

Marking a Moment in Time--

Views of the South Bay Salt Evaporation Ponds from Newark to Mountain View, CA, July 2002



Evaporation pond A3W and the North Channel, to the north of Moffett Golf Club.



Fence line along the North Channel and evaporator A3W



Cargill evaporation pond A-2W to the northwest of Moffett Field

It takes an average of 5 years for bay water that enters Cargill Salt evaporation pond A-1 to evaporate, leaving salt. The water travels several miles from north of NASA Ames Research Center, Moffett Field to its final destination at Newark, CA., where salt is harvested from the crystallizing ponds (Map 1).



The image of south San Francisco Bay shown here was recorded on July 7, 1999 by an electronic Earth scanning sensor known as the Thematic Mapper (TM) on board the Landsat 7 satellite. Using false color infrared bands 4-3-2 (for red, green, and blue colors respectively), healthy vegetation appears red and the crystallizing salt evaporation ponds appear green.



Approximate location of Moffett Field



Moving harvested salt at the Cargill plant, Newark, CA.



Cargill Salt plant at Newark, CA

On May 29, 2002, the largest wetland restoration plan in California history was announced, marking the return of 16,500 acres of evaporation ponds to tidal marsh and seasonal dry wetlands. For \$100 million, Cargill Salt agreed to sell its property in the San Francisco Bay area to the State of California and the federal government for habitat restoration. Expected to be a 20 year process, the tidal marsh restoration program is working to meet the Baylands Ecosystem Habitat Goals.

The sale of 16,500 acres of Cargill Salt evaporation ponds is scheduled for on or before December 16, 2002.

Many questions are being considered by environmentalists, biologists, ecologists, geographers, Earth scientists, Cargill engineers, and the general public, such as:

1. What are the current conditions of the ponds?
2. What is the best way to stop the production of salt in the ponds?
3. What long-term changes will need to be monitored? How will this be done? Who will do it?



Crystallizing pond at Cargill Salt, Newark, CA. The characteristic red color associated with the crystallizing ponds is caused by a bloom of photosynthetic Halobacteria that lacks chlorophyll pigments. By the time salt is ready for harvesting (September through December), the salt crystals are 6-8 inches thick.

Water is moved from one evaporation pond to the next as it increases in salinity. A number of weather variables--rain, wind, and days of sunshine--affect the speed of its movement from one pond to the next.

As salinity increases, the types of plants and animals that can live in or around the water change. Some species drop out as others come in.



View of NASA Ames Research Center, Moffett Field from Cargill Salt plant in Newark, CA. The excavation work in the foreground shows construction of graded crystallizing ponds. The bottoms of the ponds are made of naturally occurring clay.