HEALTH RISKS FROM SEAFOOD CONSUMPTION IN PACIFIC ISLANDS

S O S ON GUAM'S REEFS:

REVIEW OF A SEAFOOD CONSUMPTION ADVISORY DUE TO CONTAMINANTS IN GUAM

NATURALLY OCCURRING SEAFOOD HEALTH RISKS IN THE PACIFIC ISLANDS

- HISTAMINES
- BACTERIA AND VIRUSES
- PUFFERFISH (FUGU) TETRAODOTOXIN
- SHARK LIVER
- CLUPEOTOXISM
- PARALYTIC SHELLFISH POISONING
- HALLUCINOGENIC FISH POISONING
- CIGUATERA

CIGUATERA

- SYMPTOMS
- DISTRIBUTION
- SOURCE
- SPECIES AFFECTED
- PREVENTION

SEAFOOD POISONING FROM ENVIRONMENTAL CONTAMINATION

- CIGUATERA?
- SEWAGE CONTAMINATION
- HARMFUL ALGAL BLOOMS
- HEAVY METALS
- PESTICIDES
- PCBs
- DIOXINS/FURANS

OROTE LANDFILL, GUAM

- HISTORY
- CONTAMINANTS
- INSTALLATION RESTORATION ACTIONS
  - CLEANUP SHORE AND SHALLOWS
  - BUILD SEAWALL
  - CONSOLIDATE WASTE
  - CAP
  - MONITOR

OROTE PENINSULA

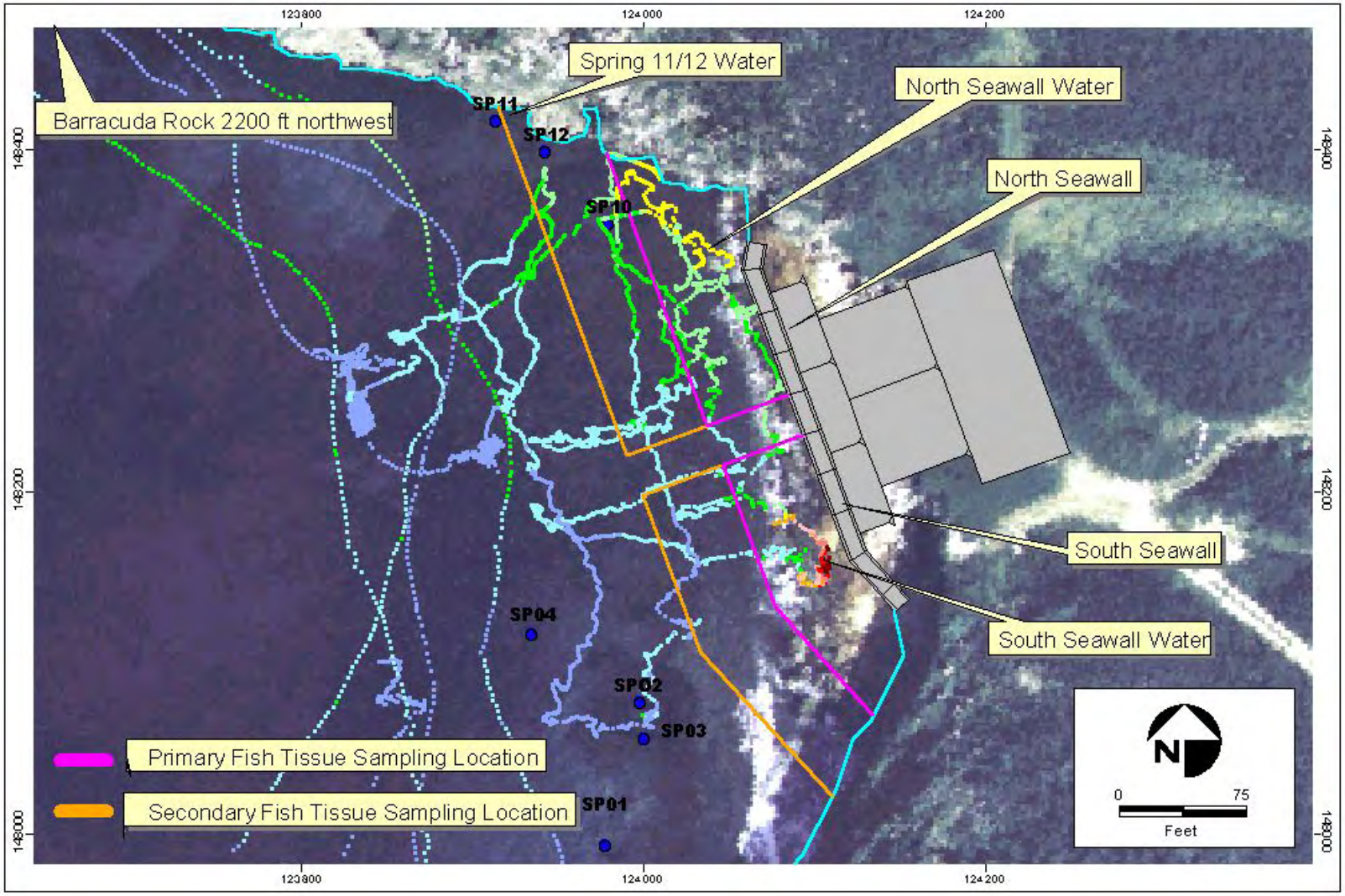
Orote Beach Before Construction of the Seawall

