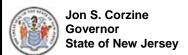
# 2009

# Fish Smart, Eat Smart

A Guide to Health Advisories for Eating Fish and Crabs Caught in New Jersey Waters



New Jersey Department of Environmental Protection New Jersey Department of Health and Senior Services







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The New Jersey Department of Environmental Protection and the New Jersey Department of Health and Senior Services can provide more information on the advisories and the health effects of chemical contaminants in the fish. To stay current with advisory updates and to request additional information, please contact the NJDEP Division of Science, Research and Technology at 1-609-984-6070 or check the website www.FishSmartEatSmartNJ.org or the NJDHSS at 1-609-588-3123.

# introduction

### Introduction

Fishing provides enjoyable and relaxing recreation. Many people enjoy cooking and eating their own catch. Fish are an excellent source of protein, minerals and vitamins, are low in fat and cholesterol and play an important role in maintaining a healthy, well-balanced diet. The American Heart Association recommends people eat fish regularly. Fish are also one of the few foods that are rich in the omega-3 fatty acids needed for proper development of the brain and nervous system in the fetus and infants, and may reduce the risk of heart attack. Fish are an excellent substitute for other protein foods that are higher in saturated fats and cholesterol. Health professionals recommend that you include fish in your diet.

However, certain fish may contain toxic chemicals, such as polychlorinated biphenyls (PCBs), dioxins and mercury from the water they live in and the food they eat. Therefore, it is a good idea to follow a few precautions in consuming recreationally caught fish and crabs, particularly if you eat them often. The purpose of this booklet is to provide information to you on how to reduce your risk by avoiding or limiting consumption of certain fish, and to guide you in preparing the fish you eat from local waters in ways that reduce your exposure to PCBs, dioxins and mercury.

Since 1982, when research began to show elevated levels of potentially harmful contaminants in certain fish and crabs in some New Jersey waters, fish consumption advisories were adopted to guide citizens on safe consumption practices. Fish consumption advisories are developed through a scientific process that includes collecting samples of fish from waters throughout the state and analyzing them for various chemical contaminants, such as dioxin, PCBs and mercury. The contaminant levels in the fish are then evaluated using federal guidelines for protecting human health. Chemical contaminants such as dioxin and PCBs are classified by the U.S. Environmental Protection Agency as probable cancercausing substances in humans. Elevated levels of mercury can pose health risks to the human nervous system, particularly to developing fetuses.

The New Jersey Department of Environmental Protection (NJDEP) and Department of Health and Senior Services (NJDHSS) provide advice on consuming those species of fish in which high levels of dioxin, PCBs and mercury have been found. Since levels of contaminants may vary from one location to another, and from one fish species to another, the advisories are also separated by site. So be sure to check which guidelines refer to your fishing location.

# Health Effects from Consumption of Contaminated Fish and Crabs

### **General Advice**

Exposure to low levels of some contaminants in the environment may have long lasting health effects on people. Mercury, PCBs and dioxins are among the major contaminants found in some New Jersey fish in portions of the state. These contaminants can be especially harmful to women of childbearing age, pregnant women and nursing mothers. Trace amounts of these contaminants may remain in your body for a period of time after eating. Should you become pregnant during this time, these contaminants can be passed along to your fetus, potentially affecting the development of the nervous system. Children are also at risk of developmental and neurological problems if exposed to these chemicals.

### Mercury

Mercury is a toxic metal that has been commonly used in a number of products (e.g., thermometers, electrical switches). There are many sources of mercury in the environment, natural and man-made; primary sources include burning of fossil fuels such as coal, incineration of wastes, and metal processing/manufacturing.

Mercury discharged to the environment can end up in local water bodies. Mercury accumulates in fish muscle tissue through the aquatic food chain from the food that fish eat. Above certain levels, mercury can damage the nervous system, particularly in unborn and young children, resulting in learning and developmental delays. Regular consumption, of even low amounts of mercury may cause subtle effects on the central nervous system in both children and adults. In addition, long-term consumption of fish with elevated levels of mercury by adults and older children may result in adverse health effects, including neurological damage.

### **PCBs**

Polychlorinated biphenyls (PCBs) were commercially produced for industrial application in heat transfer systems, hydraulic fluids and electrical equipment. They were later incorporated into other uses such as printing inks, paints and pesticides. The manufacture of PCBs was stopped in 1979 as a result of evidence that PCBs build up in the environment and cause harmful effects. PCBs tend to stay mostly in soil and sediment, but are also found in the air and water.

Once they enter the food chain, they have a tendency to absorb into fat tissue. PCBs build up in fish to levels that are hundreds of thousands of times higher than the levels in the surrounding water. When people consume fish that have already accumulated PCBs, the PCBs then accumulate in their bodies.

PCBs have been shown to cause <u>cancer</u> in animals, and there is evidence that PCBs may cause cancer in exposed humans. PCBs have also been shown to cause a number of serious health effects besides cancer in humans and animals, including effects on the nervous system of the developing fetus, the <u>immune system</u>, and the reproductive system. Studies have shown that unborn and young children are most at risk to PCB exposure. Because PCBs take a long time to leave the body after they accumulate, women who plan to become pregnant should follow the more restrictive consumption advice before becoming pregnant.

For more information go to www.epa.gov/ebtpages/pollmultimediapollpolychlorinatedbiphenylspcbs.html.

### **Dioxin**

Dioxin is the most toxic member of a large chemical family of related dioxins and furans. Dioxin is an unwanted industrial byproduct formed through numerous processes, including production of chlorinated phenol products such as herbicides, the incineration of municipal solid waste, and creation of paper products using bleach. Most of what we know about dioxin has been obtained through animal toxicity testing in the laboratory and representative wildlife species. Dioxin produces a number of effects in animal testing, including suppression of the immune system, impaired reproduction, birth defects in some species tested, a skin condition called chloracne, alterations in liver function, and cancer. The federal Environmental Protection Agency (EPA) has classified dioxin as a probable human carcinogen.

For more information go to www.epa.gov/ebtpages/pollchemicalsdioxins.html.

### **General Consumption Guidelines**

Fish Species: Contaminant levels may vary from species to species. If possible, eat smaller amounts of several different types of fish rather than a large amount of one type that may be high in contaminants. Try to focus your consumption on those species of fish that have lower levels of contaminants, such as fluke or flounder.

**Fish Size**: Smaller fish of a species will usually have lower chemical levels than larger fish in the same location because contaminants tend to build up in the

fish over time. It is advisable to eat smaller fish (of legal size) more often than larger fish.

High-risk Individuals: Infants, children, pregnant women, nursing mothers and women of childbearing age are considered to be at higher risk from contaminants in fish than members of the general public. People within this category should be particularly careful about following the advisories, because of the greater potential for PCBs, dioxin and mercury to affect the development of the fetus, infant, and young child.

# Preparation and Cooking Methods for Fish and Crabs under Advisory

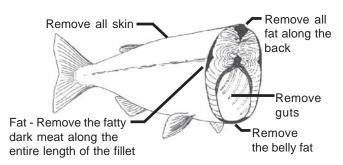
The best way to reduce exposure to contaminants in fish is to learn what fish species are affected and either limit or avoid consumption. However, if you must eat those species under advisories, there are steps you can take to reduce your exposure. Contaminants tend to concentrate in the fatty tissue of the fish you catch. Proper cleaning and cooking techniques, which remove some of the fat from the fish, can significantly reduce levels of PCBs, dioxins and other organic chemicals. Please note, however, that these techniques will not reduce or remove unsafe levels of mercury from these fish. Mercury occurs in the flesh. There is no way to remove mercury through cooking. The best way to reduce mercury exposure is to select those species of fish which are known to have lower levels of mercury.

