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## Toxic evaporation ponds in Utah threaten birds, little protection

Wildlife • Tainted water from oil and gas wells, dead insects draw migratory birds.

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Moab ornithologist Skip Ambrose visited evaporation ponds at Danish Flats Environmental Services eight times in 2009 and 2010, documenting dead birds, masses of dead insects and birds with oiled plumage, which can be lethal because it harms eggs and ruins the insulating properties of feathers.

The company agreed to the inspections to win over environmentalists concerned about the wastewater facility's potential to harm ducks, grebes and other migratory birds that might mistake the oily evaporation ponds for a wholesome stopover.

But it is unclear whether Danish Flats has implemented recommendations for safeguarding the hundreds of waterfowl Ambrose saw landing on the ponds and feeding on dead bugs accumulating along the grimy edges.

"There are ways to minimize impacts and Danish Flats hasn't done all they can do. In my view, that's the cost of doing business," Ambrose said. "People think natural-gas extraction is a clean industry, but the process isn't that clean if you have ponds like these."

Danish Flats operations manager Justin Spaeth declined to discuss the company without his engineering team and has not yet arranged such an interview.

The facility, north of Cisco, handles contaminated water produced by oil and gas wells. Such ponds can be a menace to birds and mammals, especially bats.

Larry Crist, the U.S. Fish and Wildlife Service's Utah field supervisor, outlined the threats in an August 2008 letter to Grand County officials.

"The sticky nature of oil entraps birds in the pits and they die from exposure and exhaustion," he wrote. "Birds that do manage to escape can die from starvation or the toxic effects of oil ingested during preening."

Federal law protects migratory birds, and causing their deaths through exposure to toxic substances is a crime punishable by up to six months in jail.

"We recommend that operators always ensure that no surface oil is present on pits, tanks, etc.," Crist wrote.

His letter also urged the installation of nets over ponds and regular water-quality monitoring because the salts and heavy metals in the wastewater also can harm birds.

Danish Flats agreed to take "the appropriate course of action" identified by Ambrose, under a deal with now-defunct Red Rock Forests, which in exchange agreed to endorse the company's 2009 expansion.

The company said it would reserve funds from the expanded operation to place nets over all its ponds and for other mitigation.

To process the water, the company removes valuable hydrocarbons, then routes the water to a settling pit, where more hydrocarbons are suctioned off. The water is then piped through a series of five-acre evaporation ponds.



(Courtesy Skip Ambrose) A western sandpiper feeds on oiled insects that collect along the edge of evaporation ponds operated near Cisco by Danish Flats Environmental Services, which processes wastewater from oil and gas wells.

Ambrose observed 2,754 birds at the facility during his eight seasonal visits, and more than half were in or around these ponds. He recovered four dead birds from Pond 3, which he considers the dirtiest and most dangerous to wildlife.

Danish Flats netted the settling pit that fed Pond 3, but Lee Shenton, Grand County's field inspector, said it has installed nothing to keep birds and bats off the ponds, now numbering 14 with plans to add another six.

At a minimum, Ambrose had insisted the company place nets over Pond 3.

The issue is more pressing now because accumulated tar in the settling pit has rendered it useless, and the company is settling fluids in Pond 3, according to Shenton.

Danish Flats has deployed noise-making devices designed to scare away birds, but the annoying sounds make no useful difference in birds' behavior, Ambrose said.

He also recommended frequent skimming of the downwind sides of the ponds to remove floating oil and the dead insects that attract birds.

Shenton, who regularly inspects the facility, said he has observed a sheen building up in the ponds' downwind corners.

"We need to work with them to get it up to standard on the conditional use permits," he said. "They need a system for frightening birds off the ponds."

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