

## **APPENDIX B**

### **NATURAL RESOURCES**

## A. EXISTING CONDITIONS

Table B-1 demonstrates finfish species caught in New York Harbor that have the potential to occur in the vicinity of Gowanus Canal Proper or Gowanus Bay.

**Table B-1**  
**Finfish Species Caught in New York Harbor 1982–2003**

Common Name	Scientific Name
Alewife	<i>Alosa pseudoharengus</i>
American eel	<i>Anguilla rostrata</i>
American sand lance	<i>Ammodytes hexapterus</i>
American shad	<i>Alosa sapidissima</i>
Atlantic cod	<i>Gadus morhua</i>
Atlantic croaker	<i>Micropogonias undulatus</i>
Atlantic herring	<i>Clupea harengus</i>
Atlantic mackerel	<i>Scomber scombrus</i>
Atlantic menhaden	<i>Brevoortia tyrannus</i>
Atlantic moonfish	<i>Selene setapinnis</i>
Atlantic needlefish	<i>Strongylura marina</i>
Atlantic seasnail	<i>Liparis atlanticus</i>
Atlantic silverside	<i>Menidia menidia</i>
Atlantic sturgeon	<i>Acipenser oxyrhynchus</i>
Banded killifish	<i>Fundulus diaphanous</i>
Bay anchovy	<i>Anchoa mitchilli</i>
Black sea bass	<i>Centropristis striata</i>
Blackfish	<i>Tautoga onitis</i>
Blueback herring	<i>Alosa aestivalis</i>
Bluefish	<i>Pomatomus saltatrix</i>
Butterfish	<i>Peprilus triacanthus</i>
Clearnose skate	<i>Raja eglanteria</i>
Conger eel	<i>Conger oceanicus</i>
Crevalle jack	<i>Caranx hippos</i>
Cunner	<i>Tautoglabrus adspersus</i>
Fawn cusk eel	<i>Lepophidium cervinum</i>
Feather blenny	<i>Hypsoblennius hentzi</i>
Fourbeard rockling	<i>Enchelyopus cimbrius</i>
Foureye butterflyfish	<i>Chaetodon capistratus</i>
Four-spot flounder	<i>Paralichthys oblongus</i>
Gizzard shad	<i>Dorosoma cepedianum</i>
Goosefish	<i>Lophius americanus</i>
Grey snapper	<i>Lutjanus griseus</i>
Grubby	<i>Myoxocephalus aeneus</i>
Hickory shad	<i>Alosa mediocris</i>
Hogchoker	<i>Trinectes maculatus</i>

**Table B-1 (cont'd)**  
**Finfish Species Caught in New York Harbor 1982–2003**

Common Name	Scientific Name
Inshore lizardfish	<i>Synodus foetens</i>
Lined seahorse	<i>Hippocampus erectus</i>
Little skate	<i>Raja erinacea</i>
Longhorn sculpin	<i>Myoxocephalus octodecimspinosus</i>
Lookdown	<i>Selene vomer</i>
Mummichog	<i>Fundulus heteroclitus</i>
Naked goby	<i>Gobiosoma boscii</i>
Northern kingfish	<i>Menticirrhus saxatilis</i>
Northern pipefish	<i>Syngnathus fuscus</i>
Northern puffer	<i>Sphoeroides maculatus</i>
Northern searobin	<i>Prionotus carolinus</i>
Orange filefish	<i>Aluterus schoepfi</i>
Oyster toadfish	<i>Opsanus tau</i>
Planehead filefish	<i>Monacanthus hispidus</i>
Pollock	<i>Pollachius virens</i>
Rainbow smelt	<i>Osmerus mordax</i>
Red hake	<i>Urophycis chuss</i>
Rock gunnel	<i>Pholis gunnellus</i>
Rough scad	<i>Trachurus lathamii</i>
Scup	<i>Stenotomus chrysops</i>
Seaboard goby	<i>Gobiosoma ginsburgii</i>
Sheepshead	<i>Archosargus probatocephalus</i>
Short bigeye	<i>Pristigenys alta</i>
Silver hake	<i>Merluccius bilinearis</i>
Silver perch	<i>Bairdiella chrysoura</i>
Smallmouth flounder	<i>Etropus microstomus</i>
Spot	<i>Leiostomus xanthurus</i>
Spotfin butterflyfish	<i>Chaetodon ocellatus</i>
Spotted hake	<i>Urophycis regia</i>
Striped bass	<i>Morone saxatilis</i>
Striped burrfish	<i>Chilomycterus schoepfi</i>
Striped cuskeel	<i>Ophidion marginatum</i>
Striped killifish	<i>Fundulus majalis</i>
Striped mullet	<i>Mugil cephalus</i>
Striped searobin	<i>Prionotus evolans</i>
Summer flounder	<i>Paralichthys dentatus</i>
Tautog	<i>Tautoga onitis</i>
Threespine stickleback	<i>Gasterosteus aculeatus</i>
Tomcod	<i>Microgadus tomcod</i>
Weakfish	<i>Cynoscion regalis</i>
White hake	<i>Urophycis tenuis</i>
White mullet	<i>Mugil curema</i>
White perch	<i>Morone americana</i>
Windowpane	<i>Scophthalmus aquosus</i>
Winter flounder	<i>Pseudopleuronectes americanus</i>
Yellowtail flounder	<i>Limanda ferruginea</i>
<b>Sources:</b> Woodhead 1990; EEA 1988; EA Engineering, Science & Technology 1990; LMS 1994, 1999, 2002, 2003a, 2003b; Able et al. 1995	

Figure B-1 demonstrates the geographic area for Essential Fish Habitat (EFH), regulated by the National Marine Fisheries Service (NMFS), where the project site is situated. (The entire canal is designated as EFH, but divided between two NMFS 10'x10' squares. The project site is within a portion of the Harbor Estuary EFH that is situated in the NMFS 10'x10' square having the coordinates (North) 40° 50.0' N, (East) 73° 50.0' W, (South) 40° 40.0' N, (West) 74° 00.0' W). Table B-2 presents the life stages of fish, skate, and shark species for which EFH has been designated by NMFS.

