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**Attachments:** A P anadromouswatersupdate Appendix C (1).doc

see attached

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# **DRAFT**

## **APPENDIX C**

### **LOCATIONS OF ANADROMOUS AMERICAN SHAD AND RIVER HERRING DURING THEIR SPAWNING PERIOD IN NEW JERSEY'S FRESHWATERS INCLUDING KNOWN MIGRATORY IMPEDIMENTS AND FISH LADDERS**

March 2005

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Bureau of Freshwater Fisheries  
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## Introduction

The majority of the information listed in this document was taken from, "Information On Anadromous Clupeid Spawning Runs In New Jersey" (Zich, 1978). The list addresses only river herring (alewife and blueback) and American shad. The presence or absence of these species is indicated on the identified drainages. Some additional spawning runs are included that were recently documented by the Division of Fish and Wildlife, Bureau of Freshwater Fisheries.

The list includes impediments (dams, and floodgates), fish ladder locations, and sections of identified drainage (culverts and bridge crossings) where anadromous clupeid spawning runs were documented or reported. The waters are designated as either (c) confirmed spawning run or (r) reported spawning run.

Several of the impediments listed have fish ladders incorporated into the dam or floodgate design. These locations are identified on the list. The fish ladders allow passage over the impediment to the next upstream barrier. Therefore, this list should be used in a way that considers spawning migrations to extend up to the next upstream barrier. Many of these upstream barriers have developing river herring and or American shad fisheries below that barrier.

Some of the barriers classified, as reported (r) should not be ruled out as candidates for fish ladders. It is likely that an area listed as "reported" does indeed support clupeid spawning migrations, however to date, the Division of Fish and Wildlife has not confirmed the presence of clupeids in these waterways.

It is noted and emphasized that all unlisted waters in each of the identified drainages have the potential to support anadromous fishes up to the first upstream barrier where suitable habitat is available.

\* Fish ladder recently installed (no confirmation of fish passage).

\*\* Approved fish ladder (installation pending).

+ Fish ladder installed with confirmed movement.

**Alloway Creek Drainage**

	<u>Shad</u>	<u>River herring</u>
Unnamed tributary – Laurel Lake Dam (Quinton)		(r)
Deep Run – Elkington Mill Dam (Alloway)		(c)
Alloway Creek – Alloway Lake Dam (Alloway)		(c)

**Assiscunk Creek Drainage**

	<u>Shad</u>	<u>River herring</u>
Assiscunk Creek – Rt. 628 Bridge (Mansfield)	(c)	(c)

**Assunpink Creek Drainage**

	<u>Shad</u>	<u>River herring</u>
Assunpink Creek – Whitehead Pond Dam (Lawrence)		(r)
Assunpink Creek – Assunpink Creek (Trenton)		(c)

**Atlantic Ocean (Atlantic Co. ) Drainage**

	<u>Shad</u>	<u>River herring</u>
Absecon Creek - Atlantic City Reservoir Dam (Absecon)		(c)
Doughty Creek - East Pool (Oceanville)		(c)
Doughty Creek - West Pool (Oceanville)		(c)

**Atlantic Ocean (Cape May Co. ) Drainage**

	<u>Shad</u>	<u>River herring</u>
Mill Creek – Magnolia Lake Dam (Ocean View)		(c)
Taylor Creek – Taylor Creek (Rio Grande)		(r)

**Atlantic Ocean (Monmouth Co. ) Drainage**

	<u>Shad</u>	<u>River herring</u>
Atlantic Ocean – Deal Lake Dam (Asbury Park)		(c)
Whale Pond Creek – Takanassee Lake Dam (Oakhurst)		(c)

**Arthur Kill (Middlesex & Union County Co. ) Drainage**

	<u>Shad</u>	<u>River herring</u>
Arthur Kill River - Entire length	(c)	(c)

### **Atlantic Ocean (Ocean Co. ) Drainage**

Shad   River herring

Lake of Lilies Dam - (Bayhead Junction)	(c)
Little Silver Lake Dam - (Point Pleasant Beach)	(c)

