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

New Jersey Department of Environmental Protection Division of Fish and Wildlife Bureau of Freshwater Fisheries Southern Regional Office 220 Blue Anchor Road Sicklerville, NJ 08081 (856) 629-4950

<u>Introduction</u>

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 <u>all unlisted waters</u> in each of the identified drainages <u>have the potential to support anadromous fishes</u> 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>	River herring
Unnamed tributary – Laurel Lake Dam (Quinton) Deep Run – Elkington Mill Dam (Alloway) Alloway Creek – Alloway Lake Dam (Alloway)		(r) (c) (c)
Assiscunk Creek Drainage	<u>Shad</u>	River herring
Assiscunk Creek – Rt. 628 Bridge (Mansfield)	(c)	(c)
Assunpink Creek Drainage	01 1	B:
Assunpink Creek – Whitehead Pond Dam (Lawrence) Assunpink Creek – Assunpink Creek (Trenton)	<u>Shad</u>	(r) (c)
Atlantic Ocean (Atlantic Co.) Drainage	<u>je</u> Shad	River herring
Absecon Creek - Atlantic City Reservoir Dam (Absecon) Doughty Creek - East Pool (Oceanville) Doughty Creek - West Pool (Oceanville)	<u>5.166</u>	(c) (c) (c)
Atlantic Ocean (Cape May Co.) Draina		Diver berries
Mill Creek – Magnolia Lake Dam (Ocean View) Taylor Creek – Taylor Creek (Rio Grande)	<u>Shad</u>	(c) (r)
Atlantic Ocean (Monmouth Co.) Drains	age Shad	River herring
Atlantic Ocean – Deal Lake Dam (Asbury Park) Whale Pond Creek – Takanassee Lake Dam (Oakhurst)	<u>onau</u>	(c) (c)
Arthur Kill (Middlesex & Union County Co.) Drainage Shad River herring		
Arthur Kill River - Entire length	(c)	(c)

Atlantic Ocean (Ocean Co.) Drainage Shad	River herring
Lake of Lilies Dam - (Bayhead Junction) 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) Cedar Creek – Rt. 9 (Cedar Beach) Double Creek – East Bay Ave. (Barnegat) Fresh Creek – Taylor Road (Beach View) Gunning River – Collinstown Road (Barnegat) Kettle Creek – Brick Blvd. (Cedarwood Park) Polhemus Creek – Hooper Ave. (Silverton) Potter Creek – Bluejay Ave. (Holly Park) Silver Bay Creek – Hooper Ave. (Silverton) S. Branch Double Creek – East Bay Ave. (Barnegat) S. Branch Stouts Creek – Bayside Pkwy. Culvert (Sunrise Beach) Tunes Branch – Brick Blvd. (Lake Riviera) Westecunk Creek – Stafford Forge Imp. (Stafford Forge)	(c) (c) (c) (c) (c) (c) (c) (c) (c) (c)
Big Timber Creek Drainage Shad	River herring
Big Timber Creek – lower (Glendora) (c) S. Br. Big Timber Creek- Blackwood Lake Dam (Blackwood) Almonesson Creek - Almonesson Lake Dam	(c) (r)
Cohansey River Drainage Shad	River herring
Cohansey River –lower- (Bridgeton) Mill Creek – Sheppards Mill Pond Dam (Springtown) Indian Fields Branch – East Lake Dam (Bridgeton) Mill Creek – Clarks Pond Dam (Bridgeton) Cohansey River –Sunset Lake Dam (fish ladder+) (Bridgeton) Cohansey River – Rocaps Run	(c) (r) (c) (c) (r)
<u>Cooper River Drainage</u> <u>Shad</u>	River herring
Cooper River - Cooper River Park Lake (fish ladder+) (c) (Collingswood)	(c)
Cooper River - Wallworth Pond Dam (fish ladder*) (Haddonfield)	(r)
Cooper River - Evans Pond Dam (fish ladder*) (Haddonfield)	(r)

<u>Crosswicks Creek Drainage</u>	<u>Shad</u>	River herring
Crosswicks Creek - lower (White Horse) Back Brook - Gropps Lake Dam (fish ladder+) (White Horse Doctors Creek - Yardville/Groveville Road (Groveville) Crosswicks Creek - North Crosswicks Dam (Crosswicks)	(c)	(c) (c) (c)
Delaware Bay (Cape May Co.) Drainag	l e Shad	River herring
Dennis Creek - Dennisville Lake Dam (Dennisville) Dennis Creek - Ludlams Pond Dennis Creek - East Creek – East Creek Lake Green Creek - Green Creek Mosquito Imp. (Whitesboro) West Creek - Rt. 47- (Eldora) West Creek - Pickel Factory Pond Dam (Eldora)		(c) (r) (r) (c) (r)
Delaware Bay (Cumberland Co.) Draina	ge Shad	River herring
Cedar Creek - Cedar Lake Dam (Cedarville) Dividing Creek - Mill Creek (Dividing Creek) Dividing Creek - Cub Swamp Creek (Dividing Creek) Nantuxtent River - Shaws Millpond Dam (Newport) Nantuxtent River - Middle Pond Dam (Newport)		(c) (r) (r) (r)
Delaware and Raritan Canal (Mainstem and	<u>Feede</u>	<u>r)</u>
No confirmed / reported spawning migrations		
Delaware River (Mainstem) Drainage		River herring
Delaware River – Entire length	(c)	(c)
Delaware River (Burlington Co.) Draina	ge Shad	River herring
Blacks Creek – Rt. 301 (Bordentown) Blacks Creek – NJ Rt. 130 culvert (Bordentown) Crafts Creek - Crafts Creek Dam (Roebling) Pompeston Creek – Pompeston Creek (Cinnaminson) Unnamed Tributary – Crystal Lake Dam (Bordentown)		(c) (c) (r) (r)

