

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

Announcement of Preliminary Consultation on Two Potential Sites for Designation as National Marine Sanctuaries

AGENCY: National Ocean Service (NOS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice.

SUMMARY: NOAA is announcing preliminary consultation on two sites for potential National Marine Sanctuary designation: (1) At Norfolk Canyon, (off the coast of Virginia) and (2) Ten Fanthom Ledge/Big Rock (off the coast of North Carolina). Preliminary consultation is the first step toward designation of a National Marine Sanctuary. NOAA will review and consider public comments in determining whether these sites should become active candidates for possible designation. If a site is selected as an active candidate, an environmental impact statement will be prepared under the National Environmental Policy Act and NOAA will conduct public hearings. After selection as an active candidate, complete Sanctuary designation process could take from 2-5 years. The public, and state, local and Federal Governmental agencies are invited to comment on the potential of making these sites active candidates for formal considerations as National Marine Sanctuaries. NOAA intends to designate no more than one Sanctuary per year.

DATE: Comments on the Preliminary Consultation will be accepted until November 18, 1985.

ADDRESS: Send comments to Dr. Nancy Foster, Chief, Sanctuary Programs Division, Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration, 3300 Whitehaven Street, NW., Washington, DC 20235, (202) 634-4236.

FURTHER INFORMATION CONTACT: Mr. Edward Lindelof, Senior Policy Analyst, at the above telephone and address.

SUPPLEMENTARY INFORMATION:**I. Selection Procedures**

Title III of the Marine Protection, Research, and Sanctuaries Act of 1972 as amended, 16 U.S.C. 1431 *et seq.* (the Act), authorizes the Secretary of Commerce to designate ocean waters, as far seaward as the outer edge of the continental shelf and over which the United States exercises jurisdiction, consistent with international law, as

national marine sanctuaries. The purpose of designating national marine sanctuaries is to protect and manage distinctive areas of the marine environment for those conservation, recreational, ecological, historical, research, educational or aesthetic values which give these areas special national significance. The Act is administered by the National Oceanic and Atmospheric Administration (NOAA) through the Office of Ocean and Coastal Resource Management (OCRM), Sanctuary Program Division (SPD).

On August 4, 1983, NOAA published the Site Evaluation List (SEL) (48 FR 35568) consisting of 29 sites that could possibly be considered for National Marine Sanctuary status through 1988. Each site has been placed on the SEL because it possesses high natural resource value, and may warrant further analysis to determine its feasibility as an Active Candidate (formal proposal for consideration as a National Marine Sanctuary).

Before a site is selected as an Active Candidate, the current regulations at 15 CFR Part 922, § 922.30(c), require that NOAA undertake preliminary consultation with relevant local, state and Federal government agencies; the appropriate Fishery Management Council; any relevant international agencies, and the public. The 1984 amendments to the Act (Title I of Pub. L. 98-498, codified at 16 U.S.C. 1431-1439) also require consultation with the Committee on Merchant Marine and Fisheries of the House of Representatives and the Committee on Commerce, Science and Transportation of the Senate.

The purpose of this preliminary consultation is to seek relevant information about the sites to aid NOAA in its determination as to whether to designate one or both as Active Candidates. Evaluating a site for placement on the list of Active Candidates represents the next stage in the National Marine Sanctuary designation process.

After a 60-day review of comments and relevant information, NOAA will evaluate these sites in terms of the Active Candidate criteria. Therefore, information relevant to this analysis would be particularly useful. These criteria are:

(1) The area's natural resource and ecological qualities, including its contribution to biological productivity; maintenance of ecosystem structure, maintenance of ecologically or commercially important or threatened species or species assemblages, and the biogeographic representation of the site;

(2) The area's historical, cultural, archaeological, or paleontological significance;

(3) The present and potential uses of the area that depend on maintenance of the area's resources, including commercial and recreational fishing, subsistence uses, other commercial and recreational activities, and research and education;

(4) The present and potential activities that may adversely affect the factors identified in subparagraphs (1), (2), (3):

(5) The existing state and Federal regulatory and management authorities applicable to the area and the adequacy of those authorities to fulfill the purpose and policies of this title;

(6) The manageability of the area, including such factors as its size, its ability to be identified as a discrete ecological unit with definable boundaries, its accessibility, and its suitability for monitoring and enforcement activities;

(7) The public benefits to be derived from sanctuary status, with emphasis on the benefits of long-term protection of nationally significant resources, vital habitats, and resources which generate tourism;

(8) The negative impacts produced by management restrictions on income-generating activities such as living and nonliving resources development; and

(9) The socioeconomic effects of sanctuary designation.