Cleanup Activities

- **Removal of landfill material from beach and nearshore areas**
- **Construction of Seawall to protect landfill material from eroding further**
- **Capping of the landfill with low permeability cover**

Orote Beach After Construction of the Seawall

Seawater and Fish Tissue Sampling Locations - June 2001



Field Sampling Program - June 2001

- **Sample Media**
  - Water
    - Salinity
    - Chemistry
    - Toxicity
  - Whole Fish Tissue
    - Chemistry

Herbivorous Fish:
Sergeant major

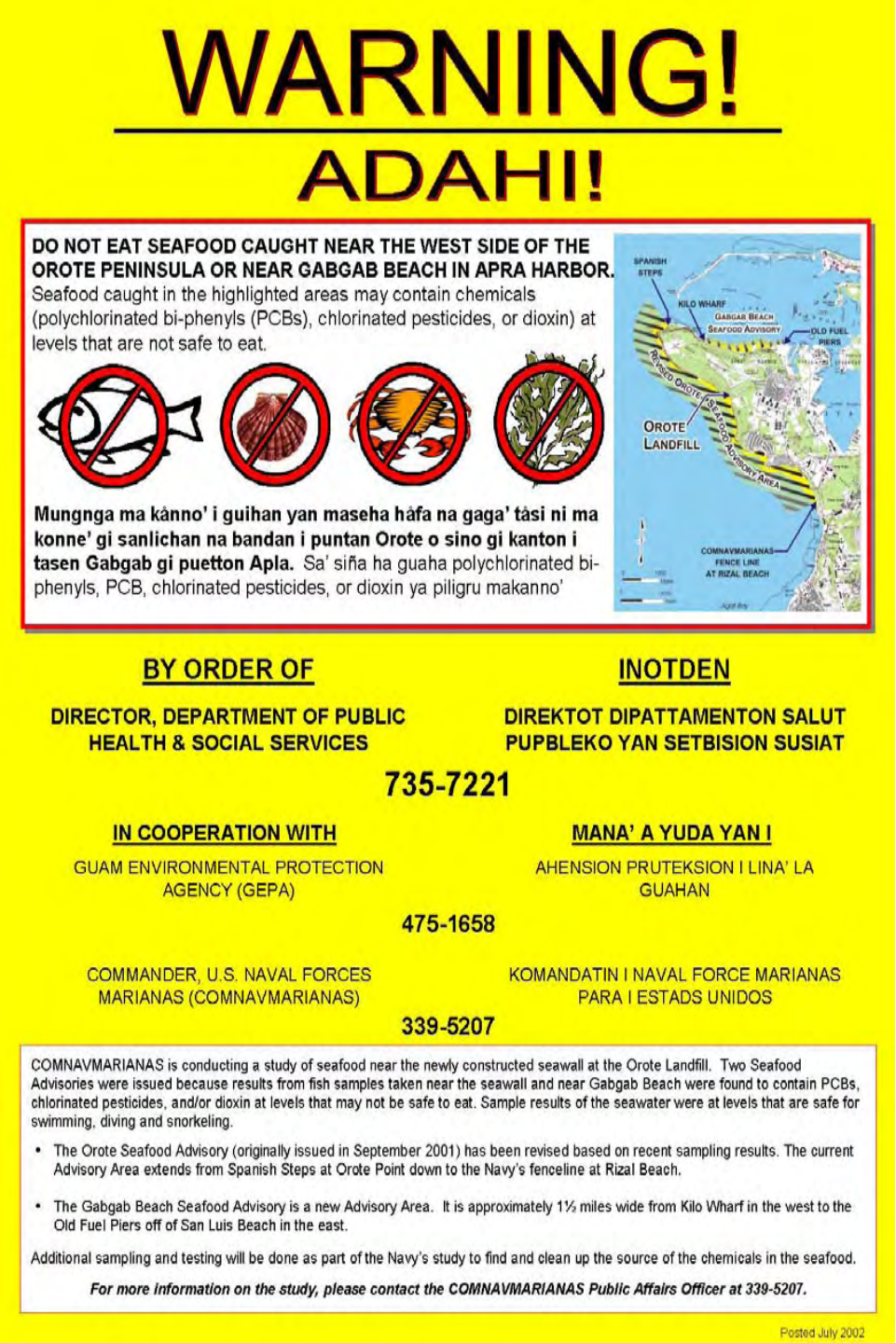
Carnivorous Fish:
Hexagon grouper

OROTE SEAFOOD TOXICITY

- HIGH PCBs
- ADVISORY
- TARGETED SAMPLING
- REVISED ADVISORY
- CONSUMPTION SURVEY
- HEALTH RISK
- SOURCE IDENTIFICATION AND REMOVAL

The Seafood Advisory

- June 2001 sampling conducted to see if marine life was affected by the landfill
- PCBs and other chemicals were found in seafood at levels that are not safe to eat
- Navy and Guam EPA recommended a seafood advisory to Guam Public Health on September 22, 2001



WARNING!

ADAHI!

DO NOT EAT SEAFOOD CAUGHT NEAR THE WEST SIDE OF THE OROTE PENINSULA OR NEAR GABGAB BEACH IN APRA HARBOR.
Seafood caught in the highlighted areas may contain chemicals (polychlorinated bi-phenyls (PCBs), chlorinated pesticides, or dioxin) at levels that are not safe to eat.

Mungnga ma kånno' i guihan yan maseha håfa na gaga' tåsi ni ma konne' gi sanlichan na bandan i puntan Orote o sino gi kanton i tasen Gabgab gi puetton Apla. Sa' siña ha guaha polychlorinated bi-phenyls, PCB, chlorinated pesticides, or dioxin ya piligru makanno'

