUBLIC INFORMATION DOCUMENT

For Potential Changes to the
Interstate Fishery Management Plan
For

AMERICAN EEL

Prepared by the
American Eel Plan Development Team

Approved November 10, 2004

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Introduction

The Atlantic States Marine Fisheries Commission (ASMFC) is considering changes to its Interstate Fishery Management Plan for American Eel (FMP). The current FMP for American Eel was approved in April 2000.

In March 2004, the American Eel Management Board convened to review advice from the American Eel Technical Committee with respect to potential management changes that could be made to address the population declines revealed by available science. In May 2004, the Board tasked the American Eel Plan Development Team with developing this Public Information Document (PID) to explore issues related to American eel management and potential changes to the FMP.

Purpose of the Public Information Document

The purpose of this document is to inform the public of the intent of the ASMFC to gather information concerning the American eel fishery and provide an opportunity for the public to identify major issues and alternatives relative to the management of American eel. Input received at the start of the public input process can have a major influence on the outcome of any changes to American eel management. The purpose of this document is to draw out observations and suggestions from the public, as well as any supporting documentation and additional data sources. To facilitate public input, this document provides a broad overview of the issues facing the American eel population and fishery.

This document identifies eight specific issues on which the ASMFC is seeking public comment, however the underlying question for public comment is: **"How would you like the American eel population and fishery to look in the future?"** Please provide any general comments on the American eel population or American Eel management as well as any comments that are specific to the issues listed later in this document.

The Process

Publication of this document and announcement of the intent of the ASMFC to gather public comment regarding American eel management is the first step of the Commission process. Following the initial phase of information-gathering and public comment, the ASMFC will evaluate potential management alternatives and the impacts of those alternatives. At that time, the Management Board will determine the most appropriate steps to take in terms of potential modifications to the current American eel management program. The management program may be modified through an Addendum or an Amendment to the Fishery Management Plan.

Depending upon the public's reaction and comment on the issues discussed in this Public Information Document (PID), the Management Board may decide to pursue an Addendum to the Fisheries Management Plan (FMP) for American Eel, or the Board may decide that an Amendment to the FMP is the most appropriate choice. An Addendum would allow the Board to rapidly address specific issues that the public feels require immediate attention, while the Amendment process would allow the Management

Board to conduct additional fact-finding and outreach activities for public participation and comment on broader issues.

The Management Board may also decide to proceed on both an Addendum and an Amendment to the FMP simultaneously. This process would allow certain issues to be resolved expeditiously via the Addendum, while other issues that require more information such as that expected from the pending stock assessment and Federal status review, or those issues not appropriately addressed through an Addendum, may be more thoroughly examined over a longer period of time.

This is the public's chance to tell the ASMFC about changes observed in the fishery, things the public feels should or should not be done in terms of management, regulation, enforcement, research, development, enhancement, and any other concerns the public has about the resource or the fishery. In addition, this is the public's chance to present reasons for the changes and concerns listed for the fishery.

Background

The American eel occupies and is exploited in fresh, brackish and coastal waters along the Atlantic from the southern tip of Greenland to northeastern South America. The species has a catadromous life cycle, spawning only in the Sargasso Sea and then migrating toward land and into freshwater, spending the majority of its life in freshwater. After hatching and ocean drift, initially in the pre-larval stage and then in the leptocephalus phase, metamorphosis occurs. In most areas, glass eel enter the nearshore area and begin to migrate up-river, although there have been reports of leptocephalus found in freshwater in Florida. Glass eel, elvers, yellow and silver eel are found in the marine environment during part of their life cycle. Elvers, yellow and silver eel also make extensive use of freshwater systems. Therefore, a comprehensive eel management plan and comprehensive set of regulations must consider the various unique life stages and the diverse habitats used, in addition to society's interest and use of this resource.

American eel (*Anguilla rostrata*) occupy a significant and unique niche in the Atlantic coastal reaches and its tributaries. Historically, American eel were very abundant in East Coast streams, comprising more than 25 percent of the total fish biomass in the streams. The abundance of this species declined from the historic levels but remained relatively stable until the 1970s. More recently, fishermen, resource managers, and scientists postulated a further decline in abundance from harvest and limited assessment data. This resulted in the development of the Atlantic States Marine Fisheries Commission (ASMFC) Interstate Fishery Management Plan (FMP) for American eel. The goals and objectives of the FMP are:

1. Protect and enhance the abundance of American eel in inland and territorial waters of the Atlantic States and jurisdictions and contribute to the viability of the American eel spawning population; and
2. Provide for sustainable commercial, subsistence, and recreational fisheries by preventing overharvest of any eel life stage.