Within 180 days after publication of this notice NOAA shall determine which, if any, of the two sites described below will become Active Candidates and publish a notice of this determination in the **Federal Register** describing how each site meets the criteria. If a site is not selected, a short statement of the reasons for the negative determination shall be specified in the notice.

Selection as an Active Candidate formally triggers the National Environmental Policy Act (NEPA) environmental impact analysis process. At this stage NOAA begins preparation of a draft management plan and draft environmental impact statement, including a resource assessment report. Subsequent steps include a public hearing, preparation of a final environmental impact statement, and a recommendation of approval to the Secretary of Commerce. Congress then has the opportunity to disapprove the designation. Opportunities for public comment exist throughout this process and will be advertised in the local media, and other appropriate channels.

II. Preliminary Consultation

Consistent with the current final regulations for designating national marine sanctuaries, NOAA is undertaking preliminary consultation on two sites: Ten Fathom Ledge/Big Rock and Norfolk Canyon. Although Norfolk Canyon does not appear on the SEL, it is eligible for consideration.

At the time of development of the Site Evaluation List the following sites were under consideration for designation by NOAA: Cordell Bank (California), Norfolk Canyon (South Atlantic), La Parguera (Puerto Rico), Monterey Bay (California), Hawaiian waters and Fagatele Bay (American Samoa). The scientific teams responsible for making recommendations were instructed not to consider these sites for SEL listing since they had already been selected by NOAA for further evaluation. At that time a contract had been awarded to the Virginia Institute of Marine Sciences for the purpose of synthesizing information on the physical and biological features of Norfolk Canyon. This site is the last of the pre-SEL candidates to be actively considered.

(1) Norfolk Canyon

Latitude: 37° 03.3' N.
Longitude: 74° 58.4' W.

This site which is located approximately 60 nautical miles off the coast of Virginia is the southernmost submarine canyon in a series of prominent, deep water features on the eastern continental margin of the United States (Figure 1). Like their counterparts on land, submarine canyons are some of the most rugged features on the face of the earth, with deep V-shaped valleys, steep, rocky and often unstable walls and swift currents. In spite of its ruggedness and depth, the Norfolk Canyon supports an abundance of marine life, of which its huge Aleyanarian tree corals and "pueblo villages" (*i.e.*, areas along the canyon wall where large invertebrates and some finfish dig extensive depressions, caves and burrows for their lodging) are especially prominent.

The topographic expression of Norfolk

Canyon begins in the shelf-break region at depths of 80 to 100 meters. The head of the Canyon is characterized by high relief (up to 400 meters between shelf and canyon floor) and a symmetrical V-shaped cross section. It incises the shelf approximately 16 to 19 km and is 6 km wide near the shelf break. Other major canyons in the Middle Atlantic are less symmetrical, having more abrupt profiles on their northeastern flanks as opposed to southwestern flanks. Terraces in the head of Norfolk Canyon are found on the canyon walls, clustered at various depths on the upper slope. They are more numerous at the shallower depths (100-250) and on the northeast sandy, foraminiferal-rich mud distinct from the gravelly, shell-rich sands characterizing the shelf. The depth of transition between the shelf and slope faces generally occurs between 250 and 300 meters in Mid-Atlantic Canyons, but has not been reported precisely for Norfolk Canyon.

The deep-sea biota of the eastern continental margin, both in and out of canyon systems, is best known with respect to its megafaunal components. The megafauna include both mobile benthopelagic or epibenthic forms such as decapods and echinoderms. Less abundant, but often observed, are various anthozoans, particularly soft-bottom forms such as sea pens and tube anemones.

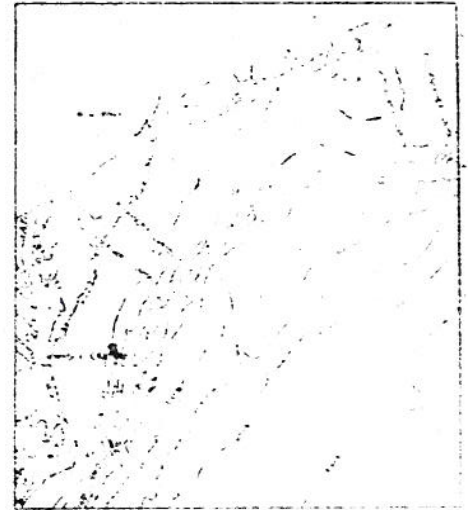
The same faunal elements seen on the open slope and rise occur in canyon areas as well, although sometimes in greater abundance than observed outside of canyon systems. In addition to the usual deep-sea assemblages, many canyon areas also support a much greater variety of hard-bottom forms than can be found in the inter-canyon areas. This is due to the generally much greater availability of hard substrates in canyons, particularly at upper to mid-slope depths and various soft corals, especially gorgonians, at deeper levels. In general, the bathymetric distributions of most species are broad.

