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PROPOSED RULEMAKING

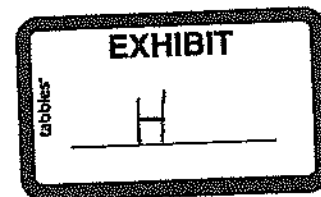
FISH AND BOAT COMMISSION

[58 PA. CODE CH. 75]

Fishing; Endangered Species

[48 Pa.B. 7532]

[Saturday, December 8, 2018]



The Fish and Boat Commission (Commission) proposes to amend Chapter 75 (relating to endangered species). The Commission is publishing this proposed rulemaking under the authority of 30 Pa.C.S. (relating to Fish and Boat Code) (code). The proposed amendments update the Commission's lists of endangered and candidate species.

A. *Effective Date*

This proposed rulemaking, if approved on final-form rulemaking, will go into effect upon publication in the *Pennsylvania Bulletin*.

B. *Contact Person*

For further information on this proposed rulemaking, contact Wayne Melnick, Esq., P.O. Box 67000, Harrisburg, PA 17106-7000, (717) 705-7810. This proposed rulemaking is available on the Commission's web site at www.fish.state.pa.us.

C. *Statutory Authority*

The proposed amendments to § 75.1 (relating to endangered species) are published under the statutory authority of section 2305 of the code (relating to threatened and endangered species). The proposed amendments to § 75.3 (relating to candidate species) are published under the statutory authority of 2102 of the code (relating to rules and regulations).

D. *Purpose and Background*

The specific purpose and background of the proposed amendments is described in more detail under the summary of proposal.

E. *Summary of Proposal*

(1) Pugnose Minnow (*Opsopoeodus emiliae*) is a small (40—55 mm), silver and olive colored, slender and compressed minnow with a nearly vertical mouth it uses to feed on microcrustaceans at the water's surface. It inhabits sluggish streams, lakes, wetlands and oxbows, usually where dense vegetation or coarse woody debris is present. It occurs in waters that are clear or turbid. In this Commonwealth, it occurs in a low gradient, turbid stream sections with limited submerged and emergent vegetation, but with considerable downed, in-stream woody debris.

The Pugnose Minnow occurs from the Atlantic Slope in South Carolina across the Gulf Slope to Texas, and northward in the Mississippi River and Great Lakes systems to southern Wisconsin and Ontario (Page and Burr 2011).

The Pugnose Minnow was first collected in this Commonwealth in 2000 (Argent and Spear 2001) and was subsequently collected in 2001 (Criswell and Fischer). In 2016, R. Criswell, D. Fischer and J. Brancato (PADEP) collected 10 individuals of this species, confirming an established population. All collections are from a short section of lower Cussewago Creek, Crawford County, totaling no more than 2 kilometers (km) in length. Although there are no older records for this species, experts consider it native here. Cussewago Creek, particularly the lowermost section where this species was collected, is difficult to sample, and the microhabitat occupied by the Pugnose Minnow is very limited. It could have very easily been overlooked, and historic sampling effort there, particularly for nongame fishes, has been very limited. In addition, this species occurred historically in northeast Ohio (Trautman 1981) and is represented elsewhere in its range by several disjunct populations (Page and Burr 2011). This species appears to be subject to population fluctuations in this Commonwealth. Five surveys were focused on this species in the occupied section of Cussewago Creek between 2006 and 2016 without success.

The level of turbidity that this population of Pugnose Minnows will tolerate is unknown, but any significant increases could be problematic. The State-endangered Hornyhead Chub, *Nocomis biguttatus*, formerly occurred in this waterway, but is now extirpated. The Commission suspects that increased turbidity during the post-1930 period is responsible for this extirpation. Increases in silt loading must be considered the greatest threat to the Pugnose Minnow.

A dam currently impounds a portion of Cussewago Creek 1.5 km below the area occupied by the Pugnose Minnow. There have been discussions concerning the removal of this dam (B. Lorson, Commission, pers. comm.). It is unclear if the removal of this dam would impact the water level or habitat in the vicinity of the Pugnose Minnow population. It is also unclear if the Pugnose Minnow occupies the impounded area.

