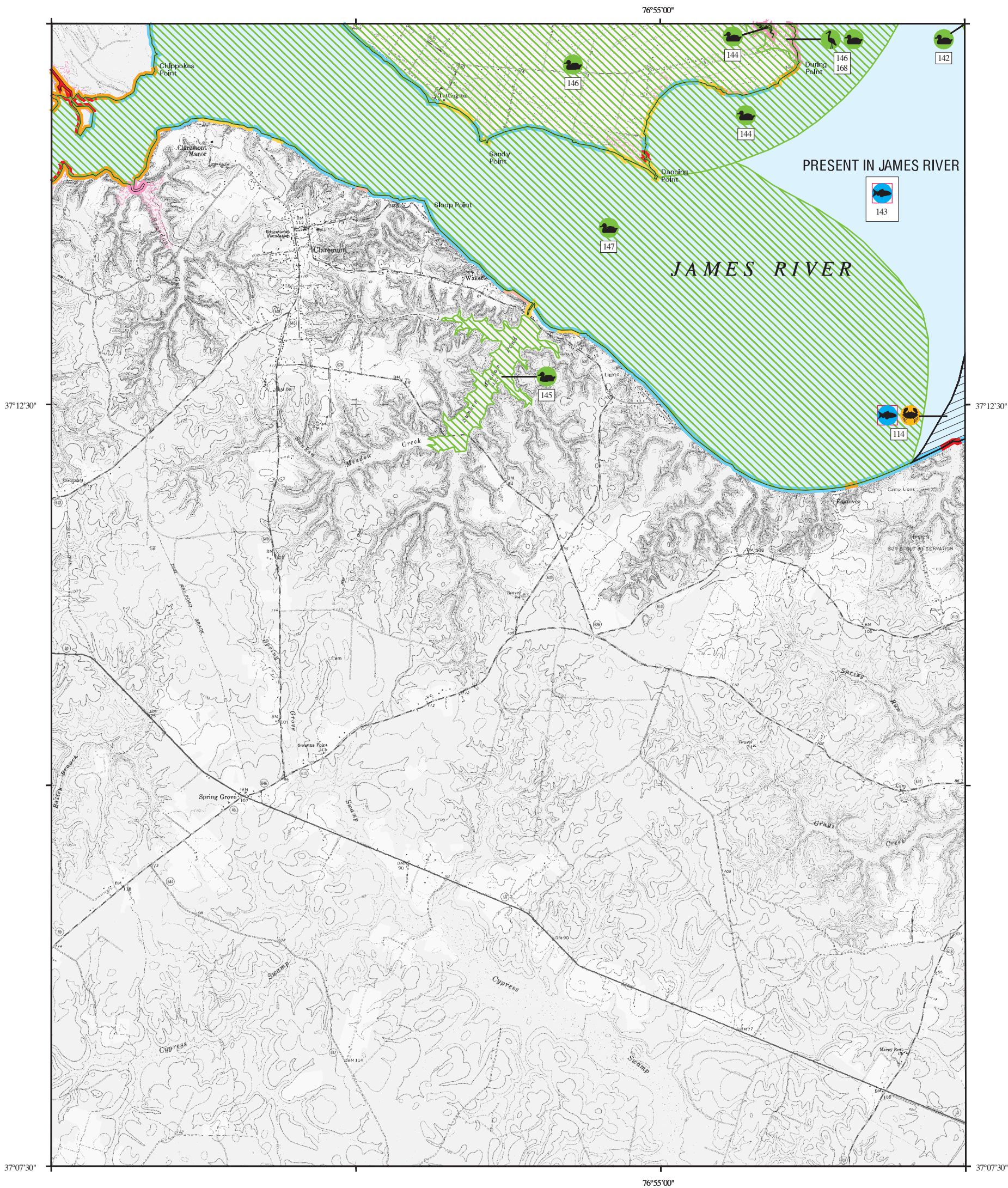
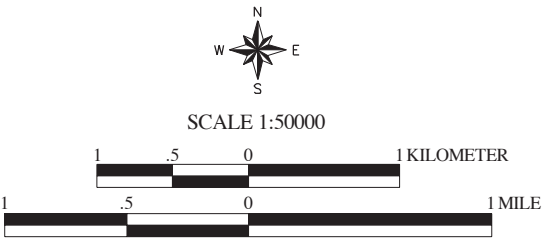