**Table B-2**  
**Fish Species Designated as Having Essential Fish Habitat (EFH) in Gowanus Canal Proper**

Species	Eggs	Larvae	Juveniles	Adults
Pollock ( <i>Pollachius virens</i> )			X	X
Red hake ( <i>Urophycis chuss</i> )		X	X	X
Winter flounder ( <i>Pleuronectes americanus</i> )	X	X	X	X
Windowpane flounder ( <i>Scopthalmus aquosus</i> )	X	X	X	X
Atlantic sea herring ( <i>Clupea harengus</i> )		X	X	X
Bluefish ( <i>Pomatomus saltatrix</i> )			X	X
Atlantic butterfish ( <i>Peprilus triacanthus</i> )		X	X	X
Atlantic mackerel ( <i>Scomber scombrus</i> )			X	X
Summer flounder ( <i>Paralichthys dentatus</i> )		X	X	X
Scup ( <i>Stenotomus chrysops</i> )	X	X	X	X
Black sea bass ( <i>Centropristus striata</i> )	n/a		X	X
Clearnose skate ( <i>Raja eglanteria</i> )			X	X
Little skate ( <i>Leucoraja erinacea</i> )			X	X
Winter skate ( <i>Leucoraja ocellata</i> )			X	X
King mackerel ( <i>Scomberomorus cavalla</i> )	X	X	X	X
Spanish mackerel ( <i>Scomberomorus maculatus</i> )	X	X	X	X
Cobia ( <i>Rachycentron canadum</i> )	X	X	X	X
Clearnose skate ( <i>Raja eglanteria</i> )			X	X
Little skate ( <i>Leucoraja erinacea</i> )			X	X
Winter skate ( <i>Leucoraja ocellata</i> )			X	X
Sand tiger shark ( <i>Odontaspis taurus</i> )		X*		
Dusky shark ( <i>Charcharinus obscurus</i> )		X*		
Sandbar shark ( <i>Charcharinus plumbeus</i> )		X*		X
<b>Notes:</b>	* neonates			
<b>Sources:</b>	<a href="http://www.nero.noaa.gov">http://www.nero.noaa.gov</a>			

Figure B-2 demonstrates the geographic area for Essential Fish Habitat (EFH), regulated by the National Marine Fisheries Service (NMFS), in the vicinity of Gowanus Bay. (The entire canal is designated as EFH, but divided between two NMFS 10'x10' squares. The lower portion of the Gowanus Canal [Gowanus Bay] is within a portion of the Harbor Estuary EFH that is situated in the NMFS 10' x 10' square having the coordinates (North) 40° 40.0' N, (East) 74° 00.0' W, (South) 40° 30.0' N, (West) 74° 10.0' W.) Table B-3 presents the life stages of fish, skate, and shark species for which EFH has been designated by NMFS.

**Table B-3**

**Fish Species Designated as Having Essential Fish Habitat (EFH) in Gowanus Bay  
Within Upper New York Bay**

Species	Eggs	Larvae	Juveniles	Adults
Red hake ( <i>Urophycis chuss</i> )		X	X	X
Winter flounder ( <i>Pleuronectes americanus</i> )	X	X**	X	X**
Windowpane flounder ( <i>Scopthalmus aquosus</i> )	X**	X**	X	X
Atlantic sea herring ( <i>Clupea harengus</i> )		X	X	X
Bluefish ( <i>Pomatomus saltatrix</i> )			X	X
Atlantic butterfish ( <i>Peprilus triacanthus</i> )		X	X	X
Atlantic mackerel ( <i>Scomber scombrus</i> )			X	X
Summer flounder ( <i>Paralichthys dentatus</i> )		X	X	X
Scup ( <i>Stenotomus chrysops</i> )	X	X	X	X
Black sea bass ( <i>Centropristus striata</i> )			X	X
King mackerel ( <i>Scomberomorus cavalla</i> )	X	X	X	X
Spanish mackerel ( <i>Scomberomorus maculatus</i> )	X	X	X	X
Cobia ( <i>Rachycentron canadum</i> )	X	X	X	X
Clearnose skate ( <i>Raja eglanteria</i> )			X	X
Little skate ( <i>Leucoraja erinacea</i> )			X	X
Winter skate ( <i>Leucoraja ocellata</i> )			X	X
Sandbar shark ( <i>Carcharinus plumbeus</i> )		X*		X
Sand tiger shark ( <i>Carcharius taurus</i> )		X*		
Dusky shark ( <i>Carcharhinus obscurus</i> )		X*		
<b>Notes:</b>	* neonates **known to occur within Gowanus Bay on basis of sampling for the Gowanus Bay and Canal Ecosystem Program (LMS 2004).			
<b>Sources:</b>	<a href="http://www.nero.noaa.gov">http://www.nero.noaa.gov</a>			

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