### **Barnegat Bay (Ocean Co. ) Drainage**

Shad   River herring

Cedar Creek – U.S.G.S Gage Dam (Lanoka Harbor)	(c)
Cedar Creek – Rt. 9 (Cedar Beach)	(c)
Double Creek – East Bay Ave. (Barnegat)	(c)
Fresh Creek – Taylor Road (Beach View)	(c)
Gunning River – Collinstown Road (Barnegat)	(c)
Kettle Creek – Brick Blvd. (Cedarwood Park)	(c)
Polhemus Creek – Hooper Ave. (Silverton)	(c)
Potter Creek – Bluejay Ave. (Holly Park)	(c)
Silver Bay Creek – Hooper Ave. (Silverton)	(c)
S. Branch Double Creek – East Bay Ave. (Barnegat)	(c)
S. Branch Stouts Creek – Bayside Pkwy. Culvert (Sunrise Beach)	(c)
Tunes Branch – Brick Blvd. (Lake Riviera)	(c)
Westecunk Creek – Stafford Forge Imp. (Stafford Forge)	(r)

### **Big Timber Creek Drainage**

Shad   River herring

Big Timber Creek – lower (Glendora)	(c)	(c)
S. Br. Big Timber Creek- Blackwood Lake Dam (Blackwood)		(r)
Almonesson Creek - Almonesson Lake Dam		(r)

### **Cohansey River Drainage**

Shad   River herring

Cohansey River –lower- (Bridgeton)	(c)
Mill Creek – Sheppards Mill Pond Dam (Springtown)	(r)
Indian Fields Branch – East Lake Dam (Bridgeton)	(r)
Mill Creek – Clarks Pond Dam (Bridgeton)	(c)
Cohansey River –Sunset Lake Dam ( <b>fish ladder+</b> ) (Bridgeton)	(c)
Cohansey River – Rocaps Run	(r)

### **Cooper River Drainage**

Shad   River herring

Cooper River - Cooper River Park Lake ( <b>fish ladder+</b> ) (Collingswood)	(c)	(c)
Cooper River - Wallworth Pond Dam ( <b>fish ladder*</b> ) (Haddonfield)		(r)
Cooper River - Evans Pond Dam ( <b>fish ladder*</b> ) (Haddonfield)		(r)

#### **Crosswicks Creek Drainage**

	<u>Shad</u>	<u>River herring</u>
Crosswicks Creek - lower (White Horse)	(c)	(c)
Back Brook - Gropps Lake Dam ( <b>fish ladder+</b> ) (White Horse)		(c)
Doctors Creek - Yardville/Groveville Road (Groveville)		(c)
Crosswicks Creek - North Crosswicks Dam (Crosswicks)		(c)

#### **Delaware Bay (Cape May Co.) Drainage**

	<u>Shad</u>	<u>River herring</u>
Dennis Creek - Dennisville Lake Dam (Dennisville)		(c)
Dennis Creek - Ludlams Pond		(r)
Dennis Creek - East Creek – East Creek Lake		(r)
Green Creek - Green Creek Mosquito Imp. (Whitesboro)		(r)
West Creek - Rt. 47- (Eldora)		(c)
West Creek - Pickel Factory Pond Dam (Eldora)		(r)

#### **Delaware Bay (Cumberland Co.) Drainage**

	<u>Shad</u>	<u>River herring</u>
Cedar Creek - Cedar Lake Dam (Cedarville)		(c)
Dividing Creek - Mill Creek (Dividing Creek)		(r)
Dividing Creek - Cub Swamp Creek (Dividing Creek)		(r)
Nantuxtent River - Shaws Millpond Dam (Newport)		(r)
Nantuxtent River - Middle Pond Dam (Newport)		(r)

#### **Delaware and Raritan Canal (Mainstem and Feeder)**

No confirmed / reported spawning migrations

#### **Delaware River (Mainstem) Drainage**

	<u>Shad</u>	<u>River herring</u>
Delaware River – Entire length	(c)	(c)

#### **Delaware River (Burlington Co.) Drainage**

<u>Shad</u>	<u>River herring</u>
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Blacks Creek – Rt. 301 (Bordentown)	(c)
Blacks Creek – NJ Rt. 130 culvert (Bordentown)	(c)
Crafts Creek - Crafts Creek Dam (Roebbling)	(r)
Pompeston Creek – Pompeston Creek (Cinnaminson)	(r)
Unnamed Tributary – Crystal Lake Dam (Bordentown)	(r)

#### **Delaware River (Camden Co.) Drainage**

	<u>Shad</u>	<u>River herring</u>
Newton Creek – Newton Lake Dam (Oaklyn) (Fish Ladder *)		(r)

#### **Delaware River (Gloucester Co.) Drainage**

	<u>Shad</u>	<u>River herring</u>
Repaupo Creek- Floodgate Repaupo Creek (Greenwich)		(r)
Woodbury Creek – Stewart Lake Dam (Woodbury)		(r)
(Fish Ladder *)		

