

D.3.1 Description of Essential Fish Habitat for the Groundfish Resources of the BSAI Regions

D.3.1.1 EFH Information Levels for BSAI Groundfish

BSAI Species	Eggs	Larvae	Early Juvenile	Late Juvenile	Adult
Walleye pollock	1	1	x	1	1
Pacific cod	x	1	x	1	1
Yellowfin sole	x	x	x	1	1
Greenland turbot	1	1	x	1	1
Arrowtooth flounder	x	x	x	1	1
Rock sole	x	1	x	1	1
Alaska plaice	1	x	x	1	1
Rex sole	x	x	x	1	1
Dover sole	x	x	x	1	1
Flathead sole	1	1	x	1	1
Sablefish	x	1	x	1	1
Pacific ocean perch	x	1	x	1	1
Shortraker/rougheye rockfish	x	1	x	x	1
Northern rockfish	x	1	x	x	1
Thornyhead rockfish	x	1	x	1	1
Yelloweye rockfish	x	1	x	1	1
Dusky rockfish	x	1	x	x	1
Atka mackerel	x	1	x	x	1
Skates	x	x	x	x	1
Sculpins	x	x	x	1	1
Sharks	x	x	x	x	x
Forage fish complex	x	x	x	x	x
Squid	x	x	x	1	1
Octopus	x	x	x	x	x

x - No information available.

D.3.1.2 EFH Text Descriptions for BSAI Groundfish

EFH Description for BSAI Walleye Pollock

Eggs

EFH for walleye pollock eggs is the general distribution area for this life stage, located in pelagic waters along the entire shelf (0 to 200 m), upper slope (200 to 500 m), and intermediate slope (500 to 1,000 m) throughout the BSAI, as depicted in Figure D-77.

Larvae

EFH for larval walleye pollock is the general distribution area for this life stage, located in epipelagic waters along the entire shelf (0 to 200 m), upper slope (200 to 500 m), and intermediate slope (500 to 1,000 m) throughout the BSAI, as depicted in Figure D-78.

Early Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles

EFH for late juvenile walleye pollock is the general distribution area for this life stage, located in the lower and middle portion of the water column along the inner (0 to 50 m), middle (50 to 100 m), and outer (100 to 200 m) shelf throughout the BSAI, as depicted in Figure D-79. No known preference for substrates exist.

Adults

EFH for adult walleye pollock is the general distribution area for this life stage, located in the lower and middle portion of the water column along the entire shelf (0 to 200 m) and slope (200 to 1,000 m) throughout the BSAI, as depicted in Figure D-79. No known preference for substrates exist.

EFH Description for BSAI Pacific Cod**Eggs—No EFH Description Determined**

Scientific information notes the rare occurrence of Pacific cod eggs in the BSAI.

Larvae

EFH for larval Pacific cod is the general distribution area for this life stage, located in epipelagic waters along the entire shelf (0 to 200 m), upper slope (200 to 500 m), and intermediate slope (500 to 1,000 m) throughout the BSAI, as depicted in Figure D-80.

Early Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles

EFH for late juvenile Pacific cod is the general distribution area for this life stage, located in the lower portion of the water column along the inner (0 to 50 m), middle (50 to 100 m), and outer (100 to 200 m) shelf throughout the BSAI wherever there are soft substrates consisting of sand, mud, sandy mud, and muddy sand, as depicted in Figure D-81.

Adults

EFH for adult Pacific cod is the general distribution area for this life stage, located in the lower portion of the water column along the inner (0 to 50 m), middle (50 to 100 m), and outer (100 to 200 m) shelf throughout the BSAI wherever there are soft substrates consisting of sand, mud, sandy mud, muddy sand, and gravel, as depicted in Figure D-81.

EFH Description for BSAI Yellowfin Sole**Eggs—No EFH Description Determined**

Scientific information notes the rare occurrence of yellowfin sole eggs in the BSAI.

Larvae—No EFH Description Determined

Scientific information notes the rare occurrence of larval yellowfin sole in the BSAI.

Early Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles

EFH for late juvenile yellowfin sole is the general distribution area for this life stage, located in the lower portion of the water column within nearshore bays and along the inner (0 to 50 m), middle (50 to 100 m), and outer (100 to 200 m) shelf throughout the BSAI wherever there are soft substrates consisting mainly of sand, as depicted in Figure D-82.

Adults

EFH for adult yellowfin sole is the general distribution area for this life stage, located in the lower portion of the water column within nearshore bays and along the inner (0 to 50 m), middle (50 to 100 m), and outer (100 to 200 m) shelf throughout the BSAI wherever there are soft substrates consisting mainly of sand, as depicted in Figure D-82.