SPANISH STEPS
KILO WHARF
GABGAB BEACH SEAFOOD ADVISORY
OLD FUEL PIERS
REVISED ORIOTE SEAFOOD ADVISORY AREA
OROTE LANDFILL
COMNAVMARIANAS FENCE LINE AT RIZAL BEACH

BY ORDER OF

DIRECTOR, DEPARTMENT OF PUBLIC HEALTH & SOCIAL SERVICES

INOTDEN

DIREKTOT DIPATTAMENTON SALUT PUPBLEKO YAN SETBISION SUSIAT

735-7221

IN COOPERATION WITH

GUAM ENVIRONMENTAL PROTECTION AGENCY (GEPA)

MANA' A YUDA YAN I

AHENSION PRUTEKSION I LINA' LA GUAHAN

475-1658

COMMANDER, U.S. NAVAL FORCES MARIANAS (COMNAVMARIANAS)

KOMANDATIN I NAVAL FORCE MARIANAS PARA I ESTADS UNIDOS

339-5207

COMNAVMARIANAS is conducting a study of seafood near the newly constructed seawall at the Orote Landfill. Two Seafood Advisories were issued because results from fish samples taken near the seawall and near Gabgab Beach were found to contain PCBs, chlorinated pesticides, and/or dioxin at levels that may not be safe to eat. Sample results of the seawater were at levels that are safe for swimming, diving and snorkeling.

- The Orote Seafood Advisory (originally issued in September 2001) has been revised based on recent sampling results. The current Advisory Area extends from Spanish Steps at Orote Point down to the Navy's fenceline at Rizal Beach.
- The Gabgab Beach Seafood Advisory is a new Advisory Area. It is approximately 1½ miles wide from Kilo Wharf in the west to the Old Fuel Piers off of San Luis Beach in the east.