Primary Objectives

- Improve knowledge of eel utilization at all life stages through mandatory reporting of harvest and effort by commercial fishers and dealers, and enhanced recreational fisheries monitoring.
- Increase understanding of factors affecting eel population dynamics and life history through increased research and monitoring.
- Protect and enhance American eel abundance in all watersheds where eel now occur.

- Where practical, restore American eel to those waters where they had historical abundance but may now be absent by providing access to inland waters for glass eel, elvers, and yellow eel and adequate escapement to the ocean for pre-spawning adult eel.
- Investigate the abundance level of eel at the various life stages, necessary to provide adequate forage for natural predators and support ecosystem health and food chain structure.

Harvest pressure and habitat losses are listed as the primary causes of any possible historic and recent decline in abundance. Several factors contribute to the risk that heavy harvest may adversely affect American eel populations: (1) American eel mature slowly, require 7 to 30+ years to attain sexual maturity; (2) glass eel aggregate seasonally to migrate; (3) yellow eel harvest is a cumulative stress, over multiple years, on the same year class; and (4) all eel mortality is pre-spawning mortality. Blockage of stream access, pollution, and nearshore habitat destruction limit habitat availability for eel. Oceanic changes may also contribute to declines in eel abundance. One estimate states that diadromous fish, dependent on access to Atlantic coastal watersheds, may be hindered from reaching up to 84% of upstream habitats. Downstream passage technology to increase escapement of outmigrating adults is also lacking.

Planning and regulatory activities require information, specifically, the abundance and status of the species and its habitat. Management is made difficult by the paucity of long-term data sets describing eel abundance at any life stage. Although eel have been continuously harvested, consistent data on harvest are often not available and, when available, are not good indicators of abundance because harvest is dependent on demand for eel. Where available, most of the data are of short duration and data collections were not standardized between management agencies. Few other long-term data sets are available from fish ladders, impingement sampling, research collections, and monitoring programs. In addition, changes in year-class strength are not readily recognizable because most samples of fish include fish of similar sizes but from an unknown number of year classes.

A compilation of all available information on eel fisheries and biology suggests that the data are fragmented and/or incomplete. Therefore, the FMP identifies standardized commercial and recreational regulation and surveys and monitoring programs by each state. The annual Young of the Year (YOY) Abundance Survey is required for each state under the FMP. The Technical Committee approved a standard YOY survey protocol in 2000.

Each state is responsible for implementing management measures and the identification and protection of habitat within its jurisdiction to ensure the sustainability of the American eel population that resides within state boundaries. Since the American eel is one panmictic population, significant management action will have range-wide implications. The FMP suggests new funding and improved coordination in order to effectively standardize regulations, collection of abundance data at various life stages, and evaluation of habitat and restoration.

The American Eel Technical Committee met on March 2-3, 2004 to discuss the status of the American eel population. Dr. John Casselman from the Canada Department of Fisheries and Oceans (DFO) presented findings of a continued decline in both abundance of eel, as measured from the commercial landings, and recruitment of eels ascending the eel ladder at the Moses-Saunders hydroelectric dam, which spans the St. Lawrence River. The demonstrated decline in this northern portion of the population is of concern because this segment of the population consists mainly of large, fecund females. It is the escapement of such large, fecund female eels that is thought to have a direct effect on recruitment of eels along the coast.

Since this population is believed to be panmictic, an eel larva from the Sargasso may recruit to any region along the coast – thus, loss of such a population of large, fecund females may have negative consequences for the rest of the stock. Recruitment for northern areas, like all other areas, is assumed to be dependent on stock size – thus, a decline in recruitment to any area along the coast is assumed to be indicative of declining stocks along the remainder of the coast. In addition, when stocks of a resource are in decline, this declining trend is often first noted at the extreme ends of the range of the resource. If this pattern holds true for American eels, the data from the Lake Ontario/St. Lawrence region may hold particular significance in terms of forecasting further declines along the coast. The report of the ICES Working Group on Eels (2000) does note, however, that northern areas of the range may be more sensitive to larval dispersal mechanisms associated with oceanographic conditions (ICES 2000).

