



las vegas wash coordination committee

lvwash.org



Las Vegas Wash Aquatic Bird Count



© Gene Hertzog

Prepared by:

Deborah Van Dooremolen
Southern Nevada Water Authority
100 City Parkway, Suite 700
Las Vegas, NV 89106

February 2010



SOUTHERN NEVADA
WATER AUTHORITY



Project Overview

The Las Vegas Wash (Wash) is the primary drainage for the Las Vegas Valley watershed, carrying urban flows and storm water from the valley to Lake Mead at Las Vegas Bay. The Las Vegas Wash Coordination Committee (LVWCC), a 30-member stakeholder group charged with stabilizing the Wash and restoring its ecological function, is constructing approximately 22 erosion control structures along the channel's length and revegetating wetlands. In addition, Clark County is increasing wetland habitat as it develops the Clark County Wetlands Park, through which the Wash flows. These activities are improving the amount and diversity of aquatic habitat available along the Wash. Consequently, on October 28, 2009, the Las Vegas Wash Project Coordination Team (Wash Team) initiated aquatic bird counts on the Wash to document the birds using those habitats with funding provided by the Bureau of Reclamation.

The initiation of the surveys fulfills a recommended action in the Las Vegas Wash Wildlife Management Plan (Shanahan et al. 2008) and will expand our knowledge of the richness, abundance and distribution of waterfowl, other waterbirds and shorebirds using the Wash. In addition, the Great Basin Bird Observatory (GBBO) initiated a statewide aquatic bird count monitoring program in 2004 (GBBO et al. 2004), and the Wash counts provide data to this program. GBBO assisted in the development of the monitoring methods used and maintains a statewide monitoring database. Through participation in this program, Wash data can be compared with other sites in Nevada, improving information about the distribution of these species within the state. Also, if species richness and abundance along the Wash are found to be similar to healthy aquatic habitats in the region, the Wash Team will have another metric showing the LVWCC is meeting its goal of restoring the ecological function of the waterway.

Sites surveyed include most weirs along the main Wash and bypass channel, and off-channel wetlands in the Clark County Wetlands Park (Figure 1). Weir sites typically include the impoundment, face, and apron of the weir. However, for some sites only the impoundment is sufficiently accessible to be surveyed. Off-channel wetland sites include the lower pond in the Nature Preserve and the in-lieu fee mitigation ponds (Figure 1). Prior to the initiation of the surveys, field staff identified the areas at each site that could be well-surveyed, such as open water, marsh edge and pond edge. Portions of a site that could not be well-surveyed, such as marsh interior, vegetated islands and areas otherwise blocked from view, were also identified. These strata (well-surveyed and poorly-surveyed) were then delineated on aerial maps of each site in ArcGIS, so that the total number of acres per stratum could be quantified. Any significant changes to these strata are noted during surveys and subsequently updated in ArcGIS.

Sites are surveyed monthly with the exception of spring and fall shorebird migration (early April through mid-May and mid-August through September), when a minimum of three evenly-spaced surveys will be conducted (GBBO et al. 2004). Field staff consisting of one to two people survey all off-channel wetland sites on one day and all Wash weir sites on the following day (unless postponed due to poor weather). Surveys begin at sunrise and conclude within approximately five hours. Staff record aquatic bird detections, listing the species, location within the site (impoundment, weir or apron) and habitat (open water, pond edge, marsh interior, etc.). Staff also note if the bird was heard and not seen. Species for which the majority of detections are heard emanating from poorly surveyed areas such as the marsh interior may be disregarded

during quantitative analysis. Surveys are not time-limited, but are instead area- or space-limited. Field staff remain on-site until they are reasonably confident they have counted all birds present. While surveys are not time-limited, a minimum of 15 minutes is spent at each site, and surveys are timed.

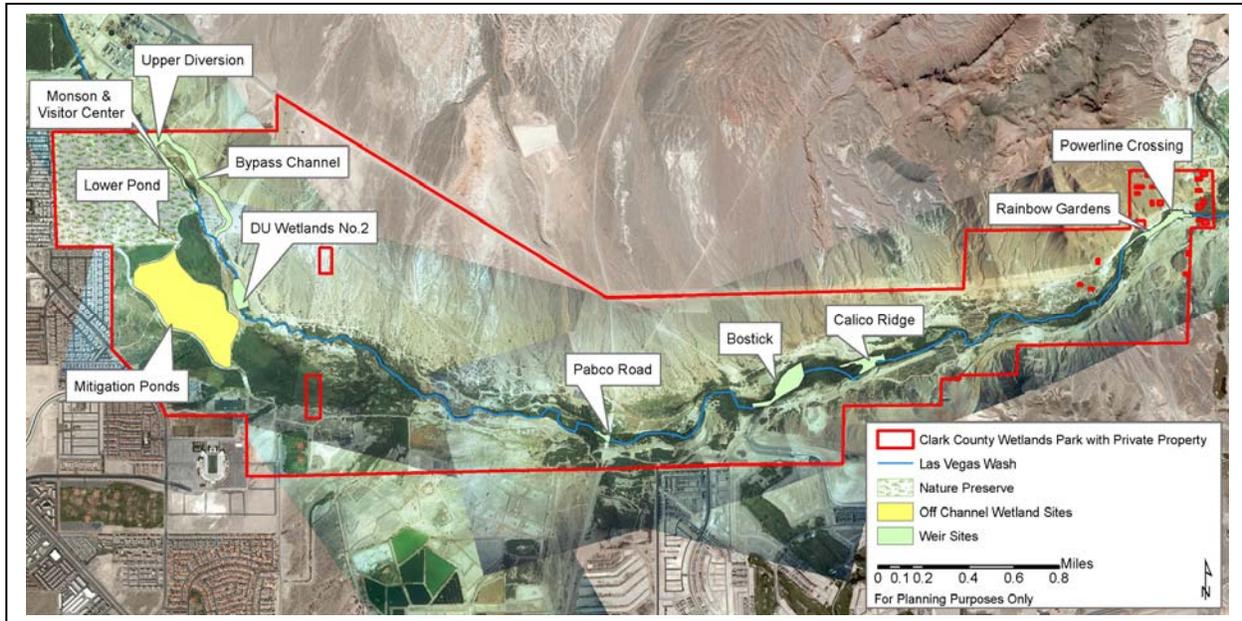


Figure 1. Aquatic bird count sites.

Data will be analyzed and reported, including at minimum a list of species detected, estimates of abundance, and average richness and abundance per survey. This will provide valuable information on this diverse group of birds and their use of Wash habitats.

Literature Cited

GBBO (Great Basin Bird Observatory), U.S. Geological Survey, B. Bauman, P. Bradley, J. Jeffers, C. Tomlinson, J. Williams, E. Campbell, S. Canning, J. Eidel, H. Judd, R. Haley, M. Boyles, B. Henry, K. Kritz, J. MacKay, D. McNinch, D. McIvor, W. Molini, C. Mortimore, L. Neel, L. Oring, N. Saake, J. Sellman, J. Swett, and G. Wilson. 2004. Aquatic bird count sites and procedures for Nevada. Great Basin Bird Observatory Technical Report No. 04-02, Reno, Nevada.

Shanahan, S.A., D.M. Van Dooremolen, T. Sharp, S. Martin, and B. Brown. 2008. Las Vegas Wash Wildlife Management Plan. Southern Nevada Water Authority, Las Vegas, Nevada and SWCA Environmental Consultants, Salt Lake City, Utah.