EFH Description for BSAI Greenland Turbot**Eggs**

EFH for Greenland turbot eggs is the general distribution area for this life stage, located principally in benthypelagic waters along the outer shelf (100 to 200 m) and slope (200 to 3,000 m) throughout the BSAI in the fall, as depicted in Figure D-83.

Larvae

EFH for larval Greenland turbot is the general distribution area for this life stage, located principally in benthypelagic waters along the outer shelf (100 to 200 m) and slope (200 to 3,000 m) throughout the BSAI and seasonally abundant in the spring, as depicted in Figure D-84.

Early Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles

EFH for late juvenile Greenland turbot is the general distribution area for this life stage, located in the lower and middle portion of the water column along the inner (0 to 50 m), middle (50 to 100 m), and outer (100 to 200 m) shelf and upper slope (200 to 500 m) throughout the BSAI wherever there are softer substrates consisting of mud and sandy mud, as depicted in Figure D-85.

Adults

EFH for late adult Greenland turbot is the general distribution area for this life stage, located in the lower and middle portion of the water column along the outer shelf (100 to 200 m), upper slope (200 to 500 m), and lower slope (500 to 1,000 m) throughout the BSAI wherever there are softer substrates consisting of mud and sandy mud, as depicted in Figure D-85.

EFH Description for BSAI Arrowtooth Flounder

Eggs—No EFH Description Determined

Insufficient information is available.

Larvae—No EFH Description Determined

Scientific information notes the rare occurrence of larval arrowtooth flounder in the BSAI.

Early Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles

EFH for late juvenile arrowtooth flounder is the general distribution area for this life stage, located in the lower portion of the water column along the inner (0 to 50 m), middle (50 to 100 m), and outer (100 to 200 m) shelf and upper slope (200 to 500 m) throughout the BSAI wherever there are softer substrates consisting of gravel, sand, and mud, as depicted in Figure D-86.

Adults

EFH for adult arrowtooth flounder is the general distribution area for this life stage, located in the lower portion of the water column along the inner (0 to 50), middle (50 to 100 m), and outer (100 to 200 m) shelf and upper slope (200 to 500 m) throughout the BSAI wherever there are softer substrates consisting of gravel, sand, and mud, as depicted in Figure D-86.

EFH Description for BSAI Rock Sole

Eggs—No EFH Description Determined

Insufficient information is available.

Larvae

EFH for larval rock sole is the general distribution area for this life stage, located in pelagic waters along the entire shelf (0 to 200 m) and upper slope (200 to 1,000 m) throughout the BSAI, as depicted in Figure D-87.

Early Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles

EFH for late juvenile rock sole is the general distribution area for this life stage, located in the lower portion of the water column along the inner (0 to 50 m), middle (50 to 100 m), and outer (100 to 200 m) shelf throughout the BSAI wherever there are softer substrates consisting of sand, gravel, and cobble, as depicted in Figure D-88.

Adults

EFH for adult rock sole is the general distribution area for this life stage, located in the lower portion of the water column along the inner (0 to 50 m), middle (50 to 100 m), and outer (100 to 200 m) shelf throughout the BSAI wherever there are softer substrates consisting of sand, gravel, and cobble, as depicted in Figure D-88.

EFH Description for BSAI Alaska Plaice

Eggs

EFH for Alaska plaice eggs is the general distribution area for this life stage, located in pelagic waters along the entire shelf (0 to 200 m) and upper slope (200 to 500 m) throughout the BSAI in the spring, as depicted in Figure D-89.

Larvae—No EFH Description Determined

Scientific information notes the rare occurrence of larval Alaska plaice in the BSAI.

Early Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles

EFH for late juvenile Alaska plaice is the general distribution area for this life stage, located in the lower portion of the water column along the inner (0 to 50 m), middle (50 to 100 m), and outer (100 to 200 m) shelf throughout the BSAI wherever there are softer substrates consisting of sand and mud, as depicted in Figure D-90.

Adults

EFH for adult Alaska plaice is the general distribution area for this life stage, located in the lower portion of the water column along the inner (0 to 50 m), middle (50 to 100 m), and outer (100 to 200 m) shelf throughout the BSAI wherever there are softer substrates consisting of sand and mud, as depicted in Figure D-90.

EFH Description for BSAI Rex Sole

Eggs—No EFH Description Determined

Scientific information notes the rare occurrence of rex sole eggs in the BSAI.

Larvae—No EFH Description Determined

Scientific information notes the rare occurrence of larval rex sole in the BSAI.