Dr. Casselman utilized both Canadian and US landings of eel, collected from 1945 to the present, to demonstrate the extent of the decline in 2003 commercial landings to the lowest levels recorded, indicating a localized stock collapse in the Lake Ontario/St. Lawrence River system. Dr. Casselman also showed evidence from the Moses-Saunders eel ladder that indicates a localized recruitment failure. Other sources of information, including fishery dependent research, support the conclusion of localized stock collapse/recruitment failure. The American Eel Technical Committee crafted a set of recommendations for the American Eel Management Board based on the continued decline of American eel from the Lake Ontario/St. Lawrence River and the potential effect that these and other localized declines will have on US Atlantic coast American eel.

Locally, ongoing research from the Chesapeake Bay area estimates that eels appear overfished in the Chesapeake Bay relative to three different biological reference points, with the maximum spawning potential of stocks in the Bay well below what is needed for replacement of the stock (Weeder and Uphoff, in press[a]). It is noted that ICES guidelines recommend that fishing mortality (F) equal natural mortality (M) in data-poor situations, but in 2001 F in the upper Chesapeake Bay was estimated at two to four times larger than M (Weeder and Uphoff, in press[a]). It has been reported that recruitment may be needed from other areas along the Atlantic coast with lower fishing mortality for the American eel populations in the Chesapeake Bay to continue at present levels (Weeder and Uphoff, in press[a]). Another report from the Chesapeake Bay states that eel densities in surveyed tributaries have decreased over time, and the observed size structure of eels in the Bay has also changed over time (Weeder and Uphoff, in press[b]). This report suggests that high fishing mortality rates may be responsible for the observed changes in the Chesapeake Bay eel population and recommends changes in management aimed at reducing fishing mortality and maximizing spawning escapement of silver eels (Weeder and Uphoff, in press[b]).

The FMP instituted a mandatory annual Young-of-the-Year (YOY) abundance survey. The purpose of the YOY survey is to characterize trends in annual recruitment of young of the year eel over time. The desired result or outcome will be a qualitative appraisal of the annual recruitment of American Eel to the U.S. Atlantic coast. All states/jurisdictions were required to implement the YOY survey beginning in the year 2000. Challenges such as effective sampling site location, trap vandalism and theft, and other factors initially prevented some states/jurisdictions from implementing the survey on time. Technical committee members from nearby states have made themselves available to assist states having a difficult time with survey implementation, and all states were attempting a survey by 2003. In December 2003, a Young-of-the-Year survey workshop was conducted to bring the individuals responsible for the surveys in their respective jurisdictions together. Factors affecting the surveys such as gear, method, timing, and cost were presented by each jurisdiction. Representatives were encouraged to discuss any difficulties experienced in survey implementation and the forum was a productive means of addressing these issues. Suggestions for alternative funding were discussed for states where personnel and funding issues make survey implementation difficult. All jurisdictions have been implementing the survey for at least two

years now, though some have been implementing since 2000. The Stock Assessment Subcommittee plans to evaluate the results of the survey to this point and determine the applicability of the results to a coastwide benchmark stock assessment in 2005.

The European Management Response

Since the early 1980s, a 90% decline in recruitment has been observed in continent-wide populations of the European eel, *Anguilla anguilla* (Dekker 2003). ICES 2000 notes that reductions in habitat, declining or neutral trends in abundance, severe decline in abundance in northern areas, continuous exploitation, and unknown oceanographic effects support the adoption of the precautionary approach in the management of American eel. In Europe, two countries have national eel management plans, one has a set of regional management plans, four are currently preparing plans, and three do not have management plans for eel. Some European countries see no need for an eel management plan, while others are waiting for the international guidelines for these plans before they are written and implemented. ICES 2003 notes that, while there is no evidence that any existing national management plan has effected a significant change in overall stocks, there are only three management plans in place, they have not been implemented for a long period of time, and this lack of evidence of a noticeable change for overall stocks may be due to factors other than the plans themselves. Almost all countries in Europe where eel fishing takes place have implemented some sort of action to control eel fishing mortality (ICES 2003). The report of the Working Group on Eels notes the importance of developing management plans for all areas in Europe where eels are fished (ICES 2003). The report also notes that, in Europe, the available information points to the stocks being depleted enough that urgent management action is recommended (ICES 2003). The ICES Working Group on Eels states that there is no longer time for research and monitoring based on a long-term planning scale; rather, that moving forward with focused and prioritized management must be done immediately and must coincide with ongoing monitoring efforts (ICES 2003). Development of a "goal-oriented, cost-effective, and comprehensive monitoring program" is listed as a matter of "utmost importance (ICES 2003)."