### **Fish Preparation Methods**

Proper fish cleaning and cooking techniques may reduce PCB levels by approximately 50 percent when compared to raw fish fillets. A meal size is considered to be an uncooked 8 ounce fillet.

**Eat only the fillet portions**. Do not eat whole fish or steak portions.

The following diagram illustrates those body portions. Many chemical contaminants, like PCBs and pesticides (but not mercury), are stored in the fatty portions of fish. To reduce the levels of these



chemicals, skin the fish and trim any of the dark meat (lateral line), back strap and belly flap.

Do not eat the heads, guts or liver, because PCBs usually concentrate in those body parts. Also, avoid consumption of any reproductive parts such as eggs or roe.

### Fish Cooking Methods

Use a cooking method such as baking, broiling, frying, grilling, or steaming that allows the fats and juices to drain away from the fish. When possible, cook the fish on an elevated rack that allows fats and juices to drain to the pan below.

Avoid batter, breading or coatings that can hold in the juices that may contain contaminants. The juices should be thrown away since they contain the PCBs and other chemicals that were in the fat. Do not pour these juices over the fish as a sauce or to moisten the fish. Butter, margarine or other liquids can be added to the fish for this purpose once the juices have been poured off.

After cooking, **discard all liquids and frying oils**. Do not reuse.

Do <u>not</u> use heads, skin, trimmed fatty portions in soups, stews, chowders, boils, broth or for fish stock. If you make stews or chowders, only use skinless fillet parts.

Raw fish may be infested by parasites. Cook fish thoroughly to destroy the parasites. This also helps to reduce the level of many chemical contaminants.

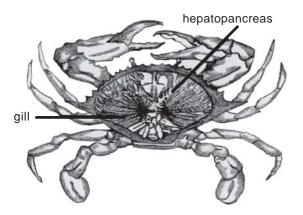
### **Crab Preparation Methods**

Eating, selling or taking (harvesting) blue crabs from Newark Bay Complex and the tidal Passaic River is prohibited. The Newark Bay Complex is located in northeastern New Jersey. It includes the Newark Bay, tidal Hackensack River, Arthur Kill, Kill Van Kull and tidal tributaries. (See chart on page 8.) If blue crabs are taken from water bodies other than the Passaic River/Newark Bay Complex, the following preparation techniques can be followed to reduce exposure to some contaminants.

The highest levels of chemical contaminants are found in the hepatopancreas, commonly known as the tomalley or green gland. It is the yellowish green gland under the gills. This material is found next to the lump meat (backfin) portion of the crab. Chill and break the crabs immediately before cooking. Care must be taken to remove all of the hepatopancreas before cooking.

There is no specific cooking method available to reduce the chemical contaminant levels in blue crabs. The following steps for proper preparation is key to reducing your exposure to harmful chemical contaminants.

- · Do not eat the green gland (hepatopancreas).
- Remove green gland (hepatopancreas) before cooking.
- After cooking, discard the cooking water.
- Do not use cooking water or green gland (hepatopancreas) in any juices, sauces, bisques or soups.



### Federal Advice on Fish Consumption

The following is provided as general information and advice from the federal government.

Fish and shellfish are an important part of a healthy diet. Fish and shellfish contain high quality protein and other essential nutrients, are low in saturated fat, and contain omega-3 fatty acids. A well-balanced diet that includes a variety of fish and shellfish can contribute to heart health and children's proper growth and development. So, women and young children in particular, should include fish or shellfish in their diets due to the many nutritional benefits.

However, nearly all fish and shellfish contain traces of mercury. For most people, the risk from mercury by eating fish and shellfish is not a health concern. Yet, some fish and shellfish contain higher levels of mercury that may harm an unborn baby or young child's developing nervous system. The risks from mercury in fish and shellfish depend on the amount of fish and shellfish eaten and the levels of mercury in the fish and shellfish. Therefore, the Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA) are advising women who

may become pregnant, pregnant women, nursing mothers, and young children to avoid some types of fish and eat fish and shellfish that are lower in mercury.

By following these 3 recommendations for selecting and eating fish or shellfish, women and young children will receive the benefits of eating fish and shellfish and be confident that they have reduced their exposure to the harmful effects of mercury.

- 1. Do not eat Shark, Swordfish, King Mackerel, or Tilefish because they contain high levels of mercury.
- 2. Eat up to 12 ounces (2 average meals) a week of a variety of fish and shellfish that are lower in mercury.
- Five of the most commonly eatenfish that are low in mercury are shrimp, canned light tuna, salmon, pollock, and catfish.
- Another commonly eaten fish, albacore ("white") tuna has more mercury than canned light tuna. So, when choosing your two meals of fish and shellfish, you may eat up to 6 ounces (one average meal) of albacore tuna per week.
- 3. Check local advisories about the safety of fish caught by family and friends in your local lakes rivers, and coastal areas. If no advice is available, eat up to 6 ounces (one average meal) per week of fish you catch from local waters, but don't consume any other fish during that week.

Follow these same recommendations when feeding fish and shellfish to your young child, but serve smaller portions.

Additional information on mercury in seafood can be found at the FDA's web site: http://www.cfsan.fda.gov/~dms/admehg.html

For more information on EPA freshwater fish consumption advisories, go to http://www.epa.gov/ost/fish/

### 2009 Fish Consumption Advisories for

### PCBs, Dioxin and Mercury

The following advisory table provides statewide, regional, and water body-specific advisory information for various fish species. The table includes PCB, Dioxin and Mercury Advisories. The table lists the recommended fish consumption frequencies for the **General Population** and **High-risk Individuals** for waters statewide and for specific water bodies.

<u>High Risk Individuals:</u> Includes infants, children, *pregnant* women, nursing mothers and women of childbearing age.

General Population: Includes all others not in the high-risk category. PCB advisories for the General Population are presented in meal frequencies (for example: one meal per month or four meals per year). This range is based on an estimated 1 in 10,000 risk of cancer during your lifetime from eating fish at the advisory level. This means that one additional cancer may occur in 10,000 people eating fish at the advisory level for a lifetime.

By using this advisory, you have the necessary information to make an informed choice on the number of meals of fish to consume. You can reduce your risk further by eating less than the advisory meal frequency, however, this needs to be balanced with the health benefits of eating fish.

The limits that follow each species assume that no other contaminated fish are being eaten. If you eat more than one species of fish listed in the advisory, the total consumption of fish should not exceed the recommended frequency as a guideline for consumption. The best approach is to use the lowest recommended frequency as a guideline for consumption. Example: If you fish Union Lake, you can eat four meals of white perch or you can eat one meal of Largemouth Bass over the course of a month, but not both.

If your specific fishing location is not mentioned within the advisories on the following pages, this does not mean the fish are free of contamination. Not all New Jersey waters or fish species have been tested, and not all fish species were found in all locations, or in some cases available data were insufficient to list a species for a specific water body. Follow the statewide advisory for the listed species if your fishing area is not mentioned in the guidelines, or follow the statewide advisory of one meal per week for (general Population) or one meal per month (high-risk individuals) for freshwaters.