#### **Delaware River (Hunterdon Co.) Drainage**

	<u>Shad</u>	<u>River herring</u>
Fiddlers Creek – Rt. 29 (Titusville)		(c)
Lockatong Creek – Rt. 29 (Kingwood)		(c)
Delaware River – Lambertville Wing Dam		(c)
Alexauken Creek – Alexauken Creek (Lambertville)		(r)

#### **Delaware River (Mercer Co.) Drainage**

	<u>Shad</u>	<u>River herring</u>
Jacobs Creek – Rt. 29 (Sommerset)		(c)
Steel Run – Washington Crossing St. Park (Washington Crossing)		(c)

#### **Delaware River (Sussex Co.) Drainage**

No confirmed / reported spawning migrations in tributaries to the Delaware River

#### **Delaware River (Warren Co.) Drainage**

No confirmed / reported spawning migrations in tributaries to the Delaware River

#### **Elizabeth River Drainage**

No confirmed / reported spawning migrations

**Flat Brook Drainage**

No confirmed / reported spawning migrations

**Forked River Drainage**

	<u>Shad</u>	<u>River herring</u>
N. Branch Forked River – Lower Lake Dam (Forked River Beach)		(r)
Forked River – Middle Branch		(c)

**Great Egg Harbor River Drainage**

	<u>Shad</u>	<u>River herring</u>
Patcong Creek – Bargaintown Lk. Dam (fish ladder*) (Somers Point)		(c)
English Creek – Hogans Pond Dam (English Creek)		(c)
Gibson Creek – Corbin City Imp. #1 (Gibson Landing)		(c)
Peters Run – Corbin City Imp. #3 (Tuckahoe)		(r)
Middle River – (Tuckahoe)		(c)
Charley Creek – Corbin City Impoundment #3 (Tuckahoe)		(c)
Hawkins Creek – Corbin City Imp. #2 (Estell Manor)		(c)
Jacksons Creek – unnamed pond dam (Estell Manor)		(c)
Stephan Creek – Stephans Lake Dam (Estellville)		(c)
Miry Run – Rt. 559 (Estellville)		(c)
South River – 11 <sup>th</sup> Ave. (Harding Lakes)		(c)
South River – Forty Wire Rd. (Harding Lakes)		(c)
Gravelly Run – Rt. 559 (Clarks Run)		(c)
Watering Race Branch – Babcock Creek (Mays Landing)		(c)
Great Egg Harbor River – Lk. Lenape Dam (fish ladder**) (Mays Landing)		(c)

**Hackensack River Drainage**

	<u>Shad</u>	<u>River herring</u>
Hackensack River – Oradell Reservoir Dam (Jersey City)	(c)	(c)

**Hudson River Drainage**

Hudson River – Entire Length in New Jersey	(c)	(c)
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**Little Egg Harbor (Manahawkin Bay) Drainage**

<u>Shad</u>	<u>River herring</u>
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Mill Creek – Manahawkin Lake Dam (Manahawkin)	(c)
Tuckerton Creek – Pohatcong Lake Dam (Tuckerton)	(c)
Willis Creek- Willis Creek Dam (Giffordtown)	(c)
Willis Creek – Radio Road (Giffordtown)	(c)

#### Manasquan River Drainage

	<u>Shad</u>	<u>River herring</u>
Watson Creek – Stockton Lake Dam (Manasquan)		(c)
Mill Run – Allaire State Park (Squankum)		(c)
Manasquan River – U.S.G.S. Gage Dam (Lower Squankum)		(r)

#### Mantua Creek Drainage

	<u>Shad</u>	<u>River herring</u>
Mantua Creek – lower- (Mount Royal)	(c)	(c)
Mantua Creek – Wenonah Lake Dam (Wenonah)		(r)

#### Maurice River Drainage

	<u>Shad</u>	<u>River herring</u>
Maurice River- lower- (Buckshutem)	(c)	(c)
Muskee Creek – Rt. 47 (Bricksboro)		(c)
Manumuskin Creek – Cumberland Pond Dam (Millville)		(r)
Buckshutem Creek – Laurel Lake Dam (Bucketshutem)		(c)
Menantico Creek – Menantico Sand Ponds (Millville)		(c)
Hankins Brook – Rt. 47 (Millville)		(c)
White Marsh Run – Silver Lake Dam (Millville)		(c)
Maurice River – Union Lake Dam <b>(fish ladder+)</b> (Millville)		(c)
Muddy Run – Rainbow Lake Dam (Vineland)		(r)
Maurice River – Westside Park Dam (Vineland)		(r)