Description of the Fishery

Commercial Fishery

American eel currently support important commercial fisheries throughout their range. Fisheries are executed in rivers, estuaries, and ocean. Commercial fisheries for glass eel/elver exist in Maine, South Carolina, and Florida (though in Florida no commercial glass eel/elver landings were recorded in 2002), whereas yellow/silver eel fisheries exist in all states/jurisdictions with the exception of Pennsylvania and the District of Columbia.

Coastwide commercial landings for American eel have declined dramatically from historic highs. Commercial landings decreased from the high of 1.8 million pounds in 1985 to a low of 649 thousand pounds in 2002. Landings from Maryland, Virginia and Delaware combined accounted for 55% of commercial landings in 2002, with 41% coming from Maryland and Virginia. The Potomac River Fisheries Commission reported combined landings (2002) for Maryland and Virginia of 128,595 pounds.

Recreational Fishery

Few recreational anglers directly target eel. Hook and line fishermen, for the most part, catch eel incidentally when fishing for other species. The NMFS Marine Recreational Fisheries Statistics Survey (MRFSS), which has surveyed recreational catch in ocean and coastal county waters since 1981, shows a

declining trend in the catch of eel during the latter part of the 1990's. According to MRFSS[1], 2002 recreational catch was 44,043 fish, which represents an increase in number of fish from 2001 (34,869 fish). New York, Georgia, Delaware and New Jersey together represented 78% of the recreational American eel landings in 2002. About one half of the eel caught are released alive by the anglers. Eel are often purchased by recreational fishermen for use as bait for larger game fish such as striped bass, and some recreational fishermen may catch eels and then utilize them as bait.

Status of the Stocks

Current stock status for American eel is poorly understood due to limited and non-uniform stock assessment efforts and protocols across the range of this species. Reliable indices of abundance of this species are scarce. Limited data from indirect measurements (harvest by various gear types and locations) and localized direct stock assessment information are currently collected.

Although eel have been continuously harvested, consistent data on harvest are often not available. Harvest data is often a poor indicator of abundance, because harvest is dependent on demand and may consist of annually changing mixes of year classes. Most of the data collections were of short duration and were not standardized between management agencies. Harvest data from the Atlantic coastal states (Maine to Florida) indicate that the harvest has declined after a peak in the mid-1970s. Annual eel catch ranged from 913,251 lbs. to 3,626,936 lbs. between 1970 and 2000. The lowest harvest (between 1970 and 2001) was 898,459 lbs., which occurred in 2001. Because fishing effort data is unavailable, however, finding a correlation between population numbers and landings data is problematic.

As stated in Section 2 of the FMP, the purpose of this management effort is to reverse any local or regional declines in abundance and institute consistent fishery-independent and dependent monitoring programs throughout the management unit.

In 2003, declarations from the International Eel Symposium (AFS 2003, Quebec City, Quebec, Canada) and the Great Lakes Fisheries Commission (GLFC) highlighted concerns regarding the health of American eel stock. Available data points to decreasing recruitment, combined with localized declines in abundance. This information is cause for concern and represents an opportunity for cooperation with other entities such as the GLFC to preserve the American eel stock.

The Commission will complete the benchmark, peer-reviewed stock assessment for American eel in 2005. This will be the first assessment coordinated by the ASMFC for American eels. The 2005 assessment may provide additional insight into the status of the American eel stock and may contain additional advice on potential changes to American eel management.

[1] MRFSS Data for American Eel are unreliable. Due to data collection problems with the MRFSS telephone survey during Waves 2-3, 2002, preliminary estimates for this period are based upon pooled data from the previous three years.

Public Comment Issues

Public comment is being sought on a series of issues that may need to be included as changes to American eel management.

Issue 1. Recreational possession limit

Section 4.1 of the ASMFC Interstate Fishery Management Plan for American Eel states, "In order to minimize the chance of excessive recreational harvest, as well as circumvention of commercial eel regulations, the ASMFC member states/jurisdictions shall establish uniform possession limits for recreational fisheries of a six inch minimum size and a possession limit. Recreational anglers may possess no more than 50 eels per person, including crew members involved in party/charter (for-hire) employment, for bait purposes during fishing. Recreational fishermen will not be allowed to sell eel without a State license permitting such activity."