Late Juveniles

EFH for juvenile rex sole is the general distribution area for this life stage, located in the lower portion of the water column along the inner (0 to 50 m), middle (50 to 100 m), and outer (100 to 200 m) shelf throughout the BSAI wherever there are substrates consisting of gravel, sand, and mud, as depicted in Figure D-91.

Adults

EFH for adult rex sole is the general distribution area for this life stage, located in the lower portion of the water column along the inner (0 to 50 m), middle (50 to 100 m), and outer (100 to 200 m) shelf throughout the BSAI wherever there are substrates consisting of gravel, sand, and mud, as depicted in Figure D-91.

EFH Description for BSAI Dover Sole

Eggs—No EFH Description Determined

Scientific information notes the rare occurrence of Dover sole eggs in the BSAI.

Larvae—No EFH Description Determined

Scientific information notes the rare occurrence of larval Dover sole in the BSAI.

Early Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles

EFH for late juvenile Dover sole is the general distribution area for this life stage, located in the lower portion of the water column along the middle (50 to 100 m), and outer (100 to 200 m) shelf and upper slope (200 to 500 m) throughout the BSAI wherever there are substrates consisting of sand and mud, as depicted in Figure D-92.

Adults

EFH for adult Dover sole is the general distribution area for this life stage, located in the lower portion of the water column along the middle (50 to 100 m), and outer (100 to 200 m) shelf and upper slope (200 to 500 m) throughout the BSAI wherever there are substrates consisting of sand and mud, as depicted in Figure D-92.

EFH Description BSAI Flathead Sole**Eggs**

EFH for flathead sole eggs is the general distribution area for this life stage, located in pelagic waters along the entire shelf (0 to 200 m) and slope (200 to 3,000 m) throughout the BSAI in the spring, as depicted in Figure D-93.

Larvae

EFH for larval flathead sole is the general distribution area for this life stage, located in pelagic waters along the entire shelf (0 to 200 m) and slope (200 to 3,000 m) throughout the BSAI, as depicted in Figure D-94.

Early Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles

EFH for juvenile flathead sole is the general distribution area for this life stage, located in the lower portion of the water column along the inner (0 to 50 m), middle (50 to 100 m), and outer (100 to 200 m) shelf throughout the BSAI wherever there are softer substrates consisting of sand and mud, as depicted in Figure D-95.

Adults

EFH for adult flathead sole is the general distribution area for this life stage, located in the lower portion of the water column along the inner (0 to 50 m), middle (50 to 100 m), and outer (100 to 200 m) shelf throughout the BSAI wherever there are softer substrates consisting of sand and mud, as depicted in Figure D-95.

EFH Description for BSAI Sablefish**Eggs—No EFH Description Determined**

Scientific information notes the rare occurrence of sablefish eggs in the BSAI.

Larvae

EFH for larval sablefish is the general distribution area for this life stage, located in epipelagic waters along the middle shelf (50 to 100 m), outer shelf (100 to 200 m), and slope (200 to 3,000 m) throughout the BSAI, as depicted in Figure D-96.

Early Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles

EFH for late juvenile sablefish is the general distribution area for this life stage, located in the lower portion of the water column, varied habitats, generally softer substrates, and deep shelf gulleys along the slope (200 to 1,000 m) throughout the BSAI, as depicted in Figure D-97.

Adults

EFH for adult sablefish is the general distribution area for this life stage, located in the lower portion of the water column, varied habitats, generally softer substrates, and deep shelf gulleys along the slope (200 to 1,000 m) throughout the BSAI, as depicted in Figure D-97.

EFH Description for BSAI Pacific Ocean Perch**Eggs—No EFH Description Determined**

Insufficient information is available.

Larvae

EFH for larval Pacific ocean perch is the general distribution area for this life stage, located in pelagic waters along the entire shelf (0 to 200 m) and slope (200 to 3,000 m) throughout the BSAI, as depicted in Figure D-98, General Distribution of Rockfish Larvae.

Early Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles

EFH for late juvenile Pacific ocean perch is the general distribution area for this life stage, located in the middle to lower portion of the water column along the inner shelf (1 to 50 m), middle shelf (50 to 100 m), outer shelf (100 to 200 m), and upper slope (200 to 500 m) throughout the BSAI wherever there are substrates consisting of cobble, gravel, mud, sandy mud, or muddy sand, as depicted in Figure D-99.