Another distinctive feature of canyon systems is the extensive bioerosion of canyon walls often observed in the heads of these systems. This creates a

unique habitat both for the primary eroders and many additional species which make use of these areas, referred to as "pueblo village" communities.

The mobile megabenthos of the Norfolk Canyon area is quite similar compositionally to that found at comparable depths along the eastern continental margin. The demersal fish fauna is dominated by macrourids, morids, gadids, zoarcids, and the Synphobranchid eel, *Synphobranchus kaupi*. The longfin hake, *Phycis chesteri*, is dominant on the upper slope; the blue hake, *Antimora rostrata*, is a major constituent of the fauna on the lower slope; and the rattail species, *Corphaenoides armatus*, is dominant on the rise.

Decapods commonly observed on the upper slope include lobsters, *Cancer* crabs, and the galatheid crab, *Munda iris iris*. Over a broad range of mid-slope depths, red crabs (*Gezonia quinquegens*) dominate the decapod fauna. On the lower slope and rise, a variety of crangonid, polychetid, nematocarcinid and galatheid species are observed.



In the head of Norfolk Canyon, diverse habitat types, including boulder-covered bottom, bioeroded areas, and terraced areas supporting extensive

stands of a very large, hard-bottom spongonian, *Paragorgia arborea*, have been observed during submersible and photographic surveys. From the data available, the development of the *Paragorgia* stands appears to be more extensive than in other Mid-Atlantic canyons. A variety of other soft and hard corals are also found in the Canyon to depths of more than 2000 meters. Several of these (e.g. *Prinnoea reseda*) may not be common in east coast or Mid-Atlantic canyons, although more data are required before this can be known with certainty.

Human Uses

Major human activities pursued on the eastern continental margin include commercial and recreational fisheries, mineral resources development, ocean dumping and military operations. Although the Norfolk Canyon area may not provide uniquely important fishing grounds compared with other canyon or intercanyon areas on the outer shelf or upper slope, it is visited regularly by vessels from a variety of fisheries. Squid, red crabs, lobsters, and scallops are actively fished in this area, and it is trawled for various demersal finfish as well. Other species sought commercially in this area include butterfish, offshore mackerel, and swordfish. Tilefish are landed both north and south of Virginia and caught primarily in canyon areas, are not fished in Norfolk Canyon.

Because of its distance from shore (60 nm), Norfolk Canyon is not as heavily used by recreational fishermen as are nearshore waters. However, various offshore pelagic species are sought in this area, among which the white marlin (*Tetrapturus albidus*) is the most important.

No mineral resources are currently mined in the vicinity of Norfolk Canyon. Those resources with the greatest near-term potential for development are oil and gas. Upcoming lease sale number 111 in the Mid-Atlantic area is tentatively scheduled for February 1985.

Although no ocean disposal of wastes is occurring at present in Norfolk Canyon, the area has been used

previously for the dumping of radioactive wastes. There are two former dumpsites, one located at about the 1000-meter isobath, the other, more extensive, lying at depths between about 2000 and 2500 meters. Both occur on or near the axis of the Canyon.

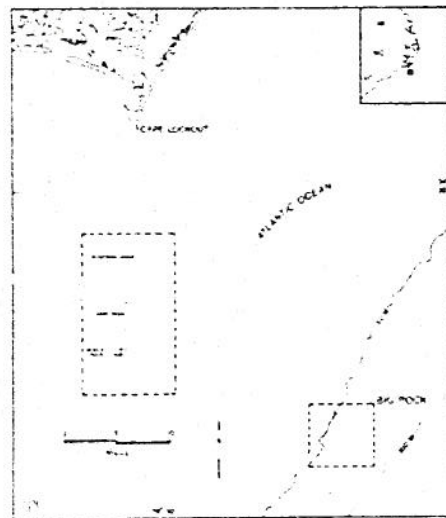
The U.S. Atlantic Fleet claims to make use of the waters and airspace above Norfolk Canyon for gunnery practice and for transiting surface and submerged ships.

(2) Ten Fathom Ledge/Big Rock

Latitude/Longitude:

Ten Fathom Ledge
 34°26' N. 76°37' W.
 34°13' N. 76°37' W.
 34°26' N. 76°29' W.
 34°13' N. 76°29' W.
 Big Rock Area
 34°12' N. 76°15' W.
 34°07' N. 76°15' W.
 34°12' N. 76°10' W.
 34°07' N. 76°10' W.

The proposed Ten Fathom Ledge/Big Rock site includes six separate hard ground ledges of varying relief, displaying similar tropical algal and coral communities representing the northernmost extension of hard ground habitats that occur off Florida, Georgia, and South Carolina (Figure 2). Two separate areas are included.