The American Eel Technical Committee recommends a reduction of the harvest or possession limit for the recreational fishery. This option could be implemented in conjunction with reductions in the commercial fishery to ensure equity between both sectors of the American eel fishery.

Does the public believe the recreational possession limit for American eel should be changed or should remain the same?

If the recreational possession limit where changed, what does the public believe the limit should be?

Is a harvest limit a more useful method than possession limits for regulating the amount of eels caught by recreational fishermen for use as bait?

Do members of the public routinely purchase eels for use as bait, or are eels used for bait generally personally caught for use by the individual who catches them?

For those who purchase the eels they use for bait, would a reduced bag limit alter the way eels are purchased from bait dealers?

Issue 2. Silver eel fishery

While all fishing mortality on American eels is pre-spawning, silver eels are the mature adult outmigrating segment of the population, and thus may merit protection as the segment of the population that is most likely to provide immediate spawning potential and subsequent recruitment to the stock. Implementation of this option is difficult to define, as silver eels are not necessarily easy to identify quickly by sight. A size limit may be one way to determine which eels would be identified as "silver" and thus subject to restrictions, but this methodology is not necessarily accurate for determining that an eel is in fact at the silver life stage and the Technical Committee noted the difficulty of measuring a live adult eel.

The American Eel Technical Committee recommends a closure of all directed silver eel fisheries.

Does the public believe that all directed silver eel fisheries should be closed?

Issue 3. Seasonal closures

The American Eel Technical Committee recommends a seasonal closure for fishing of American eel. This closed season would be defined by states in a biologically defensible manner. The season would include a minimum closure of 90 days, to correspond with the traditional time period of the States' silver eel migrations. This time period, though variable along the coast and with environmental conditions, is generally during the fall months but can extend from August until the end of December or possibly into January, depending on location along the coast. Such a closure would apply for all gear types that harvest eels during the state-specified time period. A seasonal closure during this time period would have the effect of protecting the outmigrating silver eels during a period of peak effort for the eel fisheries. The reductions in effort and fishing mortality expected to result from implementation of this option are thought to be substantial based on historic patterns and timing of landings from the Atlantic coast as reported by the states and by the National Marine Fisheries Service.

Does the public believe a seasonal closure for American eel fishing should be implemented?

If so, during what time of year does the public believe this seasonal closure should take place?

What does the public believe is the appropriate length (number of days) for such a seasonal closure?

Issue 4. Catch and effort data

Many states have expressed continued difficulty in obtaining accurate data on catch and effort for eels. The majority of the American Eel Technical Committee recommends that, at a minimum, states be required to provide accurate catch and effort data for use in the upcoming benchmark stock assessment as well as for future stock assessments. While states are currently required to report annual landings by life stage, a recent Technical Committee review of dealer data indicates the possibility of underreporting of harvest/landings information to the states, as dealer landings numbers have been higher in some cases than the landings numbers reported to the states. In addition, landing reports often do not differentiate between life stages and do not specify whether the eels being landed were used for food or bait. The Management Board has expressed a desire to develop more specific information on all sectors of the American eel fishery, including the bait sector, to gain more specific understanding of eel fisheries and determine which activities have the greatest effects on the American eel stock.

The Technical Committee recommends the implementation of a specific commercial and recreational eel harvester permit/license for each state, with each license requiring reporting of catch and effort. The permit/license should be required for all eel harvesters, including those who harvest eels for personal use or for use/sale as bait. The Technical Committee also recommends a specific eel report and license/permit from dealers, including bait dealers. Harvester and/or dealer reports must differentiate between the amount of eels used/sold for food and the amount of eels used/sold for bait. A provision could be included to exempt states that already have mandatory trip-level reporting for all fishermen and dealers, such as the North Carolina Trip Ticket Program.