The current status of this species was reviewed using the Commission's documentation and objective listing/delisting process. Endangered species criteria were met in four categories: A1 (Population Reduction), B3 (Extent of Occupancy in streams is less than 10 miles), B4 (Sum of Proportion of Watersheds Occupied value < 0.2), and B5 (Severely fragmented < 6 locations). In addition, it was evaluated with NatureServe's Conservation Status Assessments Rank Calculator and received a State Conservation Rank of S1 meaning it is critically imperiled in the Commonwealth with a high to very high risk of extirpation due to its limited range or few populations, or both, or occurrences. The Fishes Technical Committee of the Pennsylvania Biological Survey

(PABS) reviewed this documentation and rank assignment and recommended that the Pugnose Minnow be listed as endangered. Enough information is available to make the determination that it is endangered in this Commonwealth at present and to justify its addition to Commonwealth's list of endangered fishes.

Therefore, the Commission proposes that the Pugnose Minnow be added to the list of endangered species under § 75.1.

(2) Blacknose Shiner (*Notropis heterolepis*) is a small olive to pale yellow minnow (40—65 mm) found in clear lakes and streams, where it is often associated with aquatic vegetation. In this Commonwealth, this species has been collected in pools, with rubble, gravel, and sand substrates, and completely lacks submerged vegetation.

The Blacknose Shiner is distributed from the Hudson Bay drainage east to Nova Scotia in Canada, and from Maine west to Nebraska, with extinct glacial relict populations in southern Kansas and Missouri (Gilbert 1980, Page and Burr 2011). This species is common in the north of its range but disappearing from the southern region (Page and Burr 2011).

In the glaciated northwestern portion of this Commonwealth, there are historic records from the Lake Erie drainage, Shenango River drainage and the upper Allegheny River drainage. The only recent records are from two tributaries to the Allegheny River in Erie and McKean Counties.

The Blacknose Shiner was thought to be extirpated from this Commonwealth until recently, with no collection reports from the late 1930s through 2009. It was formerly known from Erie and Crawford Counties. Following collections in 2009, the status was updated to "undetermined" and the historically occupied waterways were intensively surveyed. Populations were found in a single, small drainage in Erie County within its historically known distribution. Another population is found in a tributary to the upper Allegheny River outside of the known native range in this Commonwealth and is considered to be introduced, but it could possibly be native. The known lineal occupied distance within the native range is only 2 km and justifies a change in status from undetermined to endangered.

The current status of this species was reviewed using the Commission's documentation and objective listing/delisting process. Endangered species criteria were met in four categories: A1 (Population Reduction), B3 (Extent of Occupancy in streams < 10 miles), B4 (Sum of Proportion of Watersheds Occupied < 0.2), and B5 (Severely fragmented < 6 locations). In addition, it was evaluated with NatureServe's Conservation Status Assessments Rank Calculator and received a State Conservation Rank of S1—meaning it is critically imperiled in this Commonwealth with a high to very high risk of extirpation due to its limited range or few populations, or both, or occurrences. The Fishes Technical Committee of the PABS reviewed this documentation and rank assignment and recommended that the Blacknose Shiner be listed as endangered. Enough information is available to make the determination that it is endangered in this Commonwealth at present and to justify its addition to the Commonwealth's list of endangered fishes.

Therefore, the Commission proposes that the Blacknose Shiner be added to the list of endangered species under § 75.1.

(3) Banded Sunfish (*Enneacanthus obesus*) are small sunfish (50—90 mm) with an olive colored body having 5—8 dark vertical bars extending to its ventral side. It occupies sluggish, calm sections of streams and rivers, as well as bogs, marshes, swamps, ponds and lakes. It is closely associated with dense stands of rooted and suspended aquatic vegetation over substrates of silt, sand, mud and detritus.

It is native to the coastal lowlands from southern New Hampshire to central Florida in both the Atlantic and Gulf drainages (Lee 1980). In this Commonwealth, it occurred historically in the tidal portion of Delaware River drainage in Bucks, Delaware and Philadelphia Counties (Fowler 1940, Cooper 1983).