The inner shelf site, called the Ten Fathom Ledge area, is approximately 15 mi. offshore and includes such features as Ten Fathom Ledge, West Rock Area, Thirty-mile Rock area, and a World War II submarine wreck (total area: 135 mi² or 350 Km²). The outer shelf site, some 36 mi. (58 km) offshore, includes the Big Rock area encompassing 36 mi² (90 Km²). Both sites lie entirely within Federal waters, offshore of North Carolina.

A wide variety of unique habitats is included in the study areas. The nearshore live-bottom areas harbor shallow-water subtropical populations. Due to the influence of seasonal temperatures, subtropical communities are not permanently established. The offshore sites, whose benthic communities are not as influenced by seasonal water temperature changes, offer permanent residence to subtropical species. These permanent offshore communities, as well as the "Gulf Stream transport," supply recruits to the near shore areas. Water temperature is the main factor influencing the distribution of the subtropical biota; depth is of secondary importance. Many of these subtropical flora and fauna in the Cape Lookout area are at the northern extension of their range.

The algae, invertebrates and fishes of Ten Fathom Ledge (a high relief area 3-16 ft: 1-5 m), have been identified from the Ledge; most have southern affinities. The area harbors commercially and recreationally sought species such as black sea bass, gag, scamp, longspine porgy, whitebone porgy, tautog, sheepshead, and gray triggerfish. At least 40 algal species, dominated by brown algae, have been recorded from the ledge. The algae are seasonal in occurrence and abundance, with fluctuations in red algae species most noticeable. Ten Fathom Ledge is used recreationally by fishermen and scuba divers; commercial use is predominantly harvesting of black sea bass.

Live bottom areas in the transitional depths of 100-130 ft (30-40 m), such as West Rock and Thirty-Mile Rock, show

increase in the dominance of tropical biota which is less influenced by seasons than the nearshore areas. The fauna includes deep-water components, rare in the shallower depths. Purple reef fish, yellowtail reef fish, sportfin hogfish, spanish hogfish, hogfish, bank butterflyfish, red snapper, vermilion snapper, red porgy, and knobbed porgy are examples of species occurring on habitats at these depths. Scuba, hook and line, and submersible data have indicated the presence of at least 100 species of fishes at the two mentioned locations. Diving and commercial and recreational fishing occur on live-bottom sites of these depths.

Diversity of fishes peaks on offshore live-bottom areas in the depth range of 130-246 ft (40-75 m). These areas are typically low in profile (less than 6 ft; 2 m) and offer stable temperatures. Epinepheline groupers, lutjanids, and red porgy dominate the recreational and commercial catches of these areas. Species such as reef butterflyfish, bigeye, and tattler, rare in shallower environments, have been collected in depths of this range. These sites are fished recreationally and commercially.

The Big Rock area marks the seaward boundary of the area under consideration. The Big Rock is a large

area on the continental shelf break, ranging in depth from 200-400 ft (60-120m). The deepest areas, although decreased in diversity due to cold-water upwelling from the continental slope, maintain several fish populations of commercial importance. Trolling for billfish is a frequent activity in the area.

Nearby Beaufort inlet provides easy access for fishermen, divers, and researchers. The proposed area receives high recreational and commercial use. The predominant commercial activity is hook and line fishing, but some trapping for sea bass occurs; trawling activities are negligible. Adjacent (within 30 mi 50 km) to the proposed site are calico scallop beds which are periodically dredged.

Human Uses

The major human use of the Ten Fathom Ledge/Big Rock complex is recreational. Scuba-diving clubs and recreational fishermen visit the area. Commercial trawling occurs over some low-relief hard grounds. A significant commercial headboat (i.e., commercial boats which take private rod-and-reel fishermen out for a day of recreational fishing) fishery makes use of the hard grounds.

Scientific research has been conducted in varying degrees at the

different live bottoms since 1920, and increased research emphasis on these habitat is anticipated.

Commercial and recreational fishing, using hand and long lures, occurs in the area and there is an increasing utilization of potentially destructive fishing gear (i.e., roller trawls) designed to fish reef habitats, for grouper and snapper. Although the trawlers may avoid high-relief areas, some of the coral colonies occur on relatively flat bottom away from the pinnacles.

Ten Fathom Ledge/Big Rock areas may have potential for mineral resources including oil and gas, phosphate, and possibly uranium associated with phosphate. Both Ten Fathom Ledge and Big Rock may be considered for oil and gas leasing as part of the OCS lease sales for the South Atlantic tentatively scheduled for July 1989.

(Federal Domestic Assistance Catalog No. 11.419, Coastal Zone Management Program Administration)

Dated: August 30, 1985.

James P. Blizzard,

Acting Director, Office of Ocean and Coastal Resource Management.

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