**Final Levee Breaches Caps 14-Year Effort to Restore Bair Island**

The 14-year effort to restore Bair Island in Redwood City to tidal wetlands -- bringing back conditions not seen since the late 1800s - reached reality Thursday, Dec. 10, when the U.S. Fish & Wildlife Service breached the levees following a ceremony that involved numerous agencies and project proponents.

Breaching the levees allows bay waters -- along with countless tiny floating seeds, crabs, fish and other life -- to pour back in with the tides.  These tidewaters will also bring much needed sediments to rebuild the wetlands.

Silicon Valley Clean Water (SVCW), along with USFWS, had been working together for more than 14 years developing the design of the protective offset levee that would house a new sewage force main on Inner Bair Island. As part of the restoration project, a new protective offset levee was constructed adjacent to the existing levee (within which the existing force main is located) that enabled installation of a new force main.

 Once major portions of the offset levee were completed in 2013, SVCW and the USFWS have been working side-by-side over a two-year construction period, during which SVCW installed its new 48-inch force main pipe along the western edge of Inner Bair Island.  The last portion of the new pipe went into service last month. Once SVCW switches over completely in the future, it will remove its small, temporary PVC pipe currently located along the levee.

Inner Bair Island is one of three islands known collectively as Bair Island. The federal and state approved habitat restoration overseen by USFWS since the late 1990's and will be part of the larger Don Edwards San Francisco Bay National Wildlife Refuge, which is owned and managed by the USFWS.

During SVCW's project, the new force main needed to cross the water body at the western end of Inner Bair Island, to connect to the off-island force main segments.  To avoid impacts to surface waters, the installation method for the water crossing was microtunneling.  Microtunneling is a trenchless construction process that uses a remotely controlled boring machine combined with a pipe jacking technique to directly install pipelines underground in a single pass.  This process also included launching and receiving shafts at each end of the pipeline drive for the installation process.

The property is named for Fred Bair, who harvested oysters and raised cattle on the land in the 1920s. It was a flourishing marsh until the late 1800s, when it was drained for farming, and later the site of industrial salt ponds from 1946 to 1965.

|  |
| --- |
|  |
| **File photo\_ John Blanchard\_ San Francisco Chronicle** |

The total restoration of the property's three parts -- Inner, Middle and Outer Bair islands -- is 1,534 acres. According to environmental reports, the rest of the property restored itself, when levees, mostly on Outer Bair, collapsed years ago and the bay returned.

San Jose Mercury reporter Paul Rogers reported in an article on the restoration, **"Now harbor seals lounge on outer marsh areas, and biologists hope that all the bay's wonders, including bat rays, leopard sharks and endangered birds like the clapper rail, will flourish."**

The breaching comes 2 1Ž2 years after USFWS opened a new pedestrian bridge near the south eastern levee of Inner Bair Island and a portion of the Inner Bair Island Trail. The pedestrian bridge spans across "No-Name Slough" and connects Uccelli Boulevard with Inner Bair Island. The bridge is the new and only public access point to enter the Inner Bair Island Trail. Visitors can park at the Bair Island parking lot located east of Inner Bair Island off of Uccelli Boulevard.  With SVCW's and USFWS's construction projects completed, full use of the trail is expected.