# 2009 FISH CONSUMPTION ADVISORIES

NOTE: 2009 Advisories marked in Bold are New or Revised

# STATEWIDE FISH CONSUMPTION ADVISORIES

### STATEWIDE ESTUARINE & MARINE WATERS

(All coastal waters except those under WATERBODY SPECIFIC ADVISORIES)

	GENERAL POPULATION	HIGH-RISK INDIVIDUALS (1)	
SPECIES	EAT NO MORE THAN: (2, 3)	EAT NO MORE THAN: (2, 3)	
STRIPED BASS	One meal per Month		
BLUEFISH (greater than 6 lbs/24 inches)	Four meals per Year	Do Not Fot	
BLUEFISH (less than 6lbs/24 inches)	One meal per Month	Do Not Eat	
AMERICAN EEL	Four meals per Year		
AMERICAN LOBSTER	Do Not Eat the Green Gland, (i.e., Tomalley or Hepatopancreas)		

### **GENERAL FRESHWATER ADVISORIES**

For all freshwater fish species and waters not covered by consumption advisories:

General population - Eat no more than <u>one meal per week</u>

High-risk individuals - Eat no more than <u>one meal per month</u>

### STATEWIDE FRESHWATER

(All waters *except* PINELANDS REGION and those listed under WATERBODY SPECIFIC ADVISORIES)

SPECIES	GENERAL POPULATION  EAT NO MORE THAN: (2, 3)	HIGH-RISK INDIVIDUALS  EAT NO MORE THAN: (2,3)
TROUT (Brown, Brook, Rainbow)		One meal per week
LARGEMOUTH BASS	One meal per week	
SMALLMOUTH BASS		One meal per month
CHAIN PICKEREL		one mear per monur
YELLOW BULLHEAD		
BROWN BULLHEAD	No restrictions	
SUNFISH <sup>(4)</sup>		One meal per week

# REGIONAL FRESHWATER ADVISORIES PINELANDS REGION

(All water bodies of the PINELANDS REGION unless there is a waterbody specific advisory listed below with a **P** notation)

LARGEMOUTH BASS	One meal per month	
CHAIN PICKEREL		Do not eat
BROWN BULLHEAD		
YELLOW BULLHEAD	One meal per week	
SUNFISH <sup>(4)</sup>		One meal per month

### WATERBODY SPECIFIC FISH CONSUMPTION ADVISORIES ESTUARINE & MARINE WATERS GENERAL **HIGH-RISK POPULATION INDIVIDUALS** WATERBODY **SPECIES** EAT NO MORE EAT NO MORE THAN: THAN: Do not eat or harvest (5) Blue Crab\* NEWARK BAY COMPLEX Striped Bass\* Four meals per year Including Newark Bay, tidal American Eel\* Hackensack River, Arthur Do not eat Do not eat Kill, Kill Van Kull and tidal White Perch tributaries. One meal per year White Catfish All Fish & TIDAL PASSAIC RIVER Do not eat Shellfish\* From the head of tide (Dundee Dam) to Newark Do not eat or harvest<sup>4</sup> Blue Crab\* Bay and all tidal tributaries. Striped Bass\* Four meals per year Do not eat American Eel\* **HUDSON RIVER** One meal per year From the New York & New White Perch Jersey border (near Alpine, Winter Flounder One meal per month NJ) to the NY-NJ border at the Upper New York Bay White Catfish Do not eat One meal of 7 crabs per week Blue Crab Do not eat green gland (hepatopancreas); Discard cooking liquid

### **ESTUARINE & MARINE WATERS**

ES.	ESTUARINE & MARINE WATERS			
		GENERAL POPULATION	HIGH-RISK INDIVIDUALS	
WATERBODY	SPECIES	EAT NO MORE THAN:	EAT NO MORE THAN:	
	American Lobster	Do not eat green gla	per week and (hepatopancreas) oking liquid	
RARITAN BAY	Weakfish		Do not oot	
COMPLEX Includes the Raritan Bay,	Striped Bass	One meet nor month	Do not eat	
tidal Raritan River	Winter Flounder	One meal per month	One meet man menth	
(to the Rt.1 bridge), and the	Porgy		One meal per month	
tidal portions of all tributaries. ♦ See below for	American Eel	One meal per year	Do not eat	
White Perch and White	Summer Flounder	One meal	per week	
Catfish for the Raritan River and South River.	White Perch (Raritan Bay)	One meal per year	Do not eat	
	Blue Crab	One meal of 7 crabs per month.  Do not eat green gland (hepatopancreas);  Discard cooking liquid		
♦ Raritan River upstream	White Catfish		9 1	
of Route 35 Bridge and South River (tidal portion)	White Perch	Four meals per year	Do not eat	
Sandy Hook Bay & Lower Bay	Summer Flounder	One meal per week		
COASTAL TRIBUTARIES Including. Navesink, Shrewsbury, Shark, Toms & Mullica Rivers.	American Eel	One meal per month		
Barnegat Bay at Manahawkin Bay	Weakfish	One meal per week	One meal per month	
COASTAL WATERS Atlantic Ocean from Sandy Hook to Sea Bright	Summer Flounder	One meal per week		
Atlantic Ocean from Sea Isle City to Cape May	Weakfish	One meal per week	One meal per month	

# **ESTUARINE & MARINE WATERS**

<b>L</b> D.	ESTOARINE & MARINE WATERS			
		GENERAL POPULATION	HIGH-RISK INDIVIDUALS	
WATERBODY	SPECIES	EAT NO MORE THAN:	EAT NO MORE THAN:	
	Hybrid Striped Bass	No restrictions	One meal per week	
LOWER (TIDAL)	Largemouth Bass	140 Testrictions	One mear per week	
DELAWARE RIVER	American Eel	One meel nor yeer		
Trenton, NJ to PA/DE line,	Channel Catfish	One meal per year		
including all tributaries to the head of tide.	Striped Bass	Four meals per year	Do not eat	
the head of tide.	White Perch	Tour mears per year		
	White Catfish	One meal per month		
DELAWARE RIVER ESTUARY Delaware, Pennsylvania, New Jersey borderline to Chesapeake & Delaware (C&D) Canal	All Finfish	Do no	ot eat	
		Do not eat fish larger than 6 lbs or 24 inches		
DELAWARE ESTUARY & DELAWARE BAY	Bluefish	One meal per year for fish less than 6 lbs or less than 24 inches		
Chesapeake & Delaware	White catfish		Do not eat	
(C&D) Canal to the mouth of Delaware Bay	Striped Bass			
or Belaware Bay	White perch	One meal per year		
	American eel			
	Channel catfish			
	Weakfish	One meal per week	One meal per month	
DELAWARE BAY TRIBUTARIES	American eel	One meal per month	Four meals per year	