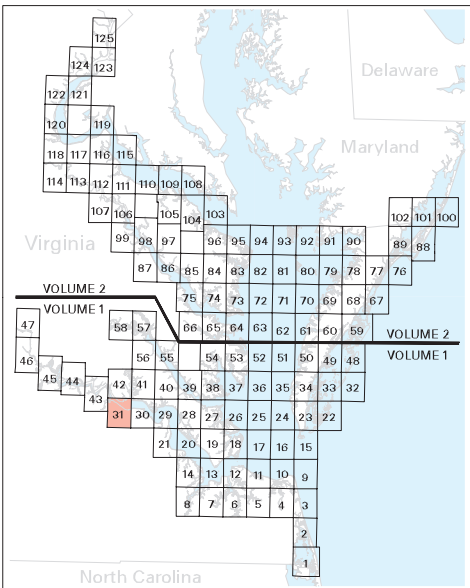
ENVIRONMENTAL SENSITIVITY INDEX MAP



- SHORELINE HABITATS (ESI)**
- 1B EXPOSED, SOLID MAN-MADE STRUCTURES
  - 2A EXPOSED WAVE-CUT PLATFORMS IN CLAY
  - 2B EXPOSED SCARPS AND STEEP SLOPES IN CLAY
  - 3A FINE-TO MEDIUM-GRAINED SAND BEACHES
  - 3B SCARPS AND STEEP SLOPES IN SAND
  - 4 COARSE-GRAINED SAND BEACHES
  - 5 MIXED SAND AND GRAVEL BEACHES
  - 6A GRAVEL BEACHES
  - 6B RIPRAP
  - 7 EXPOSED TIDAL FLATS
  - 8A SHELTERED SCARPS IN CLAY
  - 8B SHELTERED, SOLID MAN-MADE STRUCTURES
  - 8C SHELTERED RIPRAP
  - 9A SHELTERED TIDAL FLATS
  - 9B SHELTERED, VEGETATED LOW BANKS
  - 10A SALT-AND BRACKISH-WATER MARSHES
  - 10B FRESHWATER MARSHES
  - 10C SWAMP
  - 10D SCRUB-SHRUB WETLANDS



Not For Navigation  
Published: April 2005  
Published at Seattle, Washington  
National Oceanic and Atmospheric Administration  
National Ocean Service  
Office of Response and Restoration  
Hazardous Materials Response Division





Virginia: ESIMAP 31

BIOLOGICAL RESOURCES:

BIRD:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Nesting	Migrating	Molting
			-	-	-	-	-	-	-	-	-	-	-	-			
142	American black duck	MODERATE	X	X	X	X						X	X	X	-	-	-
	American coot	MODERATE	X	X	X	X						X	X	X	-	-	-
	American wigeon	MODERATE	X	X	X	X						X	X	X	-	-	-
	Bufflehead		X	X	X	X						X	X	X	-	-	-
	Canada goose	HIGH	X	X	X	X						X	X	X	-	-	-
	Common goldeneye		X	X	X	X						X	X	X	-	-	-
	Gadwall		X	X	X	X						X	X	X	-	-	-
	Green-winged teal	MODERATE	X	X	X	X						X	X	X	-	-	-
	Mallard	HIGH	X	X	X	X						X	X	X	-	-	-
	Mergansers	MODERATE	X	X	X	X						X	X	X	-	-	-
	Northern pintail		X	X	X	X						X	X	X	-	-	-
	Ring-necked duck	HIGH	X	X	X	X						X	X	X	-	-	-
	Ruddy duck		X	X	X	X						X	X	X	-	-	-
	Scaup		X	X	X	X						X	X	X	-	-	-
144	American black duck	MODERATE	X	X	X	X						X	X	X	-	-	-
	American wigeon	MODERATE	X	X	X	X						X	X	X	-	-	-
	Bufflehead		X	X	X	X						X	X	X	-	-	-
	Canada goose	VERY HIGH	X	X	X	X						X	X	X	-	-	-
	Canvasback	MODERATE	X	X	X	X						X	X	X	-	-	-
	Common goldeneye		X	X	X	X						X	X	X	-	-	-
	Gadwall	MODERATE	X	X	X	X						X	X	X	-	-	-
	Green-winged teal	MODERATE	X	X	X	X						X	X	X	-	-	-
	Mallard	HIGH	X	X	X	X						X	X	X	-	-	-
	Mergansers		X	X	X	X						X	X	X	-	-	-
	Northern pintail		X	X	X	X						X	X	X	-	-	-
	Northern shoveler		X	X	X	X						X	X	X	-	-	-
	Ring-necked duck	MODERATE	X	X	X	X						X	X	X	-	-	-
	Ruddy duck	HIGH	X	X	X	X						X	X	X	-	-	-
	Scaup	HIGH	X	X	X	X						X	X	X	-	-	-
	Snow goose		X	X	X	X						X	X	X	-	-	-
	Tundra swan	MODERATE	X	X	X	X						X	X	X	-	-	-
145	American black duck	MODERATE	X	X	X	X						X	X	X	-	-	-
	American wigeon	HIGH	X	X	X	X						X	X	X	-	-	-
	Canada goose	VERY HIGH	X	X	X	X						X	X	X	-	-	-
	Gadwall	MODERATE	X	X	X	X						X	X	X	-	-	-
	Green-winged teal	MODERATE	X	X	X	X						X	X	X	-	-	-
	Mallard	HIGH	X	X	X	X						X	X	X	-	-	-
	Ring-necked duck	MODERATE	X	X	X	X						X	X	X	-	-	-
146	Canada goose	VERY HIGH	X	X	X	X						X	X	X	-	-	-
147	Bufflehead	MODERATE	X	X	X	X						X	X	X	-	-	-
	Canvasback	MODERATE	X	X	X	X						X	X	X	-	-	-
	Common goldeneye		X	X	X	X						X	X	X	-	-	-
	Mergansers	HIGH	X	X	X	X						X	X	X	-	-	-
	Ring-necked duck	MODERATE	X	X	X	X						X	X	X	-	-	-
	Ruddy duck	HIGH	X	X	X	X						X	X	X	-	-	-
	Scaup	HIGH	X	X	X	X						X	X	X	-	-	-
	Tundra swan	MODERATE	X	X	X	X						X	X	X	-	-	-
168	King rail	VERY HIGH	X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-
	Sora	VERY HIGH	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-
	Virginia rail	VERY HIGH	X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-
	Wood duck		X	X	X	X	X	X	X	X	X	X	X	X	APR-JUN	-	-