Delaware River (Camden Co.) Drainage		
Shad	River herring	
Newton Creek - Newton Lake Dam (Oaklyn) (Fish Ladder *)	(r)	
Delaware River (Gloucester Co.) Drainage		
Shad	River herring	
Repaupo Creek- Floodgate Repaupo Creek (Greenwich) Woodbury Creek – Stewart Lake Dam (Woodbury) (Fish Ladder *)	(r) (r)	
Delaware River (Hunterdon Co.) Drainage		
Shad	River herring	
Fiddlers Creek – Rt. 29 (Titusville) Lockatong Creek – Rt. 29 (Kingwood) Delaware River – Lambertville Wing Dam Alexauken Creek – Alexauken Creek (Lambertville)	(c) (c) (r)	
Delaware River (Mercer Co.) Drainage		
Shad	River herring	
Jacobs Creek – Rt. 29 (Sommerset) 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>	River herring	
N. Branch Forked River – Lower Lake Dam (Forked River Beach)		(r)	
Forked River – Middle Branch		(c)	
Great Egg Harbor River Drainage	Shad	River herring	
Patcong Creek – Bargaintown Lk. Dam (fish ladder*) (Somers Point)		(c)	
English Creek – Hogans Pond Dam (English Creek) Gibson Creek – Corbin City Imp. #1 (Gibson Landing) Peters Run – Corbin City Imp. #3 (Tuckahoe) Middle River – (Tuckahoe) Charley Creek – Corbin City Impoundment #3 (Tuckahoe) Hawkins Creek – Corbin City Imp. #2 (Estell Manor) Jacksons Creek – unnamed pond dam (Estell Manor) Stephan Creek – Stephans Lake Dam (Estellville) Miry Run – Rt. 559 (Estellville) South River – 11 th Ave. (Harding Lakes) South River – Forty Wire Rd. (Harding Lakes) Gravelly Run – Rt. 559 (Clarks Run) Watering Race Branch – Babcock Creek (Mays Landing) Great Egg Harbor River – Lk. Lenape Dam (fish ladder**) (Mays Landing)		(c) (c) (r) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c	
Hackensack River Drainage			
Hackensack River – Oradell Reservoir Dam (Jersey City)	Shad (c)	River herring (c)	
<u>Hudson River Drainage</u>			
Hudson River – Entire Length in New Jersey	(c)	(c)	
<u>Little Egg Harbor (Manahawkin Bay) Drainage</u> Shad River herring			
Mill Creek – Manahawkin Lake Dam (Manahawkin) Tuckerton Creek – Pohatcong Lake Dam (Tuckerton) Willis Creek- Willis Creek Dam (Giffordtown) Willis Creek – Radio Road (Giffordtown)	Silau	(c) (c) (c) (c)	

Manasquan River Drainage	<u>Shad</u>	River herring
Watson Creek – Stockton Lake Dam (Manasquan) Mill Run – Allaire State Park (Squankum) Manasquan River – U.S.G.S. Gage Dam (Lower Squankum)		(c) (r)
Mantua Creek Drainage	<u>Shad</u>	River herring
Mantua Creek – Iower- (Mount Royal) Mantua Creek – Wenonah Lake Dam (Wenonah)	(c)	(c) (r)
Maurice River Drainage		
	<u>Shad</u>	River herring
Maurice River- lower- (Buckshutem) Muskee Creek – Rt. 47 (Bricksboro) Manumuskin Creek – Cumberland Pond Dam (Millville) Buckshutem Creek – Laurel Lake Dam (Bucketshutem) Menantico Creek – Menantico Sand Ponds (Millville) Hankins Brook – Rt. 47 (Millville) White Marsh Run – Silver Lake Dam (Millville) Maurice River – Union Lake Dam (fish ladder+) (Millville) Muddy Run – Rainbow Lake Dam (Vineland) Maurice River – Westside Park Dam (Vineland)	(c)	(c) (c) (r) (c) (c) (c) (c) (r) (r)
Mededeconk River Drainage		
	<u>Shad</u>	River herring
Metedeconk River – Twilight Lake Dam (Bayhead) N. Branch Beaver Dam Creek – Rt. 88 (Point Pleasant) S. Branch Beaver Dam Creek – Benton Woods/Lenape Terra N. Branch Metedeconk River – Parkway Pond Dam (Laurelton Gardens) S. Br. Metedeconk River – Shenandoah Lk. (fish ladder+) (Lakewood)	ınce	(c) (c) (c) (c)
S. Br. Metedeconk River – Lake Carasaljo Lk. Dam (fish lado (Lakewood)	der*)	(c)

