

SCOPE OF WORK

AERIAL PHOTOGRAPHIC SURVEY COUNTS OF BRANDT'S AND DOUBLE-CRESTED COLONIES IN SOUTH CENTRAL CALIFORNIA, 2012-2013

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The Torch Trustee Council funded aerial photographic surveys of cormorant breeding colonies in 2010-2012 between Point Sur and Point Mugu on the mainland and the Northern Channel Islands. Surveys of the mainland colonies were conducted in 2013 with funds from other sources. In separate allocations, Torch also funded the counting of all photographed colonies from 1996-2009, 2010, and 2011 surveys on the mainland portion of the study area between Point Sur and Point Mugu and a summary of population trends in that region from 1979 to 2011 (Capitolo et al. 2011, 2012). Surveys from 2012-2013 of the mainland portion remain uncounted, and surveys of the Northern Channel Islands have not been completely counted since 2007.

To provide updated breeding population estimates of Brandt's and Double-crested Cormorants in the Torch study area, we propose to conduct counts of nests and birds from archived aerial photographs of: 1) mainland colonies in 2012 and 2013; and 2) Northern Channel Islands colonies in 2012 (last year surveyed). In addition, we will provide counts of roosting Brown Pelicans at Shell Beach Rocks from 2014 surveys, as well as a graph of Brown Pelican roost counts there from 1996 to 2014. Having completed counts of all cormorant colonies (mainland and islands) in the Torch area for 2012 will provide information on total breeding population sizes and distributions from the most recent year with available data. Counts of 2013 mainland colonies will provide most up to date numbers and add to the long-term data set examining population trends in this region. Counts of pelicans will help evaluate the importance of Shell Beach Rocks to this recently delisted species.

Funding for this project would utilize unspent funds obligated to the U.S. Fish and Wildlife Service from the counting effort of 1996-2009 photographs and preparation of the Capitolo et al. (2012) population trends report. Our cost estimate includes staff time for counting (including data entry and photo archiving) and preparation of a short summary report that will include total nest and bird counts by colony and a brief description of population status of each species.

Literature Cited

- Capitolo, P. J., G. J. McChesney, J.A. Shore, and C. Bechaver. 2011. Aerial photographic surveys of Brandt's and Double-crested Cormorant breeding colonies in south central California in June 2010. Unpublished report, Institute of Marine Sciences, University of California, Santa Cruz, California; and U.S. Fish and Wildlife Service, San Francisco Bay National Wildlife Refuge Complex, Newark, California. 20 pp.
- Capitolo, P.J., G.J. McChesney, C.A. Bechaver, S.J. Rhoades, J.A. Shore, H.R. Carter, M.W. Parker, and L.E. Eigner. 2012. Breeding population trends of Brandt's and Double-crested Cormorants, Point Sur to Point Mugu, California, 1979-2011. Unpublished report, Institute of Marine Sciences, University of California, Santa Cruz, California; U.S. Fish and Wildlife Service, San Francisco Bay National Wildlife Refuge Complex, Fremont, California; and Humboldt State University, Arcata, California. 63 pp.

ESTIMATED BUDGET

CATEGO RY	ESTIMATED COST
COOPERATIVE AGREEMENTS/CONTRACTS (Pass-through funds)	
Survey Crew	
Salaries/benefits	
Colony counting, Pt. Sur to Ventura 2012, 18 person days @ \$360/day	\$ 6,480.0 0
Colony counting, Pt. Sur to Ventura 2013, 18 person days @ \$360/day	\$ 6,480.0 0
Colony counting, Northern Channel Islands 2012, 20 person days @ \$360/day	\$ 7,200.0 0
Report preparation, 4.5 person days @ \$360/day	\$ 1,620.0 0
Supplies	\$ 179.1 6
subtotal (direct costs)	\$ 21,959.1 6
Indirect cost (17.5%)	\$ 3,842.8 5
Total Cooperative Agreements/Contracts	\$ 25,802.0 1
USFWS Regional Office Indirect Cost for Pass-Through Funds (6%)	\$ 1,548.1 2
Total Project Cost	\$ 27,350.1 3