Adults

EFH for adult Pacific ocean perch is the general distribution area for this life stage, located in the lower portion of the water column along the outer shelf (100 to 200 m) and upper slope (200 to 500 m) throughout the BSAI wherever there are substrates consisting of cobble, gravel, mud, sandy mud, or muddy sand, as depicted in Figure D-99.

EFH Descriptions for BSAI Shortraker and Rougheye Rockfish**Eggs—No EFH Description Determined**

Insufficient information is available.

Larvae

EFH for larval shortraker and rougheye rockfish is the general distribution area for this life stage, located in epipelagic waters along the entire shelf (0 to 200 m) and slope (200 to 3,000 m) throughout the BSAI, as depicted in Figure D-98, General Distribution of Rockfish Larvae.

Early Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles—No EFH Description Determined

Insufficient information is available.

Adults

EFH for adult shortraker and rougheye rockfish is the general distribution area for this life stage, located in the lower portion of the water column along the outer shelf (100 to 200 m) and upper slope (200 to 500 m) regions throughout the BSAI wherever there are substrates consisting of mud, sand, sandy mud, muddy sand, rock, cobble, and gravel, as depicted in Figure D-100.

EFH Description for BSAI Northern Rockfish**Eggs—No EFH Description Determined**

Insufficient information is available.

Larvae

EFH for larval northern rockfish is the general distribution area for this life stage, located in pelagic waters along the entire shelf (0 to 200 m) and slope (200 to 3,000 m) throughout the BSAI, as depicted in Figure D-98, General Distribution of Rockfish Larvae.

Early Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles—No EFH Description Determined

Insufficient information is available.

Adults

EFH for adult northern rockfish is the general distribution area for this life stage, located in the middle and lower portions of the water column along the outer slope (100 to 200 m) and upper slope (200 to 500 m) throughout the BSAI wherever there are substrates of cobble and rock, as depicted in Figure D-101.

EFH Description for BSAI Thornyhead Rockfish**Eggs—No EFH Description Determined**

Insufficient information is available.

Larvae

EFH for larval thornyhead rockfish is the general distribution area for this life stage, located in epipelagic waters along the outer shelf (100 to 200 m) and slope (200 to 3,000 m) throughout the BSAI, as depicted in Figure D-98, General Distribution of Rockfish Larvae.

Early Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles

EFH for late juvenile Thornyhead rockfish is the general distribution area for this life stage, located in the lower portion of the water column along the middle and outer shelf (50 to 200 m) and upper to lower slope (200 to 1,000 m) throughout the BSAI wherever there are substrates of mud, sand, rock, sandy mud, muddy sand, cobble, and gravel, as depicted in Figure D-102.

Adults

EFH for adult Thornyhead rockfish is the general distribution area for this life stage, located in the lower portion of the water column along the middle and outer shelf (50 to 200 m) and upper to lower slope (200 to 1,000 m) throughout the BSAI wherever there are substrates of mud, sand, rock, sandy mud, muddy sand, cobble, and gravel, as depicted in Figure D-102.

EFH Description for BSAI Yelloweye Rockfish**Eggs—No EFH Description Determined**

Insufficient information is available.

Larvae

EFH for larval yelloweye rockfish is the general distribution area for this life stage, located in the epipelagic waters along the entire shelf (0 to 200 m) and slope (200 to 3,000 m) throughout the BSAI, as depicted in Figure D-98, General Distribution of Rockfish Larvae.

Early Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles

EFH for late juvenile yelloweye rockfish is the general distribution area for this life stage, located in the lower portion of the water column within bays and island passages and along the inner (0 to 50 m), middle (50 to 100 m), and outer shelf (100 to 200 m) throughout the BSAI wherever there are substrates of rock and in areas of vertical relief, such as crevices, overhangs, vertical walls, coral, and larger sponges, as depicted in Figure D-103.

Adults

EFH for adult yelloweye rockfish is the general distribution area for this life stage, located in the lower portion of the water column within bays and island passages and along the inner shelf (0 to 50 m), outer shelf (100 to 100 m), and upper slope (200 to 500 m) throughout the BSAI wherever there are substrates of rock and in vegetated areas of vertical relief, such as crevices, overhangs, vertical walls, coral, and larger sponges, as depicted in Figure D-103.

EFH Description for BSAI Dusky Rockfish**Eggs—No EFH Description Determined**

Insufficient information is available.

Larvae

EFH for larval dusky rockfish is the general distribution area for this life stage, located in the pelagic waters along the entire shelf (0 to 200 m) and slope (200 to 3,000 m) throughout the BSAI, as depicted in Figure D-98, General Distribution of Rockfish Larvae.

Early Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles—No EFH Description Determined

Insufficient information is available.