## FRESHWATER SITES

WATER BODY	SPECIES	GENERAL POPULATION EAT NO MORE THAN:	HIGH-RISK INDIVIDUAL EAT NO MORE THAN:
Alycon Lake (Gloucester Co.) ( <b>P</b> )	Black Crappie	No restrictions	One meal per month
Assunpink Creek (Mercer/Monmouth Co.)	Largemouth Bass	No restrictions	One meal per week
Atlantic City Reservoir -	Chain Pickerel		
(Atlantic Co.) ( <b>P</b> )	Largemouth Bass	Do no	ot eat
No Fishing Allowed	Yellow Perch		
Batsto Lake	Chain Pickerel	0 1 1	D ( )
(Burlington Co.) ( <b>P</b> )	Largemouth Bass	One meal per week	Do not eat
	Brown Bullhead	No restrictions	One meet nor menth
	Yellow Bullhead	No restrictions	One meal per month
Big Timber Creek (Gloucester Co.)	Channel Catfish	NT- madeinting	0
(	Largemouth Bass	No restrictions	One meal per week
	White Catfish		
	Brown Bullhead	No restr	rictions
Boonton Reservoir	Largemouth Bass	Four meals per year	Do not Eat
(Morris Co.)	Smallmouth Bass	2 -	Do not Eat
	Rock Bass	No Restriction	
	White Catfish	One meal per week	One meal per month
	Brown Bullhead	No restr	rictions
Bound Brook –(Somerset Co) Entire length including New Market Pond & Spring Lake	All fish species	Do no	ot eat
Branch Brook Park –	Largemouth Bass	One meal per week	Do not out
Newark, (Essex Co.)	Common Carp	One meal per month	Do not eat
	Bluegill	No restrictions	One meal per week
Budd Lake	White Catfish	One meal per month	
(Morris Co.)	Northern Pike	One meal per week	One meal per month
	Largemouth Bass	_	No mod
	Brown Bullhead	No restrictions	No restrictions
Butterfly Bogs Pond	Bluegill Sunfish	On a magal :: - : - : - : - : 1	One meal per week
(Ocean Co.) (P)	Chain Pickerel	One meal per week	Do not eat
(Occum Co.) (1)	Brown Bullhead	No restrictions	One meal per week

## FRESHWATER SITES

WATER BODY	SPECIES	GENERAL POPULATION	HIGH-RISK INDIVIDUAL
		EAT NO MORE THAN:	EAT NO MORE THAN:
Canistear Reservoir	Chain Pickerel		One meal per month
(Sussex Co.)	Yellow Perch	No restrictions	One mear per monar
	Yellow Bullhead	140 lestrictions	One meal per week
	Bluegill Sunfish		One mear per week
Carnegie Lake	Largemouth Bass		
(Mercer Co.)	Channel Catfish		One meal per month
	White Perch	No restrictions	One meal per week
	Bluegill Sunfish		No restrictions
Cedar Lake	Chain Pickerel	One meal per week	Do not eat
(Cumberland Co.) (P)	Largemouth Bass	One mear per week	Do not eat
Clementon Lake	Chain Pickerel	One meal per week	One meal per month
(Camden Co.) (P)	Largemouth Bass	One mear per week	One mear per monur
Clinton Reservoir	Largemouth Bass	One meet man vyeet	Do not eat
(Passaic Co.)	Yellow Bullhead	One meal per week	
	Rock Bass	No restrictions	One meal per month
	White Sucker		
Cooper River, below Evans	Common Carp	One meal per month	Do not eat
Pond (Camden Co.)	Bluegill Sunfish	One meal per week	One meal per month
Cooper River, Hopkins Pond (Camden Co.)	Brown Bullhead	One meal per month	Four meals per year
Cooper River Lake	Largemouth Bass	Four meals per year	Do not eat
(Camden Co.)	Common Carp	rour mears per year	Do not eat
	Brown Bullhead	One meal per week	One meal per month
	Bluegill Sunfish	One mear per week	One mear per monur
Cranberry Lk (Sussex Co.)	Hybrid Striped Bass	One meal per week	One meal per month
Crater Lake	Yellow Perch	One meal per week	Do not eat
(Sussex Co.)	Brown Bullhead	One mear per week	One meal per month
Crosswicks Creek	Largemouth Bass	No restrictions	One meal per week
(Mercer Co.)	White Catfish	TVO Testrictions	One mear per week
Crystal Lake	Largemouth Bass		One meal per month
(Burlington Co.)	Black Crappie	No restrictions	One meal per week
	Brown Bullhead		No restrictions
Davidson Mill Pond	American Eel	One meal per month	
(Middlesex Co.)	Bluegill Sunfish	No restrictions	One meal per week
	Chain Pickerel		One meal per month
	Largemouth Bass	One meal per week	one mear per month

## FRESHWATER SITES

		GENERAL	HIGH-RISK
WATER BODY	SPECIES	POPULATION	INDIVIDUAL
		EAT NO MORE THAN:	EAT NO MORE THAN:
	<b>Channel Catfish</b>	0 1 1	<b>.</b>
Delaware & Raritan Canal	American Eel	One meal per month	Do not eat
Entire Length	Bluegill Sunfish	No restrictions	One meal per week
Entire Length	Chain Pickerel	No restrictions	
	<b>Smallmouth Bass</b>	0	One meal per month
	<b>Largemouth Bass</b>	One meal per week	
Delaware & Raritan	Yellow Perch	No restrictions	One meal per month
Canal @ Bound Brook (Somerset Co.)	Common Carp	Four meals per year	Do not eat
Delaware & Raritan Canal at Griggstown (Middlesex-Somerset Co.)	Brown Bullhead	No restrictions	One meal per week
Delaware & Raritan Canal at Lambertville (Hunterdon Co.)	Common Carp	One meal per month	One meal per month
Delaware & Raritan Canal at Port Mercer (Mercer Co.)	Common Carp	One meal per year	Do not eat
Delaware & Raritan	Walleye		
Canal at West Trenton (Mercer Co.)	Common Carp	One meal per month	Do not eat
Delaware River -Upstream of Delaware Water Gap to	Channel Catfish	No restrictions	One meal per month
New York State border	Muskellunge		•
(Warren/Sussex Co)	Smallmouth Bass	One meal	per week
	White Sucker	One meal	per month
Delaware River –	White Catfish	One meal per week	Do not eat
Delaware Water Gap to Phillipsburg (Warren Co.)	Channel Catfish Smallmouth Bass	No restrictions	One meal per month
1 3 (	Walleye		One meal per week

# FRESHWATER SITES

		GENTED I.E	
WATER BODY	SPECIES	GENERAL POPULATION	HIGH-RISK INDIVIDUAL
		EAT NO MORE THAN:	EAT NO MORE THAN:
Delaware River-	Channel Catfish	Four meals per year	Do not eat
Phillipsburg to Trenton	Striped Bass		
(Hunterdon/Mercer Co.)	American Eel	One meal per month	Do not eat
	White Sucker		
	Largemouth Bass	No restrictions	One meel nor month
	Smallmouth Bass	One meal per week	One meal per month
DeVoe Lake	Brown Bullhead	One meal	per week
(Middlesex Co.)	Chain Pickerel	One meal per week	One meal per month
	Largemouth Bass	No restrictions	One mear per monun
Double Trouble Lake (Ocean Co.) (P)	Yellow Bullhead	One meal per month	Do not eat
<b>Duhernal Lake</b>	Bluegill Sunfish	No restrictions	One meal per week
(Middlesex Co.)	Largemouth Bass	One meal per week	One meal per month
	Brown Bullhead	One meal	per week
East Creek Lake	Brown Bullhead		
(Cape May Co.) (P)	Yellow Bullhead	One meal per month	Do not eat
	Yellow Perch		
Echo Lake Reservoir	Largemouth Bass		One meal per month
(Passaic Co.)	Chain Pickerel	No restrictions	One mear per monur
	Bluegill Sunfish	140 lestifetions	One meal per week
	Yellow Bullhead		One mear per week
Evans Pond (Camden Co.)	Brown Bullhead	One meal per week	One meal per month
Farrington Lake	Bluegill Sunfish		One meal per week
(Middlesex Co.)	Chain Pickerel	No restrictions	•
	Yellow Perch		One meal per month
	Brown Bullhead	One meel new week	
	Largemouth Bass	One meal per week	Do not eat
Green Brook - (Somerset)	American Eel	One meal per month	Do not eat
Green Turtle Lake	Chain Pickerel	No restrictions	One meal per week
(Passaic Co.)	Yellow Perch	No resurctions	One mear per week
Greenwood Lake	Largemouth Bass		One meal per month
(Passaic Co.)	Walleye		One mear per monur
	White Perch	No restrictions	No restrictions
	Bluegill Sunfish		One meal per week
	Yellow Bullhead		One mear per week

