

Identification_Information:

Citation:

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Originator: NOAA Fisheries Service

Publication_Date: 20060724

Title:

Recovery of faunal and floral communities after deposition of dredge sediments in the Laguna Madre system of Texas: 1995-1998.

Description:

Abstract:

Compared densities of nekton, benthos and seagrass among newly deposited dredged sediments and nearby and distant natural seagrass sites over a three year period. Recovery of the seagrass and nekton communities from dredged material placement is predicted to take from 4-8 years.

Purpose:

Identify and describe the relationship between fishery productivity and the coastal environment.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 19950909

Ending_Date: 19980415

Currentness_Reference: ground condition

Status:

Progress: complete

Maintenance_Update_Frequency: As necessary

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -97.47528

East_Bounding_Coordinate: -97.33333

North_Bounding_Coordinate: 27.45222

South_Bounding_Coordinate: 26.48333

Keywords:

Theme:

Theme_Keyword_Thesaurus: None

Theme_Keyword: distribution

Theme_Keyword: abundance

Theme_Keyword: seagrass

Theme_Keyword: nekton

Theme_Keyword: 1.14 m diameter drop sampler

Theme_Keyword: submerged aquatic vegetation

Theme_Keyword: dredging

Theme_Keyword: brown shrimp

Theme_Keyword: white shrimp

Theme_Keyword: pink shrimp

Theme_Keyword: Farfantepenaeus aztecus

Theme_Keyword: Litopenaeus setiferus

Theme_Keyword: Farfantepenaeus duorarum

Theme_Keyword: macrofauna

Theme_Keyword: fish

Theme_Keyword: ecosystem

Theme_Keyword: community

Theme_Keyword: decapods

Theme_Keyword: estuary

Theme_Keyword: habitat

Theme_Keyword: nursery

Place:

Place_Keyword_Thesaurus: Laguna Madre

Place_Keyword: Upper Laguna Madre

Place_Keyword: Lower Laguna Madre

Place_Keyword: Texas

Place_Keyword: western Gulf of Mexico

Access_Constraints:

Use_Constraints:

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Point_of_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization:

NOAA Fisheries Service, formerly National Marine Fisheries Service, Galveston, Texas

Contact_Person: Dr. Jim Ditty

Contact_Address:

Address_Type: mailing and physical

Address: Galveston Laboratory, 4700 Avenue U

City: Galveston

State_or_Province: Texas

Postal_Code: 77551-5997

Country: Unites States of America

Contact_Voice_Telephone: 409-766-3500

Data_Quality_Information:

Attribute_Accuracy:

Attribute_Accuracy_Report:

Samples were randomly selected for QC to ensure proper identification and enumeration of biological organisms. Data were entered into spreadsheets and checked against the raw data sheet to avoid entry errors.

Logical_Consistency_Report:

Completeness_Report:

Lineage:

Process_Step:

Process_Description:

Sampling Gear Description:

The drop trap was a cylindrical fiberglass enclosure with a galvanized metal skirt along the bottom. The 1.14-m diameter drop trap enclosed a 1-m² area. Traps were deployed from a boat with a front-mounted boom and pushed into the substrate.

Process_Date: unknown

Process_Step:

Process_Description:

Measuring Environmental Variables:

Environmental data were collected immediately after gear deployment and before collection of organisms. Water temperature, salinity, and D.O. readings were collected inside the sampler and a water sample was taken and returned to the laboratory for turbidity analysis. Minimum and maximum water depth was taken with a meter stick and recorded to the

nearest centimeter. Average water depth was the midpoint between values.

Process_Date: unknown

Process_Step:

Process_Description:

Sampling of Nekton and Associated Plants:

The engine was turned off once the boat approached the sampling site to minimize site disturbance prior to sampling. The boat drifted or was slowly guided to the sampling site by pushing from the stern. One person in the boat released or threw the trap from the bow. Immediately after sampler deployment, field personnel pushed the sampler about 15-cm into the sediment to obtain a proper seal along the bottom to prevent escape of organisms and a trap blow-out.

Process_Date: unknown

Process_Step:

Process_Description:

Removal of Animals:

After the drop trap was pushed into the substrate, dip nets were used to sweep the bottom of the trap and remove nekton. Enclosed water was pumped from the trap and filtered through a 1-mm mesh plankton net. As the water level dropped, the sampler was continually swept with dip nets because the efficiency of animal capture increases with reduced water depth. Once drained, the sediment was visually and manually inspected for animals remaining on or burrowed into the substrate. Animals collected or found during substrate inspection were added to the drop trap catch. Animals and other material (i.e., vegetation, macro-algae, shell hash, and detritus) were rinsed and the catch bag was detached. Samples were placed in a 1-mm mesh bag, labeled, fixed and returned to the laboratory for processing.

Process_Date: unknown

Process_Step:

Process_Description:

Care of Nekton Samples in the Field:

Labeled tags were placed inside and attached to the outside of each mesh sample bag. Samples were stored in 3 or 5-gallon buckets containing ten percent formalin made by mixing one part full-strength formaldehyde with nine parts water. If animals were too large to fit into the sample bag, the specimen was identified to the lowest taxon, measured, recorded, and released.

Process_Date: unknown

Process_Step:

Process_Description:

Initial Processing of Field Data and Samples:

After returning from the field, turbidity samples were analyzed in the laboratory and the information transferred to the field data sheets. Field data sheets were entered into an electronic database or database manager. A printout was given to the laboratory supervisor and primary

investigator for review.
Process_Date: unknown
Process_Step:
Process_Description:
SPECIES IDENTIFICATION and MEASUREMENT:
Specimens were identified and the species name recorded on the appropriate identification sheet. Fish and other invertebrates were counted, but not measured. Penaeid shrimp were measured to the nearest mm carapace length (CL).
Process_Date: unknown
Process_Step:
Process_Description:
Preservation and Storage of Organisms:
Samples were stored in 3 or 5-gallon buckets containing ten percent formalin made by mixing one part full-strength formaldehyde with nine parts water.
Process_Date: unknown
Process_Step:
Process_Description:
Measuring % Vegetative Cover of Submerged Aquatic Vegetation:
Percent seagrass coverage was estimated with a 1-m² quadrat with 20-cm by 20-cm grid cells.
Process_Date: unknown
Process_Step:
Process_Description:
Organism Data Entry and Validation:
Laboratory and field data were entered into the computer using a database manager. A text file was created that described these data and any abbreviated variables. Data were printed out, checked against ID sheets and corrections made at this time. A code was assigned to each species using the Fishery Ecology Branch revised species code list. A species not found on the code list was assigned a new code, which was added to the master code list.
Process_Date: unknown
Metadata_Reference_Information:
Metadata_Date: 20060724
Metadata_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization:
NOAA Fisheries Service, formerly National Marine Fisheries Service, Galveston, Texas
Contact_Person: Dr. Jim Ditty
Contact_Address:
Address_Type: mailing and physical
Address: Galveston Laboratory, 4700 Avenue U
City: Galveston
State_or_Province: Texas
Postal_Code: 77551-5997
Country: Unites States of America
Contact_Voice_Telephone: 409-766-3500
Metadata_Standard_Name:
FGDC Content Standard for Digital Geospatial Metadata
Metadata_Standard_Version: FGDC-STD-001.1-1999