



March 18, 1991

NOAA Forges Largest Yet U.S. Environmental Damage Settlement

Exxon to Pay \$1B for Alaska Oil Spill Damage

Federal trustees—led by NOAA's Administrator Dr. John Knauss and General Counsel Tom Campbell—and the State of Alaska reached a \$1 billion out-of-court settlement last week with the Exxon Corporation for damage caused by the March 24, 1989 Exxon Valdez oil spill in Alaska's Prince William Sound.

cluded the Departments of Transportation, Agriculture and the Interior, and the Envi-

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The criminal and civil settlement is by far the largest for environmental damages in U.S. legal annals, dwarfing the previous record of \$19.7 million recovered in 1988 when a Shell Oil refinery tank in Martinez, California leaked 400,000 gallons of crude oil into the wetlands and waters of San Francisco Bay.

Knauss Led Talks

Knauss led the settlement negotiations, along with Administration Cabinet members, Alaska Governor Walter Hickel and Exxon President Lee Raymond. Other federal departments and agencies involved in the negotiations in-

Exxon-Valdez Settlement Largest Ever



Largest Settlement: The \$1 billion Exxon Valdez settlement announced last week dwarfed the previous record environmental settlement of \$19.7 million for the Shell-Martinez spill in San Francisco Bay in 1988.

Bolstered Data Buoy Network Will Improve Global Research

A mammoth two-year program to probe climate change in the air and sea with an 8,000-mile-long, 1,000-mile-wide belt of buoys stretching across the Pacific Ocean will be launched by NOAA this summer.

Adding to an existing array of 18 moored instrument

buoys, scientists from the Pacific Marine Environmental Laboratory in Seattle, working in tandem with the National Ocean Service, will install a 65-station network scheduled to transmit ocean data daily back to the laboratory early in 1993. The original 18 moorings, deployed beginning in the

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Coming Events

- **Meteorological Services and Atmospheric Research meeting**, to discuss Federal Aviation administrations aviation weather research and services, in Rockville, Md., March 21.
- **Marine Sanctuaries Managers Meeting**, to discuss how to improve program operations, Washington, D.C., on March 25.
- **Marine Sanctuaries Managers meeting**, for NOS sanctuary managers and their staffs, in Washington, D.C., March 25.

Exxon-Valdez Settlement is U.S. Record

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ronmental Protection Agency. The negotiations began February 5.

'Good Deal for Nation': Knauss

Dr. Knauss called the settlement "a good deal for the nation and one that will permit us to complete the critical cleanup and begin restoration of Prince William Sound now, while avoiding years of lengthy and costly litigation."

The funds from the civil settlement will go toward an

environmental restoration program administered jointly by Federal and State Trustees, as well as for reimbursement for past and continuing Federal and State cleanup and research efforts. Fifty million of the \$100 million criminal fine will be remitted as restitution to the State of Alaska in recognition of Exxon's efforts in the cleanup of the Sound.

The agreement calls for broad public participation and consultation in the ongoing restoration of the Sound and

other areas affected by the spill.

Under terms of the agreement, Exxon will immediately deposit \$190 million in an interest-bearing account, and will deposit an additional \$150 million in September, 1992. Subsequent payments totalling \$660 million will be made, beginning in September, 1993. The agreement also contains a reopener clause which provides for an additional \$100 million in restitution if, at the end of 10 years, additional long-term environmental damages are found.

When the Exxon-Valdez struck Bligh Reef at four minutes past midnight almost two years ago, 11 million barrels of oil gushed into the 10,000 square mile Sound but an additional 47 million barrels of crude were saved and offloaded by April 4th.

Three weeks after the spill, the oil had spread over 1,000 square miles of the 10,000 square-mile Sound, with 40 percent of it washed up on beaches.

Since the accident, Exxon has spent an estimated \$2.5 billion on cleanup, equipment and other spill-related work, while in 1989 alone the U.S. government spent an additional \$100 million. ☺



Prince William Sound, on Alaska's southern coast, encompasses about 10,000 square miles along its 3,000 miles of shoreline. The area is home to about 6,000 residents. In addition to the oil pipeline terminal at Valdez, the Sound is important for its valuable commercial fisheries, especially salmon and herring. The dockside value of its fish catch in 1988 was \$71 million. In 1988, some 2,000 tankers came in and out of Valdez, from which the Exxon-Valdez had departed March 23.

Md. Fire Damages Records

A three-alarm fire in a Maryland NOAA Management Service Center office last week may hamper payment on imprest fund receipts. The fire caused at least \$500,000 in damages to the building and computer equipment.

Pacific Buoy Belt to Aid Climate Research

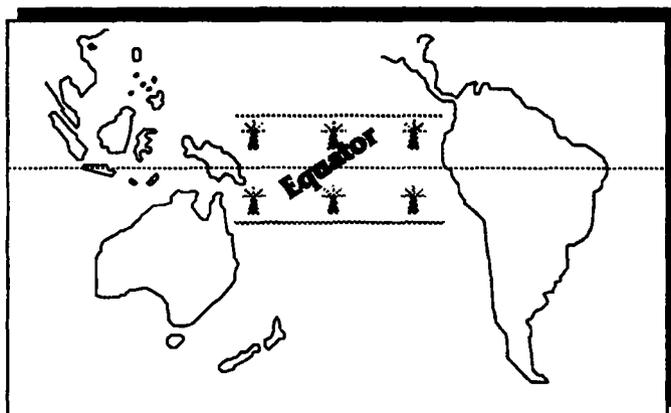
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1980s, provided information enabling climatologists to forecast the onset of the El Niño Southern Oscillation, an ocean-generated phenomenon that occasionally works major weather destruction around the world.

