


City of Santa Barbara
Airport Department

DATE: December 17, 2014
TO: Airport Commission
FROM: Hazel Johns, Airport Director 
SUBJECT: Goleta Slough Mouth Adaptive Management Program

RECOMMENDATION:

That Airport Commission receive a presentation on the Draft Goleta Slough Mouth Adaptive Management Program.

DISCUSSION:

Background

The Goleta Slough mouth is the bottom of the 48 square mile Goleta valley watershed. When it is open, the mouth connects the Goleta Slough to the tides of the Pacific, adding and removing water with the tides. The mouth closes periodically with sand transported along the shore by wave action.

The Santa Barbara County Flood Control District opened the mouth of the Goleta Slough within two weeks of its closure to provide year-round tidal circulation for approximately 30 years ending in 2012. In that year, federal concerns about the endangered steelhead trout led the Flood Control District to discontinue maintenance of the Slough mouth and withdraw its requests for permit renewals.

With the mouth unmanaged, it remains closed for months at a time. The Slough quickly fills during a rainstorm which threatens to flood Airport infrastructure, tenant buildings, and off-Airport homes and businesses in Old Town Goleta. If the high-water is allowed to remain, there is a significant increase in migratory waterfowl and mosquito populations. This presents an increased risk of wildlife-aircraft strike for the Airport, and a disease and pest control problem for the Santa Barbara County Vector Control District and the University of California, Santa Barbara.

Rising water in the Goleta Slough gave the Airport Department cause for concern in December 2012, May 2013, February 2014, and December 2014. Emergency permits were required to lower the water level by breach, or in one case, by temporary siphon. Because both environmental and safety concerns are disserved by waiting until an emergency is present to take action, the Airport has hired Rincon Consultants to aid in the design and permitting of a Goleta Slough Mouth Adaptive Management Program.

Adaptive Management Program

After months of study the consultant team defined habitat suitability parameters for both the federally-endangered steelhead trout and the federally-endangered tidewater goby. Simultaneously the team studied bird behavior to determine significance thresholds for wildlife attractants. The purpose of this effort was to establish the ideal water level for endangered species and for human life safety and design a management program to target that water level.

The study concluded that water levels between 5-6 feet above mean low tide provides a substantial area for suitable fish habitat without resulting in a significant change in bird behavior. The study proposed that a breach should be made at high tide when the Slough is above 5.5 feet above mean low tide and there is a greater than one inch storm in the National Weather Service forecast.

Under this management program, the Slough would likely remain closed for much of the summer. This would allow the Slough to fill gradually from creek flow during steelhead trout rearing season, the time when a closed estuary is most beneficial to the fish. Additionally, breaching during high-tide and before a storm event would minimize rapid flow and simulate a natural breach that would otherwise likely occur only after homes and businesses are flooded.

Each breach could then be studied with biologists on site and changes to the program could be made in response to new observations. The Airport would propose to create a Slough Mouth Technical Advisory Committee that would review the program and determine when the proposed breach parameters have been met. The monitoring and breaching of the Slough mouth will generate a new on-going operational expense that will be determined through the permit approval process.

Next Steps

A thorough biological assessment (BA) is currently being prepared to assess the proposed program's effects on wildlife. Once completed in early 2015, the BA will be submitted with permit applications to the Army Corps of Engineers, the National Marine Fisheries Service, the US Fish and Wildlife Service, the California Coastal Commission, the Regional Water Quality Control Board, the California Department of Fish and Wildlife, and the County of Santa Barbara. Airport Staff anticipate the permit review process will take one year from time of submittal.