Two circa 1850 collections include 4 specimens (UMMZ 86801) and 8 specimens (ANSP 12876). Three records from 1907—1914 each contain 1 or 2 specimens (ANSP 41855, 41859 and 41874). It is obvious, given these numbers and the very limited extent of suitable Coastal Plain habitat on this Commonwealth side of the Delaware River/Estuary, that the Banded Sunfish was never particularly common or widely distributed in this Commonwealth. The 1977 collection included 3 specimens and likely represented waifs and not a population given the paucity of records before and after.

The Banded Sunfish is currently listed as an endangered species. It has not been collected or verified in this Commonwealth since 1977, when 3 specimens were taken from an impingement screen at a power plant on the Delaware River near Philadelphia in Delaware County (Cooper 1983). All earlier records are from the Coastal Plain in Bucks and Philadelphia Counties, and predate 1915 (Stauffer et al. 2016). Despite targeted sampling by multiple researchers (R. Criswell, Academy of Natural Sciences in Philadelphia and Philadelphia Water Department), no specimens have been collected and most suitable historic habitat has been altered or destroyed (Criswell 1998, Horwitz et al. 2006, unpublished data). Based on this information, it can be surmised that this species no longer occurs in this Commonwealth and should be removed from the Commonwealth's endangered species list.

The current status of this species was reviewed using the Commission's documentation and objective listing/delisting process. Because there are currently no extant records of the Banded Sunfish, no threatened and endangered species listing criterion were met. The Fishes Technical Committee of the PABS reviewed this documentation and rank assignment and recommended that the Banded Sunfish be delisted. Enough information is available to make the determination that it no longer occurs within this Commonwealth at present and to justify its removal from Commonwealth's list of endangered fishes.

Therefore, the Commission proposes that the Banded Sunfish be removed from the Commonwealth's list of endangered species under § 75.1.

(4) Gravel Chub (*Erimystax x-punctatus*) is a slender, medium-sized (65—95 mm) yellow to olive green chub that inhabits large creeks and rivers with clear to somewhat turbid water, over substrate that includes significant amounts of clean sand, gravel and rock. It is essentially a benthic fish that occurs in riffles and runs, in both shallow and deeper water.

The Gravel Chub is native from southern Ontario and western New York west to Minnesota and south to Arkansas. It was known to inhabit the Ohio River basin of

western Pennsylvania (and New York) with most of the verified occurrences associated with the Allegheny River.

The historic distribution of the Gravel Chub is somewhat obscured by its taxonomic past. The Gravel Chub was recognized as distinct relatively recently and wasn't formally described as a species until 1956 (Hubbs and Crowe), well after the collection record had begun. It is likely that early reports of the generically similar Streamline Chub, *Erimystax dissimilis* included the Gravel Chub. Cope (1881) reported the Streamline Chub to be "especially numerous in the creeks of Western Pennsylvania."

The Commission is aware of 13 collections of the Gravel Chub from this Commonwealth. Collections made before the species description (Hubbs and Crowe 1956) were re-identified from museum specimens. The earliest was made by Edward D. Cope in the late 1800s from the Youghiogheny River (later identified by Robert E. Jenkins, ANSP1824). This collection indicates that the Gravel Chub was likely much more widely distributed initially in the upper Ohio River basin than indicated by later collections. The subsequent 12 collections were all made during the period 1935—1985 from the Allegheny River or from the lower reaches of tributaries to the Allegheny River. Similarly, Carlson et al. (2016) reported on collections known from the Allegheny River in New York during this same period with no occurrences reported after 1979.

