Ice Center Goes With The Floe, And More

Federal Team Sifts Data, Maps Activity

By BEN WHITE
Special to The Washington Post

BY DUDLEY M. BROOKS—THE WASHINGTON POST

Cheryl Bertoia, director of ice operations, maps the progress of bergs such as B-10A, which is heading for Argentina.

In the frigid expanse of Antarctica, an enormous iceberg sheared off from one of the world's largest ice shelves and began a meandering four-year odyssey at sea, ultimately lumbering into the shipping lanes off the tip of South America early last month.

The iceberg itself poses little immediate danger. Accidentally running into it would be like accidentally running into Rhode Island. More troubling are the smaller icebergs, some as big as a football field, that tend to break off the larger berg and become silent floating menaces.

Thousands of miles away in a rundown, Eisenhower-era office building in Suitland, federal scientists at the National Ice Center huddle around large computer screens tracking the latest satellite images of the monster berg—known as B-10A—and its offspring.

Tracking these huge slabs of ice, and occasionally issuing public warnings about them, is only a tiny piece of the work that goes on each day at the ice center, one of the more obscure outposts of the federal bureaucracy.

The larger mission of this odd assemblage of civilian and military meteorologists and geographers is to map the world's sea ice—most of it decidedly stationary—and post their findings each week online (at *www.natice.noaa.gov* on the World Wide Web) for anyone with a modem, and an interest in the cold stuff, to peruse.

The center—funded mostly by the Navy and the National Oceanic and Atmospheric Administration and partly by the Coast Guard—gets most of its attention for the work it does with icebergs. But Cheryl Bertoia, director of ice operations and a geographer by training, wants to be very clear: There is a whole lot more than iceberg-gazing going on.

"We've hit the news quite a few times recently with icebergs. But we don't really *do* icebergs. We *do* sea ice," Bertoia said in an interview at her office in Federal Building No. 4 in the Suitland Federal Center on the outskirts of Washington.

Each day the center receives data on sea ice from polar-orbiting satellites—American and foreign—floating buoys, meteorological models, aerial ice reconnaissance (actual human beings peering out airplane windows), and ship and shore station reports.

Analysts then sift through the data to produce the most accurate possible images of the location and quality of ice formations in any given region.

The images are then posted on the Web and delivered in software packages designed for Navy and Coast Guard ships, particularly icebreakers. The images are also used—at no cost—by foreign governments, the scientific community and commercial ships that may need to navigate icy waters, especially larger ships unable to use the Panama Canal to bypass South America on the way to the Pacific Ocean.

> "We don't really *do* icebergs. We *do* sea ice."
>
> —**Cheryl Bertoia,** director of ice operations

All the images are created in the ice center's operations room, which lies behind a secured door accessible only with a magnetic pass.

A handful of ice analysts hover over their computers, assembling the incoming data. Analyst Mary Keller is mapping the Barents Sea, which lies in the Arctic above Norway and Russia and "melted out" more than a month ago.

Keller doesn't get really excited, however, until she boots up another computer with the latest images of B-10A, immediately betraying the nonchalance with which Bertoia and others at the center treat icebergs.

B-10A is headed toward the tip of Argentina. But if it fails to break free of the circum-continental current that swirls around Antarctica, it could ultimately reattach itself to the ice shelf. If it does keep heading north, it will continue to melt away, like Frosty the Snowman, in the warmer waters off the South American coast.

But while B-10A is unlikely to crash into Argentina, it is the melting process that creates smaller icebergs with the potential to wreak Titanic-style havoc on unsuspecting ships in the area.

"These are all tiny bergs right in here," said Keller, pointing to minuscule shadows on the radar image of B-10A. "And ships would miss these because they are right down at the water level, and right now the light is very low down there because they are just starting to come out of the Antarctic winter."

These smaller bergs can appear out of nowhere, particularly during heavy Antarctic storms when a ship might easily miss them because its radar only picks up images of rippling waves crashing in the darkness.

Forget B-10A, which is wider than the District of Columbia and longer than the stretch of I-95 from here to Baltimore. "I don't think anybody is going to hit that. But these," Bertoia said, pointing to the smaller bergs, "these are a real problem."

OMB Says Y2K Work Is 97 Percent Done

Pentagon Has 161 Systems Left to Fix

By STEPHEN BARR
Washington Post Staff Writer

The government has completed 97 percent of the Year 2000 computer fixes on its most critical electronic systems, the Office of Management and Budget said yesterday in a quarterly report on federal Y2K efforts.

Of 24 large Cabinet departments and agencies that provide vital federal services, 15 have wrapped up their Y2K repairs and tests and nine agencies have a combined total of 217 critical systems that still require repair or replacement. The Defense Department owns 161 of those systems and appears likely to keep working on Y2K right up to Jan. 1.

The government's mobilization to assess and fix its 6,343 "mission critical" systems will cost an estimated $8.34 billion, up $290 million from three months ago, OMB reported.

Two years ago, congressional investigators and some Y2K experts expressed skepticism that the government could fix its systems by Jan. 1, 2000. But virtually all major agencies expect to wrap up work on their internal systems within the next few weeks, the OMB report indicated.

The Federal Aviation Administration has fixed and tested air traffic control systems, and key agencies providing benefits and loans, such as the Social Security Administration, the Education Department and Veterans Affairs Department, have completed work on 100 percent of their systems, OMB said.

"We feel we're making really solid progress as we come into the home stretch," said Linda Ricci, the OMB spokeswoman.

Based on industry reports, the White House expects the nation's electric power and telephone systems will not suffer any widespread Y2K problems. But the White House official in charge of Y2K issues, John A. Koskinen, has suggested that some states and cities may be at risk of Y2K breakdowns if local government repairs are not finished in time.

The Year 2000 problem stems from the use of two-digit date fields in many computers, which may interpret "00" as 1900, not 2000, and shut down or otherwise malfunction. Although the technical fixes for the date change are relatively simple, the widespread scope of the problem has forced a number of agencies to defer other technology projects and focus almost exclusively on Y2K.

OMB, for example, describes the Defense Department as "conducting the largest, most complex testing effort in its history" to detect potential Y2K glitches. The military has tested its logistics supply channels in the U.S. European Command and tested several weapons systems, including rockets, at White Sands, N.M.

Despite the tests, OMB said, "the interconnection of so many complex systems increases the likelihood that DOD will experience some Y2K difficulties."

The military hopes to minimize any Y2K disruptions through emergency backup plans, OMB said. The Pentagon "is conducting tabletop exercises to help prepare DOD leadership for the potential impact of Year 2000 on national security" and the chairman of the Joint Chiefs of Staff will lead "a national-level exercise conducted under scenarios of multiple Y2K failures in order to assess the ability of DOD to respond with timely decisions in a Year 2000-degraded environment," OMB said.

The other worrisome area involves public services administered through state agencies, such as food stamps, child nutrition, Medicaid, heating assistance for low-income people and welfare. Many states will not finish testing data exchanges with their federal partners until November and December, leaving little time to fix any previously undetected glitches.