

PHOENIX RIO SALADO/TEMPE TOWN LAKE

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Abstract

Phoenix, Arizona, is located in the southwestern United States in the northern Sonoran Desert. Seventy percent (70%) of avian feed in this area is associated with streams or rivers. A dry riverbed, the Salt River, runs through the valley, Valley of the Sun, in which Phoenix is located. The Salt River runs immediately adjacent to the Phoenix Sky Harbor Airport. Sky Harbor Airport is a busy commercial airport and hub for America West Airlines and Southwest Airlines. The cities of Phoenix and Tempe have engaged in a project, using mostly federal money, to create a lake and wetlands in this riverbed. A lake, Tempe Town Lake, was filled this summer, 1999. Two miles long it is located less than 2 miles from the end of the runways at Sky Harbor; aircraft pass over the lake at 650 feet AGL on approach to the airport. Additionally, wetlands construction in the Salt River bed would place wetlands within 300 feet of the new runway under construction at Sky Harbor Airport. The FAA has objected to this work. Although a mitigation plan has been proposed for Sky Harbor Airport, it has not yet been implemented. No mitigation is proposed by the City of Tempe for Tempe Town Lake, other than erecting signs, "Do not feed the birds". The Phoenix area is wintering grounds to numerous species of duck, Canada geese and other birds. For the first time in recorded history seagulls have been observed in the Phoenix area. Informal communication received from one of the major carriers at Sky Harbor indicates that bird strikes have risen dramatically since Tempe Town Lake was filled.

Key Words: Attractants: Water/reservoirs, Wetlands; Hazard Management: plans; Legal Issues: Land use, Liability-insurance, Regulations, Standards

Introduction

Skyharbor Airport is located at Phoenix, Arizona, in the southwestern United States. Phoenix is located in the northern Sonoran Desert of Mexico and southwestern U.S. The airport is owned and managed by the City of Phoenix. The airport is a hub for Southwest Airlines and America West Airlines and has some 520,000 aircraft operations per year, making it the 17th busiest airport in the U.S. A third parallel runway is currently being constructed to accommodate demand. The airport lies in a valley, the Valley of the Sun, which is surrounded by hills on the north and south side, thus restricting air traffic to an east-west flow. The Salt River, a dry streambed, runs immediately adjacent to the south side of the airport. The U.S. Congress has appropriated over \$80 million dollars to redevelop the Salt River and its tributaries into the Rio Salado/Tempe Town Lake project. This project anticipates developing the Salt River bed into an urban attraction, similar to the Riverwalk in San Antonio, Texas.

Discussion

Tempe Town Lake

The City of Tempe is a community just to the east of the City of Phoenix and just southeast of Skyharbor Airport. During the spring and summer of 1999, the City of Tempe, which had placed a dam across the Salt River, filled Tempe Town Lake. The lake is some 2 miles long and 40 feet deep. The dam is located 13,000 feet to the east of the threshold of runway 26L at Skyharbor Airport. Aircraft on approach to Skyharbor Airport fly over the lake at approximately 650 feet above the surface of the lake. The City of Tempe is encouraging commercial development along the lake front and has established a park along the lake. Push cart vendors, selling food from their carts, are allowed in the park. In the City of Tempe's plan for the lake and park, the only mention of wildlife mitigation is a caution not to feed birds as it is bad for the bird's health. Currently water from Town Lake is seeping down through the porous lake bottom and popping up downstream of the dam as pools and wetlands.

Rio Salado

The Rio Salado Project envisions a return of the dry river bed to its reported condition early in the 20th century, before a number of dams upstream were constructed. Proponents of the Project desire that the riverbed should be a braided stream channel with islands, wetlands on terraces, a permanent stream of water in the riverbed and stands of cottonwood trees and mesquite thickets along the stream channel. Walking and riding trails would be constructed along the riverbank. The Rio Salado Project would extend from

the Tempe Town Lake dam past Skyharbor Airport for several miles to the west to join another water development project known as the Tres Rios/Phoenix Reach. As planned this wetlands/stream channel will pass within 300 feet of the end of the new runway at Skyharbor Airport.

