7. Nature takes over
The restoration of Inner Bair Island marsh will happen naturally following a prescribed sequence. As the tide begins flowing into the Bair Island slough channels, bacteria will begin to form and stabilize the sediment so it does not flow back out with the tide. Then algae and aquatic plants, such as eelgrass, will begin to grow and further stabilize the channels. Cordgrass growth will follow in the lower intertidal zone where it will be inundated regularly with salt water. Pickleweed, alkali heath and the salt marsh gumplant will grow near the high tide line where they can be flooded by high tide, but aren't continuously submerged. When high tides come in, animals like the endangered salt marsh harvest mouse seek higher ground and take cover from predators in taller vegetation such as gumplant. As you walk around Inner Bair Island, you can see the evolution of each of these marsh plant communities.

8. Reducing our carbon footprint
Wetlands sequester more carbon than almost any other ecosystem on earth – 10 times more than tropical forests! How? Wetland plants grow extremely fast and take in more carbon as carbon dioxide than other plant ecosystems. Marsh plants use the absorbed carbon to grow and release oxygen into the environment. Looking out, you may see very dark dirt near the marsh which results from these plants taking in so much carbon.

9. Watershed support
Looking west from Bair Island, you can see Cordilleras Creek entering Smith Slough. This important watershed carries fresh water from Pulgas Ridge and tributaries from Edgewood County Park to the Bay.

10. Take it with a grain of salt
As you walk along the trail, look for plants with red stems or leaves. They are suffering from salt poisoning. Initially, these plants seed themselves and begin to grow normally. However, as the roots reach further into the salty soil, the stems and leaves start to turn red before ultimately dying as a result of the soil's naturally high salt content. Sagebrush bushes were plentiful in this area prior to tidal flow restoration. They have now died from the salt water brought in with the tides. Many of the tumbleweeds you see are sagebrush bushes that have uprooted and blown away in the wind. Other plants have adapted to the salty environment. The tips of pickleweed turn red and drop off so the rest of the plant survives. Salt grass actually excretes salt and you can find salt crystals on its blades.

11. Airport Safety Zone
The airplanes you see flying low over Inner Bair Island pass over the San Carlos Airport Safety Zone which is adjacent to the airport runway. The area north of the trail will remain unrestored to discourage birds from using the area and to reduce the potential for bird strikes by airplanes. Notice the difference between this area and south of the path which is being restored.

12. Middle Bair Island
Directly across from the observation deck, you can see one of the levee breaches which is helping to return Middle Bair Island to tidal marsh. This spot affords an excellent opportunity to observe abundant birds which call the marsh home. Some nest here and are commonly found all year, while other migratory birds are a seasonal treat.
Middle and Outer Bair Island are partially closed to water traffic between February and May to promote nesting. Bring your binoculars to search for geese, pelicans, egrets, black necked stilts and willets.