Adults

EFH for adult dusky rockfish is the general distribution area for this life stage, located in the middle and lower portions of the water column along the outer shelf (100 to 200 m) and upper slope (200 to 500 m) throughout the BSAI wherever there are substrates of cobble, rock, and gravel, as depicted in Figure D-104.

EFH Description for BSAI Atka Mackerel**Eggs—No EFH Description Determined**

Insufficient information is available.

Larvae

EFH for larval atka mackerel is the general distribution area for this life stage, located in epipelagic waters along the shelf (0 to 200 m), upper slope (200 to 500 m), and intermediate slope (500 to 1,000 m) throughout the BSAI, as depicted in Figure D-105.

Early Juveniles —No EFH Description Determined

Insufficient information is available.

Late Juveniles—No EFH Description Determined

Insufficient information is available.

Adults

EFH for adult Atka mackerel is the general distribution area for this life stage, located in the entire water column, from sea surface to the sea floor, along the inner (0 to 50 m), middle (50 to 100 m), and outer shelf (100 to 200 m) throughout the BSAI wherever there are substrates of gravel and rock and in vegetated areas of kelp, as depicted in Figure D-106.

EFH Description for BSAI Skates**Eggs—No EFH Description Determined**

Insufficient information is available.

Larvae—No EFH Description Determined

Insufficient information is available.

Early Juveniles—No EFH Description Determined

Insufficient information is available.

Adults

EFH for adult skates is the general distribution area for this life stage, located in the lower portion of the water column on the shelf (0 to 200 m) and the upper slope (200 to 500 m) throughout the BSAI wherever there are substrates of mud, sand, gravel, and rock, as depicted in Figure D-107.

EFH Description for BSAI Sculpins**Eggs—No EFH Description Determined**

Insufficient information is available.

Larvae—No EFH Description Determined

Insufficient information is available.

Juveniles

EFH for juvenile sculpins is the general distribution area for this life stage, located in the lower portion of the water column along the inner (0 to 50 m), middle (50 to 100 m), outer shelf (100 to 200 m) and portions of the upper slope (200 to 500 m) throughout the BSAI wherever there are substrates of rock, sand, mud, cobble, and sandy mud, as depicted in Figure D-108.

Adults

EFH for adult sculpins is the general distribution area for this life stage, located in the lower portion of the water column along the inner (0 to 50 m), middle (50 to 100 m), outer shelf (100 to 200 m) and portions of the upper slope (200 to 500 m) throughout the BSAI wherever there are substrates of rock, sand, mud, cobble, and sandy mud, as depicted in Figure D-108.

EFH Description for BSAI Sharks**Eggs—No EFH Description Determined**

Insufficient information is available.

Larvae—No EFH Description Determined

Insufficient information is available.

Early Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles—No EFH Description Determined

Insufficient information is available.

Adults—No EFH Description Determined

Insufficient information is available.

EFH Description for BSAI Forage Fish Complex—Eulachon, Capelin, Sand Lance, Sand Fish, Euphausiids, Myctophids, Pholids, Gonostomatids, etc.**Eggs—No EFH Description Determined**

Insufficient information is available.

Larvae—No EFH Description Determined

Insufficient information is available.

Early Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles—No EFH Description Determined

Insufficient information is available.

Adults—No EFH Description Determined

Insufficient information is available.

EFH Description for BSAI Squid

Eggs—No EFH Description Determined

Insufficient information is available.

Young Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles

EFH for older juvenile squid is the general distribution area for this life stage, located in the entire water column, from the sea surface to sea floor, along the inner (0 to 50 m), middle (50 to 100 m), and outer (200 to 500 m) shelf and the entire slope (500 to 1,000 m) throughout the BSAI, as depicted in Figure D-109.

Adults

EFH for adult squid is the general distribution area for this life stage, located in the entire water column, from the sea surface to sea floor, along the inner (0 to 50 m), middle (50 to 100 m), and outer (200 to 500 m) shelf and the entire slope (500 to 1,000 m) throughout the BSAI, as depicted in Figure D-109.

EFH Description for BSAI Octopus

Eggs—No EFH Description Determined

Insufficient information is available.

Young Juveniles—No EFH Description Determined

Insufficient information is available.

Late Juveniles—No EFH Description Determined

Insufficient information is available.

Adults—No EFH Description Determined

Insufficient information is available.

D.3.1.3 EFH Map Descriptions for BSAI Groundfish

Figures D-77 through D-109 show EFH distribution under Alternative 3 for the BSAI groundfish species as described in Section D.3.1.2.