There are no recent verified reports of Gravel Chubs from the Allegheny River drainage. From approximately 2000 to present, the rivers of the Ohio River drainage in western Pennsylvania have been intensively surveyed with electrofishing and trawling gears at hundreds of sites (Koryak et al. 2009, Freedman et al. 2009, Lorson 2009, Koryak et al. 2011, Stauffer et al. 2016, Commission unpublished data). Efforts by R. Criswell and D. Fischer have also specifically targeted the Gravel Chub at historic collection localities and areas containing seemingly optimum habitat. Despite the collective ability of these efforts to detect changes in the status of species requiring similar environmental conditions (for example, Streamline Chub, Mountain Madtom, Northern Madtom, Channel Darter, Longhead Darter, River Darter, Gilt Darter, Bluebreast Darter, Tippecanoe Darter, Spotted Darter), no verified specimens of Gravel Chubs have been collected. The lack of collections of the Gravel Chub in western Pennsylvania and New York indicate that it is now likely extirpated from the "Three Rivers" drainage area.

This species is of moderate concern globally. Although locally common in some areas, populations are declining over much of its range (Page and Burr 2011). The Ontario and Kentucky populations have been extirpated. Trautman (1981) suggested that increased siltation was responsible for a contraction of its range in Ohio. Impoundments are likely a contributing factor in reducing suitable habitat by altering flow and promoting the deposition of silt. Carlson et al. (2016) reported that one historic locality in New York is now inundated by the Allegheny Reservoir. On the Monongahela River and lower Allegheny River, a series of navigational locks and dams and urban development have extensively altered natural habitats. The dredging industry has utilized the impounded sections of the upper Ohio River and Allegheny River to mine glacial sand and gravel, further altering the river bottoms.

The disappearance of the Gravel Chub from this Commonwealth and New York remains somewhat of a mystery. The Gravel Chub was apparently able to survive in the

Allegheny River drainage throughout most of the 1900s as indicated by collections during 1935—1985. Environmental quality generally improved in the Allegheny River drainage in the 1970s and 1980s largely due to the implementation of the Clean Water Act (Koryak et al. 2009). During this period, many lithophilic fishes reinvaded portions of the Allegheny River drainage where pollution had been problematic, and in some areas, these fishes have become abundant (Ortmann 1909, Stauffer et al. 2016; Commission unpublished data). Apparently, the Gravel Chub did not benefit similarly.

Trautman (1981) observed that competition between the Gravel Chub and its congener, the Streamline Chub, appeared to be rather keen, especially while feeding. The Streamline Chub is presently well distributed and common to abundant in the Allegheny River and its larger tributaries (Stauffer et al. 2016, Commission unpublished data). It is also present in the upper Ohio River. In the state of Ohio, where Gravel Chubs and Streamline Chubs are still found together, these species appear to segregate into different habitats. Brian Zimmerman (Ohio State University Museum of Biodiversity) provided the following personal communication discussing his observations in Ohio.

"In Ohio the Streamline Chub *Erimystax dissimilis* and Gravel Chub *E. x-punctatus* both have greatly increased in abundance and distribution over the past 20—30 years. They do seem to differ in habitat in that the Streamline Chub is found in smaller and clearer streams than the Gravel Chub. In our two large river systems that have large populations of both (Muskingum and Scioto rivers) the Gravel Chub stays almost entirely in the main stem and the largest of tributaries where the turbidity of the water is often greater. Streamline Chubs in these two systems are found significantly further upstream and in smaller tributaries to these systems. The water clarity may just be a factor of stream size. These two also differ in habitat preference in that Streamline Chub are more often in deeper water in more "run-like" habitat and Gravel Chub are often found shallower on large gravel riffles of the large rivers they inhabit in Ohio. Clarity and or depth may be playing a role in why Streamline Chub have expanded into the upper Ohio River and a few tributaries on the eastern edge of Ohio. This presumably is a downstream extension of the very large population in PA in the Allegheny and upper Ohio Rivers. Gravel Chub on the other hand have not been found in this area."

Experts speculate that historic habitat modification in the upper Ohio River basin and possibly interspecific competition have contributed to the extirpation of the Gravel Chub from the Allegheny River drainage. It appears that turbidity presently plays a role in the distribution of Gravel Chub populations as they recolonize waters in Ohio. As polluted waters in western Pennsylvania have recovered throughout the late 1900s, they have become clearer. It is possible that this has played an additional role in further reducing optimal conditions for the Gravel Chub or by providing a competitive edge for the Streamline Chub.