Don Edwards San Francisco Bay National Wildlife Refuge

U.S. Fish & Wildlife Service

Bair Island

Don Edwards San Francisco Bay National Wildlife Refuge

Trail Guide

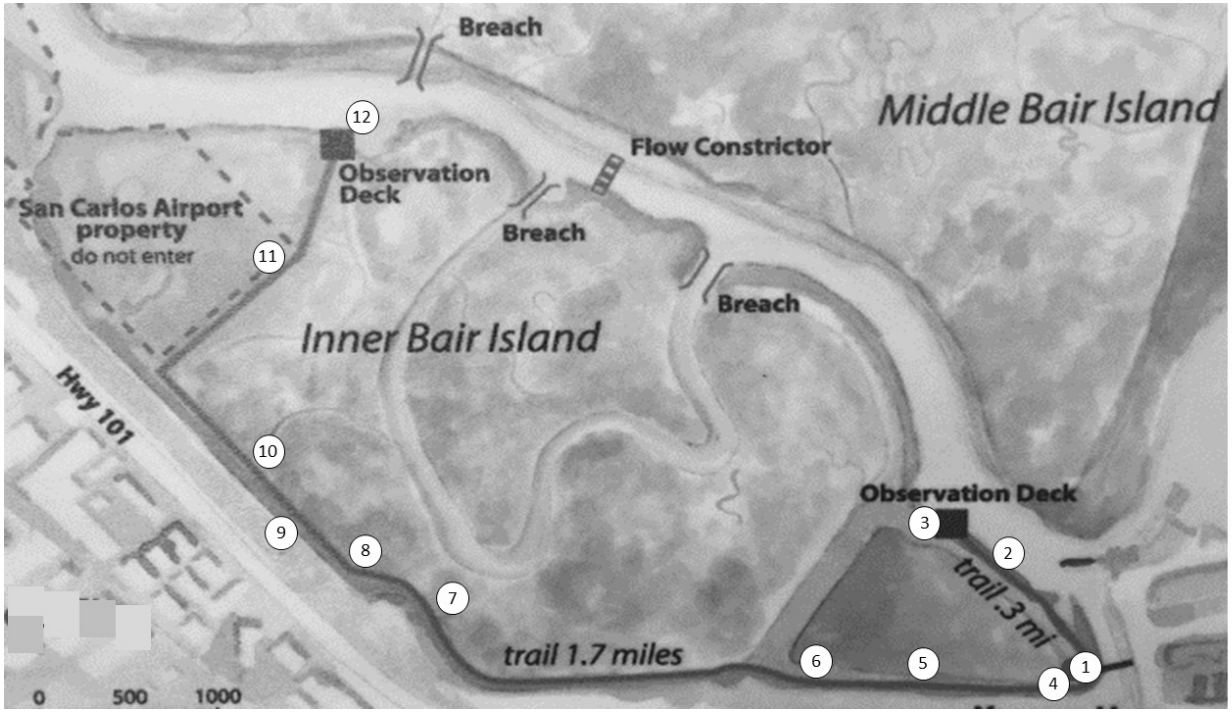
1. Restoration for a brighter future
At one time, the San Francisco Bay fed one of the largest tidal wetlands on earth. Today only 10% of this important habitat remains just as we are beginning to understand the enormous value of preserving it. Bair Island is now protected in perpetuity and its marshes are steadily rebuilding. After 100 years of restricted tidal activity to support agricultural use and salt harvesting, the restoration of Bair Island gives visitors an opportunity to witness the exciting evolution of a tidal marsh.

2. Slough – it rhymes with "moo"
A tidal slough is a shallow, slow-moving waterway that allows Bay water to circulate in and out of the salt marsh with the ebb and flow of the daily tides. At low tide, you'll see mudflats and new slough channels beginning to form. Looking toward the bay, you see Smith Slough which is the channel that separates Inner Bair Island from Middle Bair Island. There is no pedestrian access to Middle and Outer Bair Islands, but you can paddle around them in the Smith, Corkscrew and Steinberger sloughs. Launch at the Port of Redwood City off Seaport Boulevard.

3. New tidal marsh formation
Looking inland from the observation deck, you see Inner Bair Island. In December 2015, the levee that prevented Bay water from running its natural course into Inner Bair Island was breached and tidal activity is slowly returning Inner Bair Island to a mosaic of marsh, mudflat, and channels. The eastern portion of Inner Bair close to the welcome kiosk may take longer to restore due to high salt content.

4. Citizen science
As you retrace your steps back and pass the welcome kiosk, you can participate in a citizen science project to study habitat restoration. Take a photo here and share it following the instructions on the sign.

Inner Bair Island Trail Map



5. Choosing restoration
To return Inner Bair Island to a healthy marshland habitat, a massive restoration effort was necessary. One of the first steps was adding dirt to raise the subsided land. More than one million cubic yards of clean dirt were hauled onto Inner Bair to raise its level to what it would have been had the land not been used for agriculture and salt ponds. The new dirt also reduces the chance of flooding in local areas. The primary channel you see a little further down the trail was dug out where the historical slough waters ran. Over time, additional channels form as natural processes support tidal marsh evolution before our very eyes.

6. Native plant seeding
Looking adjacent to the trail, you can find more than 30 species of native plants. These important marshland habitat residents were seeded and planted in the upland area to create native plant communities that support endangered wildlife. Look for lupine, California goldfields, yarrow, mugwort, and sagebrush.