# FRESHWATER SITES

WATER BODY	SPECIES	GENERAL POPULATION	HIGH-RISK INDIVIDUAL
		EAT NO MORE THAN:	EAT NO MORE THAN:
Grovers Mill Pond	Brown Bullhead	One meal per week	One meal per month
(Mercer Co.)	Chain Pickerel	No restrictions	One meal per week
Hainesville Pond	Largemouth Bass	No restrictions	One meal per month
(Sussex Co.)	Chain Pickerel	1 to restrictions	One meal per week
Harrisville Lake	Mud Sunfish	One meal per month	Do not eat
(Burlington Co.) (P)	Yellow Bullhead	one mear per monar	
Lake Carasaljo	Largemouth Bass	One meal per week	Do not eat
(Ocean Co.) (P)	Chain Pickerel	one mem per ween	One meal per month
Lake Hopatcong (Morris/Sussex Co.)	Largemouth Bass	No restrictions	One meal per month
Lake Nummy	Chain Pickerel	One meet nor week	Do not eat
(Cape May Co.) (P)	Yellow Perch	One meal per week	Do not eat
	Yellow Bullhead	No restrictions	One meal per month
Lake Tappan	Smallmouth Bass		One meal per month
(Bergen Co.)	Largemouth Bass		
	Bluegill Sunfish	No restrictions	No restriction
	Yellow Bullhead		0
	Common Carp		One meal per week
Lamington River at	American Eel	One meal per week	One meal per month
Lamington	<b>Brown Trout</b>		
(Hunterdon-Somerset	Redbreast Sunfish	No restrictions	One meal per week
Co.)	Smallmouth Bass		
Lenape Lake –	Chain Pickerel	One meal per week	Do not eat
(Atlantic Co.) (P)	Cham i lekerer	One mear per week	Do not cut
Linden Lake- (Camden Co.) (P)	Largemouth Bass	No restrictions	One meal per month
Little Timber Creek (Camden Co.)	Brown Bullhead	No restrictions	No restrictions
Manalapan Lake	American Eel	One meal per month	
(Middlesex Co.)	Black Crappie	No restrictions One me	One meal per week
	Bluegill Sunfish		No restrictions
	<b>Largemouth Bass</b>	One meal per week	One meal per month

## FRESHWATER SITES

WATER BODY	SPECIES	GENERAL POPULATION	HIGH-RISK INDIVIDUAL
		EAT NO MORE THAN:	EAT NO MORE THAN:
Manasquan Reservoir	Largemouth Bass	One meal per month	Do not eat
(Monmouth Co.)	Black Crappie	One meal per week	One meal per month
	Chain Pickerel	No restrictions	-
	Yellow Perch	140 Testrictions	One meal per week
Maskells Mill Lake	Brown Bullhead	One meal per week	
(Salem Co.) (P)	Chain Pickerel	One mear per week	One meal per month
	Largemouth Bass		One mear per monur
	Black Crappie	No restrictions	
Merrill Creek Reservoir	Smallmouth Bass	One meet non week	
(Warren Co.)	Lake Trout	One meal per week	
	Largemouth Bass	One meal per month	Do not eat
	Black Crappie		Do not eat
	Bluegill Sunfish	No restrictions	
	Brown Bullhead	140 Testrictions	
	Yellow Perch		One meal per month
Millstone River at	Bluegill Sunfish	No restrictions	One meal per week
Manville	Common Carp	Four meals per year	Do not eat
(Somerset Co.)	<b>Largemouth Bass</b>	One meal per week	One meal per month
Mirror Lake	Largemouth Bass	One meal per week	One meal per month
(Burlington Co.) (P)	Brown Bullhead	No restrictions	One meal per week
Monksville Reservoir	Smallmouth Bass	No restrictions	One meal per month
(Passaic Co.)	Walleye	One meal per week	Do not eat
	White Perch		
	Yellow Perch	No restriction	One meal per week
Mountain Lake	Largemouth Bass	One meal per week	Do not eat
(Warren Co.)	_	r ·· ••	
Mullica River	Brown Bullhead	One meal per week	
(Burlington/Atlantic Co.)	White Perch	-	One meal per month
(P)	White Catfish	No restrictions	

## FRESHWATER SITES

WATER BODY	SPECIES	GENERAL POPULATION	HIGH-RISK INDIVIDUAL	
		EAT NO MORE THAN:	EAT NO MORE THAN:	
Navy Dagaldyn Laka	Chain Pickerel	Inan:		
New Brooklyn Lake (Camden Co.) (P)		One meal per week	Do not eat	
(Camden Co.) (1)	Largemouth Bass	One mear per week	0 1 4	
	Sunfish	NT / 1 / 1	One meal per month	
	Black Crappie	No restrictions		
	Yellow Bullhead		One meal per week	
New Market Pond– Spring Lake and the full length of the Bound	See Bound Brook Ad	visories		
Brook (Somerset Co.)				
Newton Creek, North (Camden Co.)	Brown Bullhead	No restr	rictions	
Newton Creek, South (Camden Co.)	Largemouth Bass	One meal per month	Do not eat	
Newton Lake (Camden Co.)	Bluegill Sunfish	One meal per week	One meal per month	
(Camden Co.)	Brown Bullhead	one mear per week		
	Largemouth Bass	One meet men menth	Four meals per year	
	Common Carp	One meal per month	Do not eat	
Oak Ridge Reservoir	Largemouth Bass	One meal per week	Do not eat	
(Passaic Co.)	Chain Pickerel		One meal per month	
	Brown Bullhead	No restrictions	No restrictions	
Oradell Reservoir	Largemouth Bass		One meal per month	
(Bergen Co.)	Bluegill Sunfish	No restrictions	No restriction	
	Yellow Bullhead	140 restrictions		
	Common Carp			
Overpeck Creek	Largemouth Bass		Do not eat	
(Bergen Co).	Common Carp	Four meals per year	Do not cut	
D : D:	American Eel			
Passaic River:	Redbreast Sunfish	One meal per week	0	
Rt. 280 to confluence of	Northern Pike	•	One meal per month	
Pompton R at Two Bridges (Morris/Essex/Passaic Co.)	Black Crappie Yellow Bullhead		One meal per week	
(11101116/ Laborati dasate CO.)		No restrictions		
	Pumpkinseed Sunfish			
	Common Carp	One meal per month	Do not eat	