The Gravel Chub is currently listed as endangered in this Commonwealth. The Gravel Chub persisted in this Commonwealth and New York in the Allegheny River basin throughout the worst period of pollution during the early and mid-1900s. Despite this, it hasn't been observed in this Commonwealth since 1985. Many intensive fisheries survey efforts have been conducted recently throughout its range here, including specific efforts targeted at the Gravel Chub. Based on this information, it appears that this species no longer occurs in this Commonwealth and should be delisted from the endangered species list.

The current status of this species was reviewed using the Commission's documentation and objective listing/delisting process. Because there are currently no extant records of the Gravel Chub in this Commonwealth, no threatened and endangered species listing criterion were met. The Fishes Technical Committee of the PABS reviewed this documentation and rank assignment and recommended that the Gravel Chub be delisted. Enough information is available to make the determination that it no longer occurs within this Commonwealth at present and to justify its removal from the Commonwealth's list of endangered fishes.

Therefore, the Commission proposes that the Gravel Chub be removed from the Commonwealth's list of endangered species under § 75.1.

(5) Central Mudminnow (*Umbra limi*) is a relatively small (54 mm), elongated fish that occurs in marshes, swamps, springs, ditches, lake margins and the pools of smaller streams. It is usually found in the presence of dense vegetation and soft substrates, but they have been collected in shaded, stagnant, swampy areas that lack vegetation. Suitable substrates include thick organic material, gravel, sand and silt (Stauffer et al. 2016). Becker (1983) noted a preference for clear water that may be stained light or dark brown, and it is found less frequently in turbid conditions.

Central Mudminnows are known from the St. Lawrence River drainage west through the Great Lakes to southern Manitoba, and south through the Mississippi River Basin to western Tennessee (Gilbert 1980). In this Commonwealth, they occur in the Shenango and upper Allegheny river systems, and Lake Erie drainages (Stauffer et al. 2016).

Historically, the Central Mudminnow was found to be rather widely distributed in northwestern Pennsylvania during the period 1990—present, and is known to occur in Crawford, Mercer, Erie, Venango and Warren Counties at present (Stauffer et al. 2016). A lack of recent records from Beaver and Lawrence Counties is most likely an artifact of inadequate targeted surveys there. A number of post-1990 collections include 10 or more individuals, and 150 individuals were counted at one Erie County site in 2009. The Central Mudminnow is common to abundant in the Conneaut Marsh and wetlands in the Pymatuning region; these rather extensive wetlands are the largest in this Commonwealth.

There are no recent records from the extreme southernmost portion of its range in this Commonwealth. However, given its preference for vegetated wetlands and other waterways that are difficult to survey or are not typically sampled by fishery managers and ichthyologists, it is likely that a significant number of populations exist that have not yet been detected. Although wetlands acreage has declined significantly in this Commonwealth, and the Central Mudminnow was probably more abundant prior to those losses, it is still rather widespread and locally common.

The Central Mudminnow was listed as a candidate species of this Commonwealth in 1991. It occurs in the Shenango and upper Allegheny river systems, and Lake Erie drainages. Since its listing, a significant amount of field work has been performed in this species' native drainage, and many additional populations have been documented in five counties. At some sites the Central Mudminnow was found to be common or abundant. Experts believe that many undetected populations remain, due to this species' specialized habitat and occupation of wetlands that are not typically surveyed by fishery managers or

ichthyologists. Based on this information, we believe that removal of this species from the list of candidate species is appropriate.

The current status of this species was reviewed using the Commission's documentation and objective listing/delisting process. It exceeds Criterion B.3 (Extent of Occupancy) because it occupies more than 150 river miles of waterway. Additionally, Criterion B.5 for candidate status is exceeded: no extreme fragmentation and no fluctuation or decline of populations has been documented or suspected and more than 20 occurrences have been documented or suspected. In addition, it was evaluated with NatureServe's Conservation Status Assessments Rank Calculator and received a State Conservation Rank of S4—meaning it is secure in this Commonwealth with a very low risk of extirpation due to its extensive range or many populations, or both, or occurrences. The Fishes Technical Committee of the PABS reviewed this documentation and rank assignment and recommended that the Central Mudminnow be delisted. Enough information is available to make the determination that it is secure in this Commonwealth at present and to justify its removal from the Commonwealth's list of candidate fishes.