#### Mededeconk River Drainage

	<u>Shad</u>	<u>River herring</u>
Metedeconk River – Twilight Lake Dam (Bayhead)		(c)
N. Branch Beaver Dam Creek – Rt. 88 (Point Pleasant)		(c)
S. Branch Beaver Dam Creek – Benton Woods/Lenape Terrance		(c)
N. Branch Metedeconk River – Parkway Pond Dam (Laurelton Gardens)		(c)
S. Br. Metedeconk River –Shenandoah Lk. <b>(fish ladder+)</b> (Lakewood)		(c)
S. Br. Metedeconk River – Lake Carasajo Lk. Dam <b>(fish ladder*)</b> (Lakewood)		(c)

#### Morses Creek Drainage

No confirmed / reported spawning migrations

**Mullica River Drainage**

	<u>Shad</u>	<u>River herring</u>
Ballanger Creek – Pollys Ditch (Mystic Island)		(c)
Nacote Creek – Mill Pond Dam (Port Republic)		(c)
Bass River- Bass River State Forrest (New Gretna)		(c)
Jobs Creek – Rt. 9 (New Gretna)		(c)
Negro Creek – Rt. 563 (Weekstown)		(c)
Wading River – Rt. 542 (Wading River)		(c)
Oswego River – Harrisville Lake Dam (Harrisville)		(r)
Batsto River – Batsto Lake Dam ( <b>fish ladder**</b> ) (Batsto)		(c)
Nescohague Creek – Above old dam site (Pleasant Mills)		(c)
Hammonton Creek – Nescohague Lake Dam (Pleasant Mills)		(c)
Mullica River – Constable Bridge (Batsto)		(c)

**Musconetcong River Drainage**

No confirmed / reported spawning migrations

**Navesink River Drainage**

	<u>Shad</u>	<u>River herring</u>
Navesink River - lower- (Redbank)		(c)
Swamp Brook – Shadow Lake Dam (Middletown)		(c)
Pine Brook – Swimming River- Riverdale Ave. (Clarkstown)		(c)
Swimming River – Swimming River Reservoir Dam (Lincroft)		(c)

**Newark Bay (Essex, Hudson, & Union Counties) Drainage**

	<u>Shad</u>	<u>River herring</u>
Newark Bay –Entire bay (Newark)	(c)	(c)

**Oldmans Creek Drainage**

	<u>Shad</u>	<u>River herring</u>
Beaver Creek – (Kay Gardens)		(c)
Richmonds Branch – Porches Mill Dam (Porches Mill)		(c)
Oldmans Creek – Harrisonville Lake Dam (Harrisonville)		(r)

**Oyster Creek Drainage**

	<u>Shad</u>	<u>River herring</u>
Oyster Creek – Fire Pond Dam (Forked River)		(c)

### **Passaic River Drainage**

	<u>Shad</u>	<u>River herring</u>
Passaic River (lower) (Rutherford)	(c)	(c)
Third River – Kings Land Lake Dam (Nutley)		(c)
Passaic River – Dundee Dam (Garfield)		(c)

### **Paulins Kill Drainage**

	<u>Shad</u>	<u>River herring</u>
Paulinskill River – Columbia Lake Dam (Columbia)	(r)	(r)

### **Pennsauken Creek Drainage**

	<u>Shad</u>	<u>River herring</u>
Pennsauken Creek (lower) (Palmyra)		(c)
Pennsauken Creek – Strawbridge Lake Dam (Moorestown)		(r)

### **Pequest River Drainage**

No confirmed / reported spawning migrations

### **Pochuck Creek Drainage**

No confirmed / reported spawning migrations

### **Pohatcong Creek Drainage**

No confirmed / reported spawning migrations

### **Raccoon Creek Drainage**

	<u>Shad</u>	<u>River herring</u>
Raccoon Creek - lower- (Richwood)	(c)	(c)
Raccoon Creek – Swedesboro (Swedesboro)		(c)
Unnamed tributary – Narraticon Lake Dam (Swedesboro)		(r)
Unnamed tributary – Basgalore Lake Dam (Swedesboro)		(r)
Raccoon Creek – Mullica Hill Pond (Mullica Hill)		(r)
S. Branch Raccoon Creek – Hill Street (Harrison)		(c)