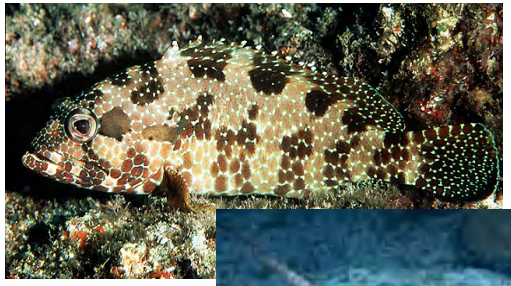
Additional sampling and testing will be done as part of the Navy's study to find and clean up the source of the chemicals in the seafood.

For more information on the study, please contact the COMNAVMARIANAS Public Affairs Officer at 339-5207.

Posted July 2002

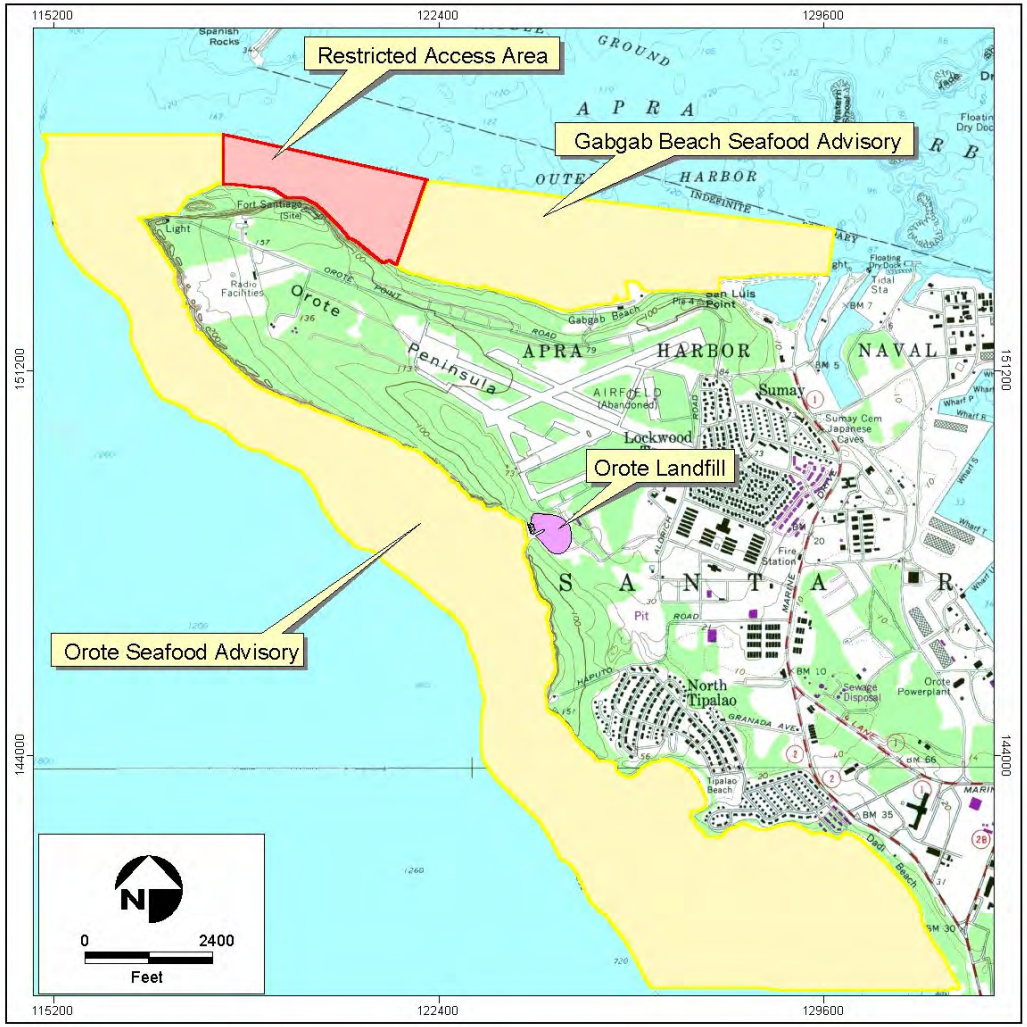
Targeted Sampling and Consumption Survey

- Sampled territorial reef fish within the advisory areas
- Asked local fishermen to help sample popular fish and seafood
- Conducted a seafood consumption survey of local residents



Revised Orote Seafood Advisory

- Advisory extends from Orote Point to the COMNAVMARIANAS Fence Line at Rizal Beach
- The Advisory extends to the 600 foot depth offshore
- Gabgab Beach Advisory located in Apra Harbor



Overview of Nearshore Environment and Seawall (January 18-19, 2001)