# FRESHWATER SITES

WATER BODY	SPECIES	GENERAL POPULATION	HIGH-RISK INDIVIDUAL	
		EAT NO MORE THAN:	EAT NO MORE THAN:	
Passaic River: Elmwood Park to Dundee	Largemouth Bass Yellow Bullhead		One meal per month	
Lake (Garfield)	Brown Bullhead	One meal per week		
(Passaic/Bergen Co.)	Redbreast Sunfish		Four meals per year	
	Common Carp			
	Bluegill Sunfish	One meal per month	Do not eat	
	American Eel			
Pennsauken Creek, at	Common Carp	Four meals per year	Do not eat	
Forked Landing	Largemouth Bass		Do not cat	
(Camden Co.)	Sunfish	One meal per month	Four meals per year	
	White Catfish		One meal per year	
Pompton Lake	Largemouth Bass	One meal per week	Do not eat	
(Passaic Co.)	Common Carp	One meal per month	Do not cat	
Pompton River	Common Carp	Four meals per year	Do not eat	
at Lincoln Park	Northern Pike			
(Passaic/Morris Co.)	Rock Bass	One meal per week		
	Redbreast Sunfish	1	Four meals per year	
	Largemouth Bass Yellow Perch		One meel per month	
	Black Crappie	No restrictions	One meal per month	
Ramapo River @ Pompton	Largemouth Bass			
Feeder (Morris Co.)	Smallmouth Bass			
Formerly listed as Pompton	Yellow Bullhead		Do not eat	
River @ Pequannock R. (Passaic/Morris Co.)	Rock Bass	One meal per week		
(Tussuic/Worns Co.)	Pumpkinseed Sunfish			
	Redbreast Sunfish		One meet men menth	
	Black Crappie		One meal per month	
Rahway River (East	Bluegill Sunfish		One meal per month	
Branch) at Milton Lake	Brown Bullhead	One meal per week	One mear per month	
(Union Co.)	Largemouth Bass		Do not eat	
D. D. 277	Common Carp	Four meals per year		
Rahway River (West	Brown Bullhead	One meal j		
Branch) at Valley Road Pond (Union Co.)	Common Carp	One meal per month	Do not eat	
1 ond (Omon Co.)	Largemouth Bass	One meal per week	One meal per month	

## FRESHWATER SITES

	12			
WATER BODY	SPECIES	GENERAL POPULATION	HIGH-RISK INDIVIDUAL	
		EAT NO MORE THAN:	EAT NO MORE THAN:	
Raritan River - North	American Eel			
Branch at Branchburg	Yellow Bullhead	One meal per week	One meal per month	
(Somerset Co.)	<b>Smallmouth Bass</b>			
	<b>Redbreast Sunfish</b>	No restrictions	One meal per week	
Raritan River - South	American Eel	One meal per month	Do not eat	
Branch at Flemington	<b>Brown Trout</b>	No restrictions		
(Hunterdon Co.)	<b>Redbreast Sunfish</b>		One meal per week	
	<b>Smallmouth Bass</b>	One meal per week		
	Yellow Bullhead		One meal per month	
Raritan River - South	American Eel	One meal per month	Do not eat	
Branch at High Bridge (Hunterdon Co.)	Redbreast Sunfish	No restrictions	One meal per week	
Raritan River - South Branch at Long Valley (Clairmont Reach; Morris Co.)	Brown Trout	No restrictions	One meal per week	
Raritan River at	Brown Bullhead	No Rest	rictions	
confluence with the	<b>Channel Catfish</b>			
Millstone River	American Eel	One meal per month	Do not eat	
(Somerset Co.)	Common Carp			
	<b>Largemouth Bass</b>	One meal per week		
	White Catfish		One meal per month	
	<b>Smallmouth Bass</b>	No restrictions		
	Redbreast Sunfish		One meal per week	
Raritan River- South	Largemouth Bass	0 1 1	One meal per week	
Branch at Neshanic	<b>Smallmouth Bass</b>	One meal per week	0 1	
Station (Somerset Co.)	Rock Bass	N	One meal per month	
	Redbreast Sunfish	No restrictions	One meal per week	
	Common Carp	One meal per week	One meal per month	
	American Eel	One meal per month	Do not eat	
Rockaway River @	Largemouth Bass	One meal per week	Do not eat	
Powerville (Morris Co.)	Chain Pickerel	•		
,	Rock Bass	No restrictions	One meal per month	
	Yellow Bullhead	No restrictions	One meal per week	
	Bluegill Sunfish		poron	

# FRESHWATER SITES

WATER BODY	SPECIES	GENERAL POPULATION	HIGH-RISK INDIVIDUAL	
		EAT NO MORE THAN:	EAT NO MORE THAN:	
Rockaway River at	Largemouth Bass	One meal per week	Do not eat	
Whippany (Morris Co.)	Black Crappie	No restrictions	One meal per month	
	Bluegill Sunfish	TWO TESTITETIONS	One meal per week	
Rosedale Lake at	Black Crappie		One meal per week	
Pennington	Bluegill Sunfish	No restrictions	No restrictions	
(Mercer Co.)	<b>Largemouth Bass</b>		One meal per month	
	Common Carp	One meal per week		
Round Valley Reservoir	Bluegill Sunfish	No restrictions	One meal per week	
(Hunterdon Co.)	White Catfish	1 (0 1 000110110110	One mear per week	
	Lake Trout	One meal	per month	
	Channel Catfish	•		
0 2011	Largemouth Bass	One meal per week	One meal per month	
Saw Mill Lake	Northern Pike	No restrictions	One meal per month	
(Sussex Co.)	Brown Bullhead		No restrictions	
Shadow Lake (Monmouth Co.)	Largemouth Bass	No restrictions	One meal per week	
Shepherd Lake (aka; Sheppards Lake:	Largemouth Bass	One meal per week	Do not eat	
(Passaic Co.)	Rock Bass	No restrictions	One meal per week	
Speedwell Lake	Bluegill Sunfish			
(Morris Co.)	Chain Pickerel	No restrictions	One meal per week	
	Common carp			
Splitrock Reservoir	Chain Pickerel		One meal per month	
(Morris Co.)	Yellow Perch	No restrictions	One meal per week	
	Bluegill Sunfish	10 restrictions	One mear per week	
	Brown Bullhead		No restrictions	
Spring Lake (Monmouth Co.) (P)	Largemouth Bass	One meal per week	Do not eat	
Spruce Run Reservoir	Northern Pike	No restrictions		
(Hunterdon Co.)	Hybrid Striped Bass	One meal per month	One meal per month	
	Common Carp			
	<b>Channel Catfish</b>	0		
	<b>Largemouth Bass</b>	One meal per week		

## FRESHWATER SITES

WATER BODY	SPECIES	GENERAL POPULATION	HIGH-RISK INDIVIDUAL	
		EAT NO MORE THAN:	EAT NO MORE THAN:	
Stafford Forge Main Line (Ocean Co.) (P)	Chain Pickerel	One meal per week	Do not eat	
Steenykill Lake (Sussex Co.)	Largemouth Bass	No restrictions	One meal per week	
Stewart Lake	Bluegill Sunfish	One meal per week	One meal per month	
(Camden Co.)	Brown Bullhead	One mear per week	Do not eat	
	Largemouth Bass	Four meal	s per year	
	Common Carp	One meal per month	Do not eat	
Strawbridge Lake	Largemouth Bass	One meal per month	One meal per year	
(Burlington Co.)	Bluegill Sunfish	-		
	Common Carp	Four meals per year	Do not eat	
	Brown Bullhead	One meal per week	Four meals per year	
Sunset Lake (Cumberland Co.) (P)	Largemouth Bass	One meal per week	One meal per month	
Swartswood Lake	Smallmouth Bass	No restrictions	One meal per month	
(Sussex Co.)	Chain Pickerel	10 restrictions	One meal per week	
Union Lake (Cumberland Co.) (P)	White Perch	One meal per week	Do not eat	
Wading River	Yellow Bullhead	One meal per month		
(Burlington Co.) (P)	Chain Pickerel	0	Do not eat	
	White Catfish	One meal per week		
Wanaque Reservoir	Largemouth Bass	One meet man weet	Do not eat	
(Passaic Co.)	White Perch	One meal per week		
	White Catfish	No most mistions	One meal per month	
	Brown Bullhead	No restrictions	No restrictions	
	Yellow Bullhead	No restrictions	One meal per week	
Wawayanda Lake	Chain Pickerel	No restriction	One meal per month	
(Sussex Co.)	Largemouth Bass	0	Do not eat	
	Yellow Bullhead	One meal per week	One meal per month	
Weequahic Lake	Largemouth Bass	On a massl man mandle	One meal per month	
(Essex Co.)	Common Carp	One meal per month	Do not eat	
	Bluegill	One meal per week	One meal per week	
	White Perch	No months of a man	One meal per week	
	Brown Bullhead	No restrictions	No restrictions	

