

# Blue-ribbon dredging under way in Nuiqsut

## New Orleans to Nuiqsut

A dredge built in New Orleans has brought an airport and honors to the North Slope village of Nuiqsut. The "Nuvakti" was built in sections at the mouth of the Mississippi. These sections were trucked to Prudhoe Bay where the drivers turned left down an ice road to the village 90 miles east of Barrow.

Re-assembled on the frozen Colville River, the Nuvakti was launched on its first dredging season when the ice melted last spring. The river bed gravel it brought up became the base of the new 5,000-foot Nuiqsut airport. And that airport recently won the Grand Award in the 1982 Engineering Excellence Awards sponsored by the Consulting Engineers Council of Washington State.

## Just the Beginning

The Nuvakti dredge and the Nuiqsut airport are just the start of a blue-ribbon dredging project planned for the North Slope. A sister ship to the Nuvakti will be supplying Wainwright with gravel for its airport this summer. A smaller but nearly as powerful dredge

from Tennessee will make its debut near Barrow sometime in June or July.

All this rock collecting is designed to meet the North Slope's need for reliable natural building materials that can be had for a reasonable price and without environmental damage. First conceived and implemented by North Slope Borough Mayor Eugene Brower when he was Public Works Director, the dredging project is now under a newly formed Public Works Material Source Division supervised by Edward Itta.

"You're looking at horrendous costs in conventional gravel mining with its equipment and man-power," says Itta. "These dredges have proven to be the most efficient way to produce the gravel for the Borough's on-going Capital Improvements Program (C.I.P.)."

## Materials Source Division

The Materials Source Division's job is to locate needed natural building materials and to develop the means of getting those materials to all the villages on the North Slope.



The dredge Nuvakti waits for break-up on the Colville River near Nuiqsut. This dredge brought up the gravel that made the award-winning new airport for the village east of Barrow.

"We hope to produce adequate material for all the villages in the not-too-distant future," says the Materials Source Supervisor.

Assisting in the work are Management Consultant Mike Weston who designed the dredges and assured their proper construction and Joe Thompson who served as

dredge captain of the Nuvakti last year and who will be General Superintendent of the three dredges in Wainwright, Barrow and Nuiqsut this summer. Beyond this the Division hires geologists to help locate suitable sources of building-quality gravel.

## Rock Hunting

Locating and extracting gra-

vel on the North Slope is not just a matter of lucky rock hunting. It is a complicated process. Some areas of the Slope, like Atkasuk, have very limited gravel supplies. Itta says that village has been a particular challenge but core samples now being taken in the area suggest the possi-

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# Dredging provides jobs in villages

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bility of dredging in Imakruak Lake.

One of the complications in finding a good source is that not all gravel is good gravel. Quality, not just quantity, of gravel is an important factor. Gravel can't be too big or too small and its performance can be determined by shape, whether the rock is generally flat or rounded.

Other factors include accessibility both in terms of distance from the village building site and the potential for environmental disturbance. In terms of environmental factors, Itta claims the dredging operations are about the best option available. In fact, besides stockpiling building materials, the dredges can also be used to improve local waterway navigation. As in the case of Nuiqsut.

"We're going to be stockpiling gravel in Nuiqsut this year," reports Itta, "and at the same time we'll be getting some sandbars out of the way so people will have an easier time getting up the Colville River."

Still, State and Federal regulations call for a long environmental review period for any kind of gravel extraction. The process of getting permits and holding the necessary public meetings means at least a year's wait before rock can be taken from a known source.

## Employment

Once in full swing the dredging operations provide much-needed local employment. Although the summer dredge season is short, it lasts only as long as there is open water, the operations do require 12 person crews.

The Materials Source Division is committed to filling those with as many local residents as possible. So far they have achieved 70% local hire, according to the Supervisor. Training programs and efforts to automate some complicated processes are being pursued to push local hires into even the top echelon positions. Some of these presently require up to 12 years experience.

## Village Rotation

The dredging operations are slated to serve North Slope communities on a rotating ba-

sis. A year for airport dredging materials and another for stockpiling and then the dredges may be able to move on. The Nuvakti is tentatively scheduled to go to Nuiqsut next year.

Barrow's smaller dredge will have a 12-inch suction pipe as compared to the 16-inch pipes on the village dredges. But due to a new design the smaller dredge will come close to its larger sisters in capacity. Some 300,000 cubic yards of gravel can be scooped off a river bed by the Barrow dredge in a season. The village dredges will be aiming at about the same level. Their top capacity under ideal conditions is some 500,000 cubic yards.

## Erosion Control

Along with providing the base material for roads, runways and buildings, the dredges will also facilitate erosion control projects. In Barrow gravel will be used to shore up the beach on the Lower Lagoon Dam and to contain erosion on the middle salt lagoon.

Dredging operations in Nuiqsut will be supplemented with a gravel crushing plant.