### **Rahway River Drainage**

No confirmed / reported spawning migrations upstream of estuarine waters

### **Rancocas Creek Drainage**

<u>Shad</u>	<u>River herring</u>
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Rancocas Creek - lower - (Willingboro)	(c)	(c)
North Branch Rancocas Creek - Mill Dam (Mt. Holly)	(r)	(c)
SW Br. Rancocas Creek – Cotoxen Lake (Hainesport)		(r)
S. Br. Rancocas Creek – (Rancocas Woods)		(c)
S. Br. Rancocas Creek - Vincentown Mill Dam (Vincentown)		(r)

#### Raritan Bay Drainage

	<u>Shad</u>	<u>River herring</u>
Comptons Creek – Broadway Ave. (Belford)		(c)
Cheesequake Creek– Hooks Creek Dam (Cheesequake)		(c)

#### Raritan River Drainage

	<u>Shad</u>	<u>River herring</u>
Raritan River – Calco Dam ( <b>notched+</b> ) (Bridgewater)	(c)	(c)
Raritan River – Island Farm Weir ( <b>fish ladder+</b> ) (Bridgewater)	(c)	(c)
Raritan River – Manville Dam (Manville)		(c)
Raritan River – Nevius Street (Raritan)	(r)	(r)
Raritan River – Roberts Street Dam (Bridgewater)		(r)
Royces Brook – Raceway ( <b>fish ladder*</b> ) (Manville)		(c)
South River - Duhernal Lake Dam (Old Bridge)	(c)	(c)
Millstone River – Weston Causeway Dam (Manville)	(c)	(c)
Raritan River – Lower Duke Island Dam (Raritan)		(r)
Lawrence Brook – Weston Mill Pond Dam (South River)		(c)

#### Salem River Drainage

	<u>Shad</u>	<u>River herring</u>
Mannington Creek – Floodgates (Welchville)		(r)
Mannington Creek - Rt. 540 (Welchville)		(c)
Salem River – Salem Canal Floodgates (Salem)		(r)
Fenwick Creek – Floodgates (Salem)		(r)

#### Shark River Drainage

	<u>Shad</u>	<u>River herring</u>
Shark River – Remsen Mill Dam (Neptune City)		(r)

#### Shrewsbury River Drainage

No confirmed / reported spawning migrations upstream of estuarine waters

#### Stow Creek Drainage

<u>Shad</u>	<u>River herring</u>
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Raccoon Ditch – Davis Millpond Dam (Greenwich)	(c)
Canton Drain – Floodgate (Canton)	(r)
Stow Creek – Lakespur Lake Dam (Stow Creek)	(r)
Stow Creek – Buckhorn Road (Stow Creek)	(c)
Stow Creek – Denn Branch (Stow Creek)	(c)
Stow Creek – Jericho Pond	(c)

#### **Toms River Drainage**

	<u>Shad</u>	<u>River herring</u>
Mill Creek – Pine Beach (Pine Beach)		(c)
Wrangle Brook – Gem Street (Silver Ridge Park)		(c)
Toms River – Rt. 9 (Toms River)		(c)
Jakes Branch – Flint Road (Toms River South)		(c)
Jeffreys Creek – Lily Pond Dam (Toms River)		(c)
Davenport Branch – Silver Ridge Park (Silver Ridge Park)		(c)
Long Swamp Creek – Washington Ave (Toms River)		(c)

#### **Tuckahoe River Drainage**

	<u>Shad</u>	<u>River herring</u>
Cedar Swamp Creek – Rt. 50 (Petersburg)		(c)
Halfway Creek – Tuckahoe Imp. #1 (Petersburg)		(c)
Bog Branch – Tuckahoe Imp. #2 (Tuckahoe)		(c)
Flat Creek – Tuckahoe Imp. #3 (Middletown)		(c)
Back Run – Unnamed Pond Dam (Tuckahoe)		(c)
Warner Mill Stream – Aetna Rd. (Head of River)		(c)
McNeals Branch – Aetna Rd.(Belleplain)		(c)
Tuckahoe River – Peaslee Tract (Tuckahoe)		(c)
Tuckahoe River – U.S.G.S. Gage Dam (Head of River)		(c)

#### **Wallkill River Drainage**

No confirmed / reported spawning migrations

#### **Wreck Pond Creek Drainage**

	<u>Shad</u>	<u>River herring</u>
Wreck Pond Creek – Old Mill Pond Dam (Spring Lake Heights)		(c)

#### **References**

Zich, H.E. 1978. "Information on Anadromous Clupeid Spawning In New Jersey", Department of Environmental Protection, Division of Fish and Wildlife. Miscellaneous Report No. 41. 28p.