### FRESHWATER SITES

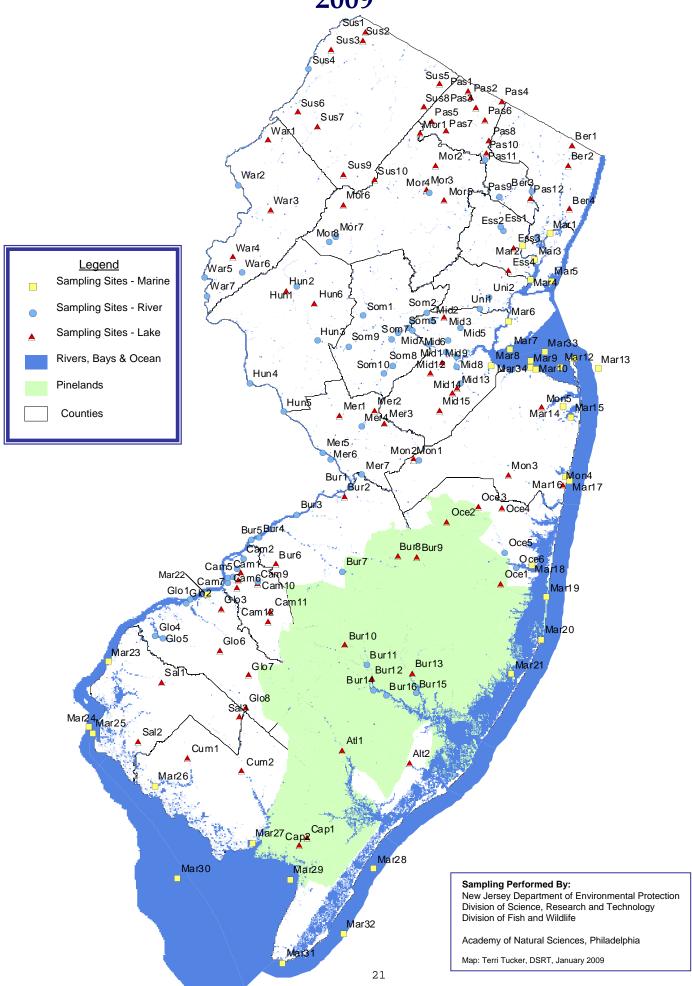
WATER BODY	SPECIES	GENERAL POPULATION	HIGH-RISK INDIVIDUAL	
		EAT NO MORE THAN:	EAT NO MORE THAN:	
Weston Mill Pond	Brown Bullhead	One meal per week		
(Middlesex Co.)	<b>Largemouth Bass</b>	One mear per week		
	Yellow Perch		One meal per month	
	Black Crappie	No restrictions		
	Chain Pickerel	1 (O I estillations		
	Bluegill Sunfish		One meal per week	
	American Eel	One meal per month	Do not eat	
Whitesbog Pond (Ocean Co.) (P)	Chain Pickerel	One meal per week	Do not eat	
Willow Grove Lake (Cumberland Co.) (P)	Brown Bullhead	No restrictions	One meal per month	
Wilson Lake (Gloucester Co.) (P)	Chain Pickerel		Do not eat	
(Gloucestel Co.) (P)	Pumpkinseed Sunfish	One meal per month		
	Yellow Perch			
	Largemouth Bass	One meal per week		
Woodstown Memorial	Black Crappie	No restrictions	One meal per month	
Lake (Salem Co.)	Largemouth Bass	ino resurctions		

- (1) High-risk individuals include infants, children, pregnant women, nursing mothers and women of childbearing age.
- (2) One meal is defined as an eight-ounce serving
- (3) Eat only the fillet portions of the fish. Use proper trimming techniques to remove fat, and cooking methods that allow juices to drain from the fish (e.g., baking, broiling, frying, grilling, and steaming). See text for full description.
- (4) Sunfish includes bluegill, pumpkinseed, and redbreast sunfish.
- (5) No harvest means no taking or attempting to take any blue crabs from these waters.

Note: Not all species were found or analyzed in all water bodies, or inadequate data were available to list some species.

- (P) = Pinelands Area
- \* Selling any of these species from designated water bodies is prohibited in New Jersey.

