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Mama polar bear and cub make it through denning season thanks to collaborative work
Collaborative planning, oil company's efforts, and use of technology leads to happy ending

The story began back in December when Hilcorp employees noticed a possible den entrance in a snowdrift under a bridge on an industrial roadway to a production facility in Prudhoe Bay, Alaska. Using thermal camera technology, Hilcorp field staff confirmed the presence of a female polar bear under the snow.

"Good planning and collaboration helped turn this into a great success story," said Christopher Putnam, Wildlife Biologist of the U.S. Fish and Wildlife Service.

Actions immediately taken to protect the den

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What could have been a risky move for the polar bear turned out positively after Hilcorp Alaska (Hilcorp), an oil and gas exploration and production company, immediately began following the guidance and plans previously developed in cooperation with the U.S. Fish and Wildlife Service (Service) to minimize disturbance to the denning polar bear.

Workers immediately closed the road and worked in cooperation with the Service to develop a plan that allowed only essential traffic to pass

Disturbance can cause a mother to abandon the den and cub

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The initial period after a female polar bear enters her den is important because disturbance may cause her to prematurely abandon the den. Even more critical is the den emergence period in the spring when female polar bears come out of their dens with the new cubs. Disturbance during the emergence period could cause a female polar bear to abandon the den site before the cubs are ready to survive out in the harsh Arctic climate.

Through the entire process, Hilcorp carefully managed their activity and maintained close communications with the Service. They also agreed to close the Endicott causeway to all traffic once the mother and her cub emerged from the den.

"I've worked in the area for several years, and while you prepare and plan for polar bears in the area, this was the first time we had encountered a situation like this," said Beth Sharp, Hilcorp's Wildlife Specialist. "It's great that we were able to have a positive result in this situation. Seeing a healthy mom and cub emerge is what we were all working toward."

Technology used to monitor the den

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The unusual location of the den prompted the company to enlist the help of Polar Bears International and Brigham Young University (BYU). They are currently conducting a long-term polar bear behavior study at denning sites that utilizes remote camera systems. The study is supported by both BP Alaska and Hilcorp. Most dens

that have been studied are far from human activity and don't require real-time observation. This den required something new — livestreaming from a remote camera hosted by a Hilcorp facility approximately a mile from the den for round-the-clock monitoring.

“We set up the cameras to give Hilcorp personnel the ability to see when the female emerged and when the family had left the den site,” said Geoff York of Polar Bears International.

“The industrial location—adjacent to a bridge and within clear site of an active well pad and a full production facility—is quite different from the other sites we’ve studied,” he added. “It will help us better understand polar bear denning behavior and sensitivity to disturbance, and that, in turn, will help managers within industry and the Service better protect denning bears.”

Camera system to monitor the polar bear den powered by solar panels and batteries. Polar Bears International photo

Right: Camera equipment and red tape blocking entry to the area. Polar Bears International photo
The big reveal

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On March 18th, after months of no activity at the den site, the polar bear and her new cub popped out of their winter home into the bright spring sunshine. The new family spent two weeks around the den site before heading off to the sea ice to take advantage of peak spring seal hunting.

“We were so fortunate to have the ability to monitor the den from our facility 24-7,” said Sharp. “Knowing what was going on at the den site and coordinating with the Service helped us ensure we didn’t disturb the bears. It was so amazing to see the new mother and her cub pop into the world for the first time from their snowy cave.”
Series of photos, taken by monitoring camera, of mother and her new cub exploring their surroundings. Polar Bears International photos

Hilcorp resumed activity only after the family had left the area and they received the green light from the Service.

“Our goal was to ensure that the bears were able to stay at the den site as long they needed, and depart when they were ready,” said the Service’s Christopher Putnam, “working together we successfully accomplished that goal.”
The abandoned winter home

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Polar bear dens can be complex, with multiple chambers. Once the bear family has left, the abandoned den is explored, the chambers are counted and measurements are taken to describe the size, depth, and slope of a den. The information is shared by the U.S. Geological Survey, U.S. Fish and Wildlife Service, Polar Bears International, and Brigham Young University.
A view from inside the den. Polar Bears International photo

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