

San Francisco Bay: Bird populations doubled since 2003 in vast salt pond restoration area

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In a clear sign that the largest wetlands restoration project on the West Coast is already improving the health of San Francisco Bay, bird populations have doubled over the past 13 years on thousands acres of former industrial salt-evaporation ponds that ring the bay's southern shoreline, scientists reported Thursday.

The overall population of ducks and shorebirds in that area, which is about the size of Manhattan, has increased from roughly 100,000 in 2002 to 200,000 today, researchers doing detailed counts every winter found.

"It shows that what's been done so far appears to be working. It's really great," said Susan De La Cruz, a wildlife biologist in Vallejo with the U.S. Geological Survey who has conducted much of the research.



Birds gather in the marsh in the A21 pond at the Don Edwards San Francisco Bay National Wildlife Refuge in Newark, Calif., on Sunday, Sept. 13, 2015.

In a landmark deal in 2003, Minneapolis-based Cargill Salt sold 15,100 acres of its bayfront salt ponds, which stretch from Hayward to San Jose to Redwood City, to state and federal agencies for \$100 million. That sale also included an additional 1,400 acres near Napa.

The idea was to take the ponds -- used for a century to harvest salt for food, medicine and road de-icing -- and restore them back to natural conditions over 50 years, bringing back birds, fish, harbor seals, leopard sharks and dozens of other species that have struggled in the bay because of development and a burgeoning human population.

San Francisco Bay has shrunk by a third since the Gold Rush of 1849 due to diking, filling and development. Most of that stopped in the 1980s with the advent of the federal Clean Water Act, Endangered Species Act and other environmental laws.

Now, scientists, environmental groups and many political leaders are trying to turn back the clock and expand the bay out again, bringing back wetlands, along with the wildlife, public trails and natural flood control that come with expanded marshes.

The restoration of the Cargill ponds is a central part of that undertaking.

The plan for the 15,100 acres, overseen by the state Coastal Conservancy and other agencies, calls for converting 90 percent of those ponds to tidal marsh by 2050.

In the last 12 years, state and federal agencies have spent \$93 million on that effort.

They have taken two major steps. First, they opened up the more than 50 ponds, some of which are as big as 500 football fields, to the bay's waters using tidal gates in levees. That stopped the salt-making process and brought in fish, shrimp, seeds of plants and other natural features found in bay waters.

Second, they have converted 3,750 acres -- about a quarter of the total project. Of that, about 1,600 acres

have been restored to tidal marsh. Another 1,440 acres have been partially restored. And 710 acres of open ponds have been reconfigured, with crews building islands and other features, or adjusting water and salinity levels, to boost bird populations.

Cargill salt ponds

- Former Cargill land owned by state and federal governments
- Land Cargill still owns



Thursday's research was unveiled at a gathering of dozens of scientists and policy makers at the South Bay Salt Pond Restoration Project's Science Symposium at the Computer History Museum in Mountain View.

"We're thrilled with the progress," said biologist John Bourgeois, executive project manager for the salt pond restoration effort. "The wildlife and habitat is responding faster than we anticipated."

Significant challenges still remain, however.

The first issue is money: It will cost an estimated \$1 billion to finish the job over the next 40 years. Environmentalists and business groups are planning to put a \$12 annual parcel tax on the June ballots in all nine counties that ring the bay. The measure, which will require an overall two-thirds majority to pass, would raise \$500 million toward wetlands restoration and flood control in the bay over the next 20 years.

Second, replacing the open water ponds with tidal marshes similar to pre-Gold Rush conditions benefits species that live in or around marshes, like fish, egrets, herons, harbor seals and leopard sharks. But the species that like the open water, such as mallards, pintails, canvasbacks and other ducks, as well as shorebirds like stilts, avocets and sandpipers, will have less habitat.

The way to address that issue, wildlife biologist De La Cruz said, is to try to make those ponds more hospitable so that as most of them are restored to tidal marsh over the years, the same numbers of birds can still flourish. What scientists are learning now -- through changing water levels, building islands and other techniques -- can help inform future projects, she said.

Finally, other challenges remain. Mercury from long-ago mining has built up in the mud across the bay and can't all be released at once. Some wetland areas can't be restored until more flood control levees are built between them and communities.

Meanwhile, in a related project not on former Cargill lands, crews on Sunday plan to breach levees in the North Bay, restoring nearly 1,000 acres near Sears Point back to wetlands.

That project will come a week after more than 100 scientists released a landmark report saying that such restorations need to accelerate in the next 15 years to help reduce the risk of flooding to highways, roads and homes as sea levels continue to rise because of climate change.

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