The NOAA Ship

Discoverer and the French vessel Noroit will deploy buoys during research cruises in the equatorial Pacific this summer. Japan is also joining the U.S. in meeting the \$2.5 million annual cost of the project.

The network will contain a north-south line of buoys moored



Oh Buoy! A network of 18 data-gathering buoys in the Pacific, to be expanded to 65, will give researchers new insights global climate change.

Details of the Exxon Settlement

The \$1 billion settlement is the largest environmental damage settlement in history—50 times the size of any other.

Twenty-five million dollars of the first payment of \$190 million will be used to continue the science program, and \$15 million will go to restoration planning and to initiate restoration pilot projects. The state of Alaska will receive \$50 million of the \$100 million criminal fine included in this payment. The balance will be used to begin to reimburse most of the trustees and the Coast Guard for past expenses.

The major part of \$150 million payment scheduled for 1992 will be used in restoration efforts aimed at returning Prince William Sound to its pre-spill condition.

Exxon will pay \$660 million over a period of years beginning in fiscal year 1993.

If significant new injury arises

based on previously unknown information after the 10-year restoration period, the trustees may reopen claims up to a cap of an additional \$100 million.

Restoration Efforts

The federal and Alaskan governments will continue to work cooperatively, conducting scientific studies and restoration efforts for the 1991 field season. Among those under consideration are:

Restoration of the beach wildlife community, to stabilize sites where natural or cultural resources are at risk,

A public information and education program, to lessen the potential for further human disturbances,

Habitat restoration for pink and chum salmon, using proven fisheries enhancement techniques,

Protection of strategic fish and wildlife habitats and recreation sites. ☺

approximately every 1,000 miles along the Equator. The Atlas buoys support instruments which measure data such as surface wind, air temperature, relative humidity, sea surface temperature, 10 subsurface water temperatures down to 1,650 feet, two subsurface pressures, and near-surface salinity.

Collected data will be relayed twice daily to Seattle. ☺

GOES Satellite Imagery System to Debut

A new microcomputer-based system that will for the first time disseminate satellite imagery to National Weather Service offices throughout the country will be in place by the end of May.

Weather Service Offices and Weather Service Forecast Offices in all the states will each receive one of the 194 microcomputer-based systems for processing and disseminating high-resolution, real-time satellite imagery. It receives and processes data from a Geostationary Operational Environmental Satellite (GOES) and sends it by telephone. ☺

Solar Flares: Beautiful but Dangerous

Last week's moderately active period of solar flares—plumes of solar radiation that can wreak havoc on earth—didn't affect NOAA's satellites, like a much more violent episode did in 1989. But these geomagnetic storms, which can produce such wonders as the northern lights, can also knock out power transmissions and send satellites off their orbits.

Solar flares are massive bursts of radiation from the sun's magnetic field which shoot toward earth's geomagnetic field. The radiation heats earth's upper atmosphere—the area satellites, including NOAA's, call home. The heating causes the upper atmosphere to expand. While there isn't much in the upper atmosphere, what is there expands greatly. The flares also throw earth's magnetic alignment off. That can cause good satellites to go bad.

"Our satellites are large and asymmetric, and they keep on their course by reading earth's

magnetic alignment," said Gary Heckman of NOAA's Space Environmental Laboratory in Boulder, Colo. "When the alignment is affected by solar

flares, the satellite's gyroscopes are usually enough to keep it pointed in the right direction. But when the radiation is extremely heavy, as it was in 1989, the force can overpower the gyroscopes, and we have to take control of the satellite from the ground to right it."

Heavy Dose in 1989

The months from March through November in 1989 showed some of the highest solar radiation hitting earth in a long time, Heckman said,

Estimates have put the cost of a power blackout on a hot summer day in the northeast—caused by solar flares—at two to six billion dollars.

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and just such a satellite scenario actually happened. The solar flares were also deemed responsible for the province-wide power blackout that year in Quebec, when they knocked out an electric utility transformer, and other transformers across the province clicked off like dominoes from the increased load put on the integrated grid system. Had they not shut down, they might have experienced the fate of a \$10 million transformer in New Jersey, which caught fire from the excess load.

What's the worst case? Heckman said a federal study estimating the economic effects of a heavy dose of solar flares causing power blackouts on a hot summer day in the northeast at two to six billion dollars, with losses likely in such diverse areas as manufacturing shutdowns to spoiled food.

—Jerry Staff ☺

New NOAA Exhibit Features Photos

A new NOAA exhibit featuring the Channel Islands Marine Sanctuaries Photographic Competition Award winners is beginning its first leg of a national tour in New Orleans at the Earth Fest '91 celebration.

In addition to the award winners, in a display called "Images," the exhibit shows off NOAA's marine science and sanctuary displays, nautical artifacts from recent Smithsonian museum Marine Exhibition, American and Australian flags and standards, and literature on the American marine sanctuaries and the Australian marine parks.

NOAA's exhibit will first be displayed at the Audubon Zoo on March 23 and then again at New Orleans Aquarium of the Americas. An expansion of the exhibit, which will include speakers on various marine sanctuary/parks topics, is expected. The new exhibition will re-open in Florida in the spring as part of the annual American Australian Chambers of Commerce meeting.

The exhibit is co-produced with the Embassy of Australia in Washington, D.C., the Great Barrier Reef Marine Park Authority and the Australian American Chambers of Commerce. Earth Fest is sponsored by the Audubon Institute. ☺

National Oceanic and Atmospheric Administration

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