The Technical Committee noted that the portion of American eel harvest (commercial and recreational) used for bait in other fisheries is an increasing component of overall American eel fishing mortality. Since alternative bait sources are available, the bait fishery was discussed as a possibility for an area of

the fishery that can be subject to reductions in harvest and effort. The bait fishery was discussed both in terms of the commercial fishery, through which eels are sold for use as bait in other fisheries, as well as the recreational fishery, where anglers often harvest eels for personal use as bait in a targeted fishery for other species. The American Eel Management Board expressed the need for an evaluation of the bait fishery for eel, as data are currently not available at the scale necessary for a full evaluation of the impacts of this sector of the American eel fishery, nor are data available to determine the exact reduction that would be necessary to achieve significant benefits for the American eel stock.

Does the public believe that collection of more accurate catch and effort data is necessary?

If so, does the public believe that a permit with mandatory reporting requirements is an appropriate way to collect these data?

Issue 5. Habitat

The American Eel Technical Committee developed a statement of concern regarding sources of mortality other than fishing. The Technical Committee noted that sources of mortality such as turbines, water intakes, and other non-fishing mortality are likely leading sources of mortality for silver eels, and that these sources of mortality must be reduced. The Technical Committee has developed a set of recommendations regarding eel passage along the Atlantic coast. These recommendations include:

1. Including eel passage as a prime consideration when licensing dams/hydropower facilities and when providing information to the FERC through the dam relicensing process
2. Inclusion of upstream and downstream passage for eels as a condition of relicensing
3. Effectiveness monitoring of upstream and downstream passage measures
4. Evaluation of suspension of hydroelectric operation as well as bypass facilities for downstream passage
5. Collaboration with the GLFC and other agencies

The 2003 report of the ICES Working Group on Eels includes a list of potential habitat-related threats to eel growth and reproduction. This list includes the following (ICES 2003):

- Physical and chemical obstructions such as low oxygen concentration or extremes of pH to upstream migration routes to suitable habitat for growing yellow eels;
- Physical and chemical obstructions in downstream migration routes to the spawning place
- Average water temperature;
- Food availability (influenced by existing in-stream diversity in terms of substrate and aquatic vegetation);
- The swim bladder parasite *Anguillicola crassus;*
- Chemicals such as PCBs, heavy metals such as mercury, and endocrine-related toxicants (which accumulate in eels, in part because of their high fat content).

While the above habitat concerns are listed in the ICES report for European eels, many of these concerns are also known or thought to be important factors affecting the stock of the American eel in North America. These habitat concerns are significant issues that should be evaluated and addressed by the proper management authorities. Recommendations for habitat may be developed by the ASMFC Habitat Committee and placed in an Amendment/Addendum to the FMP along with a more comprehensive set of research needs.

What does the public view as the primary habitat issues facing the American eel stock?

What are the public's recommendations for addressing the habitat issues facing the American eel stock?

Issue 6. Predation

The Technical Committee developed a statement of concern regarding the presence of non-native species such as the flat head catfish and the blue catfish. The Technical Committee noted the importance of research to determine the effects that these and other invasive species have on the American eel stock and requested the listing of an additional research need to address this issue. Supporting such a designation would not immediately require a change to the American eel management program. The Management Board notes that predation upon eels by other species such as native fish species, cormorants, herons, and others may be a significant source of mortality for American eel stocks.

Describe the public's knowledge of impacts of predation on the American eel stock.

What are the public's recommendations for addressing the predation issues facing the American eel stock?

Issue 7. Conservation Measures

The ASMFC has a number of options available if a reduction in fishing mortality is determined to be necessary. These options include size limits, gear restrictions, and controls on mortality such as possession limits and hard quotas. Size limits may not be the most useful of these measures, as the size at age varies greatly for the American eel.

Does the public believe that size limits are a useful conservation tool?

Does the public believe that gear restrictions are a useful conservation tool?

Does the public believe that overall controls on mortality are a useful conservation tool?

Are there other conservation tools that the public believes are useful for conserving the American eel resource?

Issue 8. Traditional uses of American eels

American eels have traditionally been harvested for use as bait in other fisheries, for human consumption as food, and for use in aquaculture operations. Regardless of life stage, an American eel removed from the system has not yet had an opportunity to reproduce.

Does the public believe that the use of American eel as bait in other fisheries is an appropriate use of the resource?

Does the public believe that the use of American eel for human consumption is an appropriate use of the resource?

Does the public view the use of American eel for bait or for any other human use and consumption is an obstacle to the restoration of the American eel resource?

If so, does the public feel that a coast wide reduction of or prohibition on the take of American eel will be helpful in re-building the American eel resource?

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