Morses Creek Drainage

No confirmed / reported spawning migrations

Mullica River Drainage	<u>Shad</u>	River herring
Ballanger Creek – Pollys Ditch (Mystic Island) Nacote Creek – Mill Pond Dam (Port Republic) Bass River- Bass River State Forrest (New Gretna) Jobs Creek – Rt. 9 (New Gretna) Negro Creek – Rt. 563 (Weekstown) Wading River – Rt. 542 (Wading River) Oswego River – Harrisville Lake Dam (Harrisville) Batsto River – Batsto Lake Dam (fish ladder**) (Batsto) Nescohague Creek – Above old dam site (Pleasant Mills) Hammonton Creek – Nescohague Lake Dam (Pleasant Mills) Mullica River – Constable Bridge (Batsto)		(c) (c) (c) (c) (c) (r) (c) (c) (c)
<u> </u>		(-)
<u>Musconetcong River Drainage</u>		
No confirmed / reported spawning migrations		
Navesink River Drainage	<u>Shad</u>	River herring
Navesink River - Iower- (Redbank) Swamp Brook - Shadow Lake Dam (Middletown) Pine Brook - Swimming River- Riverdale Ave. (Clarkstown) Swimming River - Swimming River Reservoir Dam (Lincroft	t)	(c) (c) (c)
Newark Bay (Essex, Hudson, & Union Counties) Drainage		
Newark Bay –Entire bay (Newark)	Shad (c)	River herring (c)
Oldmans Creek Drainage	<u>Shad</u>	River herring
Beaver Creek – (Kay Gardens) Richmonds Branch – Porches Mill Dam (Porches Mill) Oldmans Creek – Harrisonville Lake Dam (Harrisonville)		(c) (r)
Oyster Creek Drainage		

Oyster Creek – Fire Pond Dam (Forked River)

River herring

(c)

<u>Shad</u>

Passaic River Drainage		
	<u>Shad</u>	River herring
Passaic River (lower) (Rutherford) Third River – Kings Land Lake Dam (Nutley) Passaic River – Dundee Dam (Garfield)	(c)	(c) (c)
Paulins Kill Drainage		
	<u>Shad</u>	River herring
Paulinskill River – Columbia Lake Dam (Columbia)	(r)	(r)
Pennsauken Creek Drainage		
	<u>Shad</u>	River herring
Pennsauken Creek (lower) (Palmyra) Pennsauken Creek – Strawbridge Lake Dam (Moorestown)		(c)

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>	River herring
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	Chad	Diver herring
Rancocas Creek - Iower - (Willingboro) North Branch Rancocas Creek - Mill Dam (Mt. Holly) SW Br. Rancocas Creek - Cotoxen Lake (Hainesport) S. Br. Rancocas Creek - (Rancocas Woods) S. Br. Rancocas Creek - Vincentown Mill Dam (Vincentown)	Shad (c) (r)	River herring (c) (c) (r) (c) (r)
Raritan Bay Drainage	<u>Shad</u>	River herring
Comptons Creek – Broadway Ave. (Belford) Cheesequake Creek– Hooks Creek Dam (Cheesequake)	Snau	(c)
Raritan River Drainage	. .	
Raritan River – Calco Dam (notched+) (Bridgewater) Raritan River – Island Farm Weir (fish ladder+) (Bridgewater)	<u>Shad</u> (c) (c)	River herring (c) (c)
Raritan River – Manville Dam (Manville) Raritan River – Nevius Street (Raritan) Raritan River – Roberts Street Dam (Bridgewater) Royces Brook – Raceway (fish ladder*) (Manville)	(r)	(c) (r) (c)
South River - Duhernal Lake Dam (Old Bridge)	(c)	(c)
Millstone River – Weston Causeway Dam (Manville) Raritan River – Lower Duke Island Dam (Raritan) Lawrence Brook – Weston Mill Pond Dam (South River)	(c)	(c) (c)
Salem River Drainage	Ob a d	Diversity and a series of
Mannington Creek – Floodgates (Welchville) Mannington Creek - Rt. 540 (Welchville) Salem River – Salem Canal Floodgates (Salem) Fenwick Creek – Floodgates (Salem)	<u>Shad</u>	River herring (r) (c) (r) (r)
Shark River Drainage	Shad	Divor harring
Shark River – Remsen Mill Dam (Neptune City)	<u>Shad</u>	River herring (r)

Shrewsbury River Drainage

No confirmed / reported spawning migrations upstream of estuarine waters

Stow Creek Drainage

	<u>Shad</u>	River herring
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

	Shad	River herring
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

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

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.