Therefore, the Commission proposes that the Central Mudminnow be removed from the Commonwealth's list of candidate species under § 75.3.

(6) Eastern Mudminnow (*Umbra pygmaea*) is a larger mudminnow (107 mm) that inhabits backwaters, braided creek mouths, wetlands, vegetated and soft-bottom lake margins, and sluggish or still sections of streams. It occurs in clear to somewhat turbid water, usually where dense aquatic vegetation or decaying organic material provides adequate cover. Mudminnows can withstand low dissolved oxygen concentrations (utilizing the gas bladder as a lung), low pH and temperature extremes, making them tolerant of harsh conditions (Jenkins and Burkhead 1994, Kuhne and Olden 2014). They have been collected in slightly tannin-stained Pocono Mountains lakes and Hastings (1984) reported it from pH as low as 4.0.

The Eastern Mudminnow occurs from south-eastern New York south to the St. Johns River, Florida and west along the Gulf Slope to the Aucilla River (Gilbert 1980). In this Commonwealth, it is native to the Delaware River drainage (Stauffer et al. 2016). It has recently been reported from the Susquehanna River basin at multiple sites, where the Commission considers it to be introduced (D. Fischer, unpublished data).

The Commission is aware of 23 pre-1920 records for this species, all from the Philadelphia region (Bucks and Philadelphia Counties); between 1920 and 1990 approximately 20 collections were made, which included documentation in Carbon, Chester, Delaware, Monroe and Pike Counties (Stauffer et al. 2016; Criswell and Fischer). Most pre-1990 records document 1–9 individuals per station, but one pre-1920 collection from Bucks County (ANSP 23850) consisted of 23 individuals. There is little doubt, however, that the Eastern Mudminnow was more common than these records reflect, given its preference for debris-laden habitats and the fact that early surveyors were limited to nets and seines. Abundance data for the period 1920–1990 is lacking.

Within the last 25 years, the Eastern Mudminnow was found to be somewhat common in the Bucks, Chester, Delaware and Philadelphia Counties area and some of the Pocono Mountains region during the period 1990–present (Stauffer et al. 2016). Occurrences have been documented by the Academy of Natural Sciences in Philadelphia in Bucks,

Philadelphia, Delaware, Lackawanna, Monroe, Philadelphia, Pike and Wayne Counties (R. Horwitz, personal communication). Since 1990, extralimital collections have occurred in Bradford, Dauphin, Lackawanna and Luzerne Counties within the Susquehanna River drainage (Stauffer et al. 2016; D. Fischer and M. Bilger, unpublished data). It is unclear if the collections from the Susquehanna River drainage are indicative of bait releases or established populations. A significant amount of suitable habitat in northeastern Pennsylvania remains unsurveyed due to access issues.

The Eastern Mudminnow was listed as a candidate species of this Commonwealth in 1991. It occurs in the Delaware River drainage. Since its listing, a significant amount of field work has been performed in this species' native drainage. A number of additional populations have been documented and this species continues to exist at sites where it was documented prior to 1991. Experts believe that many undetected populations remain, due to this species' specialized habitat and occupation of wetlands that are not typically surveyed by fishery managers or ichthyologists; and given the vast amount of private land containing natural ponds and wetlands in northeastern Pennsylvania where access by surveyors is not available. Based on this information the removal of this species from the list of candidate species is warranted.

The current status of this species was reviewed using the Commission's documentation and objective listing/delisting process. It exceeds Criterion B.3 (Extent of Occupancy), because it occupies more than 150 river miles of waterway. Additionally, Criterion B.5 for candidate status is exceeded: no extreme fragmentation and no fluctuation or decline of populations has been documented or suspected and more than 20 occurrences have been documented or suspected. In addition, it was evaluated with NatureServe's Conservation Status Assessments Rank Calculator and received a State Conservation Rank of S4—meaning it is secure in this Commonwealth with a very low risk of extirpation due to its extensive range or many populations, or both, or occurrences. The Fishes Technical Committee of the PABS reviewed this documentation and rank assignment and recommended that the Eastern Mudminnow be delisted. Enough information is available to make the determination that it is secure in this Commonwealth at present and to justify its removal from the Commonwealth's list of candidate fishes.