FISH:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
			-	-	-	-	-	-	-	-	-	-	-	-					
114	Alewife			X	X	X	X	X	X	X	X	X	X	X	-	-	-	FEB-OCT	FEB-JUN
	American eel		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	American shad			X	X	X	X	X	X	X	X	X	X	X	-	-	-	FEB-OCT	FEB-JUN
	Atlantic croaker		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Atlantic menhaden					X	X	X	X	X	X	X	X	X	-	-	-	MAY-NOV	-
	Atlantic silverside		X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUL	-	-	JAN-DEC	JAN-DEC
	Atlantic sturgeon	C	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	APR-NOV
	Bay anchovy		X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	-	-	JAN-DEC	JAN-DEC
	Blueback herring			X	X	X	X	X	X	X	X	X	X	X	-	-	-	FEB-OCT	FEB-JUN
	Channel catfish		X	X	X	X	X	X	X	X	X	X	X	X	MAR-MAY	-	-	JAN-DEC	JAN-DEC
	Gizzard shad		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Hickory shad			X	X	X	X	X	X	X	X	X	X	X	-	-	-	MAR-SEP	FEB-JUN
	Hogchoker		X	X	X	X	X	X	X	X	X	X	X	X	MAY-SEP	MAY-SEP	MAY-SEP	JAN-DEC	JAN-DEC
	Minnows		X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-	JAN-DEC	JAN-DEC
	Mummichog		X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-	JAN-DEC	JAN-DEC
	Silver perch		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Spot		X	X	X	X	X	X	X	X	X	X	X	X	-	-	DEC-APR	APR-NOV	-
	Striped bass			X	X	X	X	X	X	X	X	X	X	X	-	-	-	MAY-OCT	FEB-JUN
	Weakfish		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	White catfish		X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUN	-	-	JAN-DEC	JAN-DEC
	White perch		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
143	Alewife			X	X	X	X	X	X	X	X	X	X	X	-	-	-	FEB-OCT	FEB-JUN
	American eel		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	American shad			X	X	X	X	X	X	X	X	X	X	X	-	-	FEB-JUN	FEB-OCT	FEB-JUN
	Atlantic menhaden					X	X	X	X	X	X	X	X	X	-	-	-	MAY-NOV	-
	Atlantic sturgeon	C	X	X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	-	-	JAN-DEC	APR-NOV
	Banded killifish		X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	-	-	JAN-DEC	JAN-DEC
	Blueback herring			X	X	X	X	X	X	X	X	X	X	X	-	-	-	FEB-OCT	FEB-JUN
	Bluegill		X	X	X	X	X	X	X	X	X	X	X	X	APR-SEP	-	-	-	JAN-DEC
	Channel catfish		X	X	X	X	X	X	X	X	X	X	X	X	MAR-MAY	-	-	JAN-DEC	JAN-DEC
	Gizzard shad		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	JAN-DEC
	Hogchoker		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	-
	Inland silverside		X	X	X	X	X	X	X	X	X	X	X	X	APR-MAY	-	-	JAN-DEC	JAN-DEC
	Longnose gar		X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUN	-	-	JAN-DEC	JAN-DEC
	Minnows		X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-	JAN-DEC	JAN-DEC
	Mummichog		X	X	X	X	X	X	X	X	X	X	X	X	APR-AUG	-	-	JAN-DEC	JAN-DEC
	Pumpkinseed		X	X	X	X	X	X	X	X	X	X	X	X	MAR-JUN	-	-	JAN-DEC	JAN-DEC
	Redbreast sunfish		X	X	X	X	X	X	X	X	X	X	X	X	JUN-JUL	-	-	JAN-DEC	JAN-DEC
	Striped bass			X	X	X	X	X	X	X	X	X	X	X	FEB-JUN	FEB-JUN	FEB-JUN	FEB-OCT	FEB-JUN
	Tessellated darter		X	X	X	X	X	X	X	X	X	X	X	X	APR-JUN	-	-	-	JAN-DEC
	Threadfin shad		X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	JAN-DEC	FEB-MAY
																			SEP-NOV
	White catfish		X	X	X	X	X	X	X	X	X	X	X	X	MAY-JUN	-	-	JAN-DEC	JAN-DEC
	White perch		X	X	X	X	X	X	X	X	X	X	X	X	APR-JUN	APR-JUN	APR-JUN	JAN-DEC	JAN-DEC

INVERTEBRATE:

RAR#	Species	S F Conc.	J	F	M	A	M	J	J	A	S	O	N	D	Spawning	Eggs	Larvae	Juveniles	Adults
			-	-	-	-	-	-	-	-	-	-	-	-					
114	Blue crab		X	X	X	X	X	X	X	X	X	X	X	X	-	-	MAY-NOV	JAN-DEC	JAN-DEC