FAA involvement

FAA Advisory Circular 150/5200-33, "Hazardous Wildlife Attractants On or Near Airports" requests that airport operators notify the FAA whenever land use changes around airports are proposed which could create wildlife hazards. Additionally, the same Advisory Circular recommends to airport operators that those operators using federal funds (AIP money) for airport construction oppose off-airport land uses which could attract hazardous wildlife. Neither the City of Tempe nor the City of Phoenix notified the FAA regarding the development of the Tempe Town Lake/Rio Salado project. Nor did the Skyharbor Airport oppose these projects. This Advisory Circular recommends no wildlife attractants within 10,000 feet of an airport movement area and no wildlife attractants within 5 miles in the approach or departure corridors. Although a cautionary letter was sent to Skyharbor Airport from the regional FAA office early in the project, no formal objection to these projects was entered by the FAA prior to July, 1999. However, when the FAA biologist learned of the projects in the summer of 1999, he wrote a report strongly objecting to the projects. Thereafter, on July 23, 1999, the FAA Director of the Office of Airport Safety & Standards wrote a letter to the U.S. Army Corps of Engineers, in charge of project construction, in which the FAA "...strongly object to the Rio Salado Project as currently designed....".

Legal requirements

14 CFR 139.3 (Part 139) requires airport operators to mitigate wildlife hazards on their airport. When a damaging strike occurs or has the potential to occur, an airport operator must conduct a wildlife assessment and may be required by the FAA to develop a wildlife mitigation plan.

Wildlife attraction

In 1998 Skyharbor Airport contracted with biologists of the U.S. Department of Agriculture – Wildlife Services, to conduct a wildlife assessment of the airport and its environment. This assessment was completed in the fall of 1999. Based on the observations of the biologists before Tempe Town Lake filled and after the lake was filled, wildlife in the area "... has had a huge increase since the lake filled...". Birds commonly seen now either on the lake or over the lake include double-crested cormorants, egrets, great blue herons and huge flocks of blackbirds. There were several sightings of ring-billed gulls, which had rarely frequented the area before. Additionally, ducks were

observed on the ponds and wetlands downstream of the dam. Since up to 75% of avian feed in the Sonoran Desert is associated with water, the addition of new water sources with no competition can only lead to more wildlife.

Wildlife mitigation

The cities of Phoenix and Tempe have contracted with USDA-WS biologists to complete a wildlife mitigation plan for the Skyharbor Airport and Tempe Town Lake area. The mitigation plan is scheduled for completion around the end of March, 2000. The FAA has commented on this plan. The plan will probably be accepted by the cities at that time. The cities have removed brush and vegetation in the stream channel below Tempe Town Lake dam which was serving as wildlife habitat. The biologists have received the authority to engage in wildlife harassment both at the airport and on the lake. Common means of bird harassment are planned, including lethal means if necessary. The biologists have recommended to the City of Phoenix that the Rio Salado development not proceed as planned. The biologists recommend "desert exriscaping" along the Salt River bed, meaning the planting of small cactus, small mesquite trees, channeling standing ponds and allowing no wetlands. These recommendations have not been accepted by the City of Phoenix.

Wildlife strikes

Over 90% of birdstrikes occur below 2,300 feet. Due to the terrain around the airport aircraft may only approach or depart from the east or west. This means that every arriving or departing aircraft must fly either directly over Tempe Town Lake or immediately next to it. Arriving aircraft pass over the lake at 650 feet. Informal communication with operators at Skyharbor indicate that birdstrikes have increased considerably. Unfortunately birdstrikes are not required to be reported in the U.S. and, therefore, are not reported. The two leading airlines at Phoenix do not routinely report their strikes to the FAA strike database. Additionally, the management of one of the two leading airlines in Phoenix was a supporter of the formation of Tempe Town Lake, even to the point of moving the corporate headquarters to an office building on the lake.

Conclusion

- The creation of a lake, streams, wetlands and vegetation in a desert environment has created a wildlife attractant of huge proportions
- Local governments have no concept of wildlife hazards to aviation

- Economic development which creates public safety hazards is difficult to stop, especially when the proponent is a local government
- One or two biologists cannot hope to police an area of almost 10 square miles, habitat modification is necessary
- Wildlife harassment techniques are intrusive and loud – in parks along the lake and Rio Salado project they will surely generate public complaint
- Birdstrikes are increasing in the Phoenix area and may get worse.
- Implementation of the City of Phoenix's plan for the Rio Salado Project will create a wildlife habitat next to the airport the City owns

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