

## **Alberta Conservation Association (ACA)**

**Date:** 2014-2015

**Project Name:** Waterfowl Nesting Habitat Enhancement

**Wildlife Program Manager:** Doug Manzer

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### **Partnerships**

- Alberta Fish & Game Association
- Delta Waterfowl
- Ducks Unlimited Canada
- Syncrude Canada
- Wildlife Habitat Canada
- Windsor Plywood

### **Key Findings**

- Monitored 38 tunnels and found 92% were available for use during the 2014 breeding season. Of those available, 60% were used with a nest success rate of 90%.
- Provided 12 nest boxes and 8 nest tunnels to volunteers for installation.
- Provided information on waterfowl nesting habitat to 44 people.
- Negotiated transfer of responsibility of nest tunnel maintenance and volunteers to Delta Waterfowl.

### **Introduction**

Enhancing waterfowl nesting habitat using artificial nesting structures improves nesting success for mallards in the case of nest tunnels (Eskowich et al. 1998), and increases potential nesting sites for common goldeneye and bufflehead in the case of nest boxes (Corrigan 2007). We partnered with Delta Waterfowl and Wildlife Habitat Canada to install and maintain waterfowl nest tunnels in areas where secure waterfowl nesting habitat limits ground-nesting waterfowl production. Similarly, we partnered with Ducks Unlimited Canada (DUC) to install and maintain nest boxes on ponds in the central parkland area that lack mature aspen needed for cavity nests. From 2009 to 2013, Syncrude Canada provided funding for our project.

Alberta Conservation Association's (ACA) priorities and direction have evolved over the years since we first started working with DUC on nest boxes and with Delta Waterfowl (hereafter Delta) on nest tunnels. The premise behind installing nest boxes throughout the Parkland region

was to increase potential nesting sites for cavity nesters and to provide a visual reminder of the importance of wetlands in an area under constant pressure from agricultural land use. DUC and ACA agreed that continued maintenance by either agency of the over 1,200 nest boxes installed was not sustainable, and in 2011/12, we turned over maintenance of the nest boxes to the landowners where they were located.

Our partnership with Delta developed from its desire to establish a viable “Hen House” program in Alberta. At the time, Delta had a limited presence in Alberta, and we provided local expertise and landowner contacts to get the Hen House program established. Since that time, Delta has steadily increased its presence through initiation of the Alternative Land Use Services (ALUS) program in several counties and the formation of a number of Delta chapters. ACA’s role in fostering the relationship between Delta and volunteer communities has reached a successful endpoint. Delta will now work directly with landowners and volunteers in the next stages of the Hen House program.

## **Methods**

In 2014/15, we installed nest tunnels in conjunction with Alberta Fish & Game Association clubs, volunteers and interested landowners in small (0.2 to 2.0 ha), semi-permanent or permanent wetlands on the water edge of the emergent vegetation zone. Although we have reduced our direct involvement with the program, we continue to promote tunnel installation efforts in the County of Vermilion River and County of Parkland to complement the ALUS projects delivered by Delta in these areas. We completed nest tunnel monitoring and maintenance in late winter and determined the number of nest tunnels used during the preceding breeding season and the proportion of nests that successfully hatched. We use presence of a nest bowl and down in the tunnel as indicators of tunnel use, and eggshell fragments and egg membranes as indicators of a successfully hatched nest. We encouraged volunteers through regular communication, including annual e-mail reminders for maintenance and monitoring. We provided modest incentive payments to volunteer groups and individuals for tunnel maintenance once we received their monitoring reports.

We confirmed with Delta that it wanted to assume responsibility for most of the nest tunnels currently in this program. We removed eight tunnels that Delta did not want to take over. We informed volunteers currently maintaining tunnels that monitoring information should now be sent directly to Delta and that they can request maintenance payment from Delta at the time of information submission.

We participated as a member of the Partnership Advisory Committee in the County of Vermilion River ALUS program. Membership on the Partnership Advisory Committee consists of at least 50% local producers and representatives from the county, non-government organizations and industry. The committee meets monthly through the fall and winter to review land-use changes that producers propose for enrolment in the ALUS program. These changes must increase environmental goods and services. Examples include planting shelterbelts, converting marginal cropland to permanent cover, restricting cattle use in riparian areas, and planting pollinator habitat.

We opportunistically hosted field trips and presentations for interested groups, individuals and landowners to improve their understanding of waterfowl habitat requirements.

## **Results**

In 2014/15, we provided eight nest tunnels to volunteers to install. We monitored 38 tunnels, of which 35 were available for use during the 2014 breeding season. Of those available, 21 were used (60%) and 19 (90%) appeared to have successfully hatched ducklings.

We provided eight nest boxes to the ACA Land Management team for use on our Conservation Sites and provided four other boxes to volunteer groups. Volunteer monitoring reports indicated that 28 nest boxes were monitored; of these, 18 were used by goldeneye or bufflehead ducks, 2 were used by tree swallows, 3 were used by squirrels, 1 was used by starlings and 1 was used by saw-whet owls. Three nest boxes were not used.

We hosted 12 people (6 adults, 6 youth) on a field trip to observe active nest boxes in May 2014. In addition, we presented information on waterfowl nesting habitat to 25 youth and 7 adults at a Junior Forest Wardens meeting in Rocky Mountain House in February 2015.

The Provincial Minister's Award recognizing Municipal Excellence was awarded to the County of Vermilion River and its partners for the ALUS program. The award recognizes innovation for the continued implementation and success of the ALUS program. The award was received from Alberta Municipal Affairs at both the Alberta Urban Municipalities Association conference in September 2014 and at the Alberta Association of Municipal Districts & Counties conference in November 2014.

## **Conclusions**

This project provides an ideal opportunity to connect with the public, increase awareness of the importance of waterfowl habitat and develop a committed volunteer base. Based on occupancy and nest success data for the nest-box program, we conservatively estimate that we have added an additional 100,000 ducks to the fall flight since program inception in 1989. Over the past 10 years, we estimate that we have hatched an additional 3,000 ducklings in nest tunnels. These numbers will continue to grow because of the enthusiasm and dedication of many volunteer conservationists.

While ACA will not be taking an active role in these waterfowl habitat enhancements in the future, we will provide direction and encouragement to the public interested in artificial nest structures. People specifically interested in nest tunnels will be encouraged to contact Delta and participate in their Hen House program.

## **Communications**

- Provided an annual summary report of waterfowl use of nest tunnels to Delta Waterfowl.
- Hosted field trip to observe active nest boxes attended by 12 people.
- Presented information on waterfowl nesting habitat requirements to 32 people.

- ACA acknowledged for its contribution to the County of Vermilion River ALUS program.  
<http://alus.ca/county-vermilion-wins-provincial-award/>.

### **Literature Cited**

Corrigan, R.M. 2007. Effectiveness of nest boxes in influencing population trends for common goldeneye (*Bucephala clangula*) and bufflehead (*B. albeola*) in the Buffalo Lake moraine. M. Sc. Thesis, University of Alberta, Edmonton, Alberta. 120 pp.

Eskowich, K., D. McKinnon, G. Brewster, and K. Belcher. 1998. Preference and use of nest baskets and nest tunnels by mallards in the parkland of Saskatchewan. Wildlife Society Bulletin 26: 881–885.

## Photos



Members of Raymond Scout troop replace a nest tunnel near Lethbridge. Photo: Corey Jarvis



The Partnership Advisory Committee from the County of Vermilion River Alternative Land Use Services program with the Provincial Minister's Award recognizing Municipal Excellence.  
Photo: Jim Fisher