# New Jersey Fish Tissue Sampling Sites 2009



	Sami	alina Sitas	by County		
Name	County-	_	by County Name	County-#	type
Atlantic County	<u>oounty-</u>	<u>т type</u>	Hunterdon County	Obuilty #	type
Atlantic City Reservoir	Atl2	▲ Lake	Delaware -Raritan Canal @ Lambertville	Hun5	River
Lake Lenape	Atl1	▲ Lake	Delaware River at Byram	Hun4	
Bergen County	,		Raritan River South @ High Bridge	Hun1	
Oradell Reservoir	Ber2	▲ Lake	Raritan River South @Flemington		River
Overpeck Creek Lake	Ber4	▲ Lake	Round Valley Reservoir		Lake
Passaic River at Elmwood Park	Ber3	River	Spruce Run Reservoir		Lake
Passaic River at Lyndhurst	Ber5	River	Mercer County	_	
Tappan Lake	Ber1	▲ Lake	Carnegie Lake	Mer2	Lake
Burlington County	20		Crosswicks Creek	_	River
Atsion Lake	Bur10	▲ Lake	Delaware -Raritan Canal @ Port Mercer		River
Batsto Lake	Bur12	_ Lake	Delaware -Raritan Canal @ Trenton	Mer5	River
Crystal Lake	Bur2	▲ Lake	Delaware River at Trenton		River
Delaware River at Crosswicks Creek	Bur1	<ul><li>River</li></ul>	Grovers Mill Pond		Lake
Delaware River at Palmyra	Bur5	River	Rosedale Lake in Pennington		Lake
Delaware River at Riverton	Bur4	River	Middlesex County		
Delaware River mouth of Neshaminy Creek	Bur3	River	Below New Market Pond Dam	Mid4	River
Harrisville Lake	Bur13	▲ Lake	De Voe Lake		Lake
Mirror Lake	Bur8	▲ Lake	Duhernal Lake	_	Lake
Mullica River	Bur14	River	Farrington Lake		Lake
Mullica River from Atsion to Pleasantville	Bur11	River	Manalapan Lake	_	Lake
Mullican River between Green Bank and Batsto	Bur16	River	New Market Pond		Lake
Rancocas Tributary between Vincetown/Buddtown	Bur7	River	Pompton River at Lincoln Park	Mid6	
Strawbridge Lake	Bur6	▲ Lake	Ramapo River at Pompton Feeder	Mid5	
Wading River	Bur15	River	Raritan River at Millstone Creek	Mid16	
Whitesbog Pond	Bur9	▲ Lake	Raritan River @ Millstone River	Mid7	
Camden County	Duis	Lake	Raritan River @ Route 1 Bridge	Mid1	
Big Timber Creek	Cam8	River	Raritan River Upper at Rt 1	Mid8	
Clementon Lake	Cam1	▲ Lake	South River at Old Bridge	Mid10	
Cooper River ar Cooper River Lake	Cam3	▲ Lake	South River at Sayreville	Wildio	River
Cooper River at mouth of Evans Pond	Cam10	River	Spring Lake (NMP)		Lake
Copper River Park Lake	Cam4	▲ Lake	Weston Mill Pond		Lake
Evans Pond	Cam11	▲ Lake	Monmouth County	WIIGS 2	Lake
Haddon Lake	Cam9	▲ Lake	Assunpink Creek	Mon2	River
Linden Lake	Cam12	▲ Lake	Assunpink Creek Assunpink Lake		Lake
Little Timber Creek	Cam7	River	Manasquan Reservoir		Lake
Newton Creek	Cam5	River	Shadow Lake	_	Lake
Newton Lake	Cam6	▲ Lake	Spring Lake		Lake
Pennsauken Creek at Forked Landing	Cam2	River	Morris County	WIOTI-F	Lake
Cape May County	Gamz	- 111701	Boonton Reservoir	Mor4	Lake
Lake Nummy	Cap1	<b>▲</b> Lake	Budd Lake		Lake
East Creek Lake	Cap1	▲ Lake	Oak Ridge Reservoir	_	Lake
Cumberland County	-up-	_ Lano	Raritan River South-@ Long Valley/Clairemont		River
Cedar Lake	Cum2	<b>▲</b> Lake	Raritan River, So. Branch, Clairemont Stretch		River
Sunset Lake	Cum3	▲ Lake	Rockaway River		River
Union Lake	Cum1	<u> </u>	Split Rock Reservoir		Lake
Essex County	Cum	<u> Lano</u>	Ocean County		Lano
Branchbrook Park Lake	Ess3	<b>▲</b> Lake	Butterfly Bogs	Oce3	Lake
Passaic River at Hatfield Swamp	Ess1	River	Double Trouble Lake		Lake
Rockaway/ Whippany River	Ess2	River	Lake Carasaljo		Lake
Weequahic Lake	Ess4	▲ Lake	Ridgeway Branch of Toms River		River
Gloucester County	_00 <del>-</del> 7	<u> </u>	Success Lake		Lake
Alcyon Lake	Glo6	<b>▲</b> Lake	Toms River		River
Delaware River at Mantua Creek	Glo2	River	. 5.110 13.130	0000	1 (140)
Delaware River at Paulsboro	Glo2 Glo1	River			
Malaga Lake	Glo8	▲ Lake			
Raccoon Creek at mouth near Swedesboro	Glo4	River			
Rancocas Creek	Glo5	River			
Stewart Lake	Glo3	▲ Lake			
Wilson Lake	Glo7	A Lake			

Glo7

Wilson Lake

**▲** Lake

**Sampling Sites by County** 

	Samp	ling Sites	by County	
<u>Name</u>	County-#	type	<u>Name</u>	Mar6
Passaic County			Marine	Mar31
Clinton Reservoir	Pas5	▲ Lake	Arthur Kill	Mar20
Dundee Lake	Pas12	<b>▲</b> Lake	Atlantic Ocean about 1 mile S. of Cape May	Mar19
Echo Lake	Pas7	<b>▲</b> Lake	Atlantic Ocean at Barnegat Light	Mar28
Green Turtle Lake	Pas2	<b>▲</b> Lake	Atlantic Ocean at Island Beach State Park	Mar11 $\Box$
Greenwood Lake	Pas1	<b>▲</b> Lake	Atlantic Ocean E of Sea Isle City, S of Ocean Ci	ityMar13
Monksville Reservoir	Pas3	<b>▲</b> Lake	Atlantic Ocean just N of Sandy Hook	Mar17
Passaic River - Great Piece	Pas9	River	Atlantic Ocean North	Mar32
Passaic River at Pompton	Pas11	River	Atlantic Ocean off Belmar	Mar21
Pompton Lake	Pas10	<b>▲</b> Lake	Atlantic Ocean, Sea Isle City to Cape May	Mar18
Ramapo Lake	Pas8	<b>▲</b> Lake	Barnegat Bay @ Manahawkin Bay	Mar26 □
Sheppard Lake	Pas4	<b>▲</b> Lake	Barnegat Bay at Toms River	Mar30 □
Wanaque Reservoir	Pas6	<b>▲</b> Lake	Cohansey River at Greenwich	Mar29
Salem County			Delaware Bay at Bower's Beach, DE	Mar23 □
Maskells Mills Lake	Sal2	<b>▲</b> Lake	Delaware Bay West of Reeds Beach, SE of Tho	n Mar22
Willow Grove Lake	Sal3	▲ Lake	Delaware River at Deepwater	Mar24
Woodstown Memorial lake	Sal1	▲ Lake	Delaware River at National Park	Mar25
Somerset County			Delaware River at Port Penn	Mar10
Bound Brook	Som4	River	Delaware River/Bay at Reedy Island	Mar1
Bound Brook @ Shepard Rd.	Som3	River	E. Raritan Bay at Keansburg	Mar3
Delaware and Raritan Canal	Som9	River	Hackensack River	Mar27
Delaware -Raritan Canal @ Griggstown	Som7	River	Lower Passaic River	Mar7
Delaware -Raritan Canal @ South Bound Brook	Som5	River	Maurice River at Mauricetown	Mar14
Green Brook @ Madison Ave. Bridge	Som2	River	Mid-Raritan Bay	Mar4
Millstone River @Manville	Som6	River	Navesink River at Fairhaven	Mar2
Raritan River at Neshanic Station	Som8	River	Newark Bay	Mar34
Raritan River North Branch at Branchburg	Som1	River	Passaic River by Kearny	Mar9
Sussex County			Raritan Bay at Keansburg	Mar8
Canistear Reservoir	Sus8	<b>▲</b> Lake	Raritan Bay Lower at Union Beach	Mar33
Cranberry Lake	Sus9	▲ Lake	Raritan River at Rt. 35	Mar12
Crater Lake	Sus6	_ Lake	Rahway River at Valley Road Pond	Mar16
Delaware River Upstream of Water Gap	Sus4	River	Sandy Hook Bay	Mar15
Hainsville Pond	Sus3	▲ Lake	Shark River at Belmar	Mar5
Lake Hopatcong	Sus10	_ Lake	Shrewsbury River at Oceanport	
Saw Mill Lake	Sus2	_ Lake	Upper Bay	
Steenykill Lake	Sus1	_ Lake	-11/ 17	
Swartswood Lake	Sus7	_ Lake		
Wawayanda Lake	Sus5	▲ Lake		
Union County				
Rahway River at Milton Lake	Uni1	River		
Raritan Bay at Lower Bay	Uni2	River		
Warren County				
Catfish Pond near Delaware Water Gap	War1	<b>▲</b> Lake		
Delaware River at Easton	War5	River		
Delaware River at Raubsville	War7	River		
Delaware River Phillipsburg to Water Gap	War2	River		
Merrill Creek	War6	River		
Merrill Creek Reservoir	War4	▲ Lake		
Mountain Lake	War3	▲ Lake		