Therefore, the Commission proposes that the Eastern Mudminnow be removed from the Commonwealth's list of candidate species under § 75.3.

The Commission proposes to amend §§ 75.1 and 75.3 to read as set forth in Annex A.

F. Paperwork

This proposed rulemaking will not increase paperwork and will not create new paperwork requirements.

G. Fiscal Impact

This proposed rulemaking will not have adverse fiscal impact on this Commonwealth or its political subdivisions. This proposed rulemaking will not impose new costs on the private sector or the general public.

H. Public Comments

Interested persons are invited to submit written comments, objections or suggestions about this proposed rulemaking to the Executive Director, Fish and Boat Commission, P.O. Box 67000, Harrisburg, PA 17106-7000, within 30 days after publication of this notice in the *Pennsylvania Bulletin*. Comments submitted by facsimile will not be accepted.

Comments also may be submitted electronically by completing the form at www.fishandboat.com/regcomments. If an acknowledgment of electronic comments is not received by the sender within 2 working days, the comments should be retransmitted to ensure receipt. Electronic comments submitted in any other manner will not be accepted.

JOHN A. ARWAY,
Executive Director

Fiscal Note: 48A-282. No fiscal impact; (8) recommends adoption.

Annex A

TITLE 58. RECREATION

PART II. FISH AND BOAT COMMISSION

Subpart B. FISHING

CHAPTER 75. ENDANGERED SPECIES

§ 75.1. Endangered species.

* * * * *

(b) *Fish*. The following species are endangered:

- (1) Northern brook lamprey, *Ichthyomyzon fossor*.
- (2) Shortnose sturgeon, *Acipenser brevirostrum*.
- (3) Lake sturgeon, *Acipenser fulvescens*.
- (4) Atlantic sturgeon, *Acipenser oxyrinchus*.
- (5) Spotted gar, *Lepisosteus oculatus*.
- (6) Hickory shad, *Alosa mediocris*.
- (7) Cisco, *Coregonus artedii*.
- (8) Northern redbelly dace, *Phoxinus eos*.

- (9) [**Gravel chub, *Erimystax x-punctatus***] **Blacknose Shiner (*Notropis heterolepis*)**.
- (10) Bridle shiner, *Notropis bifrenatus*.
- (11) River shiner, *Notropis blennioides*.
- (12) Ghost shiner, *Notropis buchanaui*.
- (13) Ironcolor shiner, *Notropis chalybaeus*.
- (14) Blackchin shiner, *Notropis heterodon*.
- (15) Redfin shiner, *Lythrurus umbratilis*.
- (16) Longnose sucker, *Catostomus catostomus*.
- (17) Bigmouth buffalo, *Ictiobus cyprinellus*.
- (18) Black bullhead, *Ameiurus melas*.
- (19) Mountain madtom, *Noturus eleutherus*.
- (20) Tadpole madtom, *Noturus gyrinus*.
- (21) Northern madtom, *Noturus stigmosus*.
- (22) Burbot, *Lota* (inland populations only).
- (23) Threespine stickleback, *Gasterosteus aculeatus*.
- (24) [**Banded sunfish, *Enneacanthus obesus***] **Pugnose Minnow (*Opsopoeodus emiliae*)**.
- (25) Warmouth, *Lepomis gulosus*.
- (26) Longear sunfish, *Lepomis megalotis*.
- (27) Iowa darter, *Etheostoma exile*.
- (28) Eastern sand darter, *Etheostoma pellucida*.
- (29) Hornyhead chub, *Nocomis biguttatus*.

* * * * *

§ 75.3. Candidate species.

* * * * *

(b) *Fish*.

- (1) Least brook lamprey, *Lampetra aepyptera*.

