



# Delta Naturalists Society

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## **Applicant**

Delta Naturalists Society  
Charity registration # 89207 9849 RR0001  
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## **Contact person**

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## **Alternate contact person**

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## **Project Description**

Name of project: Delta Barn Owl Nest Box Replacement Project

## **Purpose and Objectives:**

Provide new nest sites for barn owls in Delta to compensate for the loss of barns with nest roost/sites, diminishing riparian habitat and replace older barn owl boxes installed in the early 90's.

- Replace 10 active older nest boxes which are in disrepair.
- Installing 2 new boxes on properties which have suitable locations but have not been previously occupied by barn owls

**Date approved** by club's Board of Directors: January 23, 2018

**Location:** Delta

## **Description of the project, including methods to be used:**

The project proposes to build and install barn owl nest boxes following an established design. These will be built in the workshops of two Delta Nats members, using volunteer time for construction. The proposed box has been refined over a 6 year period by a group of Delta Nats and others, and tested at many sites in Delta and the Fraser Valley. The boxes are called Cascade model BB175 and are large

volume (about 180 L), and light (less than 18 kg) with a surround deck for pole mounting. A large access door with sturdy hinges and a barrel bolt is provided for clean out. For sites where pole mounting is needed, we propose using 6 x 6 inch poles, buried about 3 1/2 feet into the ground, with the box about 11 feet above ground surface. The support will be sturdy enough to permit inspection and occasional clean out of the boxes. At other sites the boxes will be mounted on the exterior wall, or within, barns.



Cascade BB175 Pole Mounted Nest Box

**Proposed start date and duration:** March 2018 - December 2018

**Please explain why this project is needed:**

Barn owls are listed as a species “of special concern” and were recommended upgraded by COSEWIC in 2010 to “threatened” mainly due to habitat and nest site loss. They are primarily found in southwestern BC, as this is northern extent of their range in North America. The municipality of Delta is one of the strongholds for the barn owl population in southwestern BC. Traditionally an agricultural community, Delta provides important grassland habitat and low lying marsh/wetland, which is critical hunting habitat for barn owls and other raptors. Barn owls take readily to nest boxes in taller structures, such as older wooden barns and riding arenas, and in the early 1990s nest boxes were installed in the Lower Mainland under direction of Mike Mackintosh and Lorraine Andrusiak. The majority of the boxes installed in Delta have been steadily occupied and pairs of barn owls have on annual basis produced batches of young. However, since the early 1990s a significant portion of the older wooden barns with boxes have either been demolished or have fallen down, and several of the boxes in well maintained barns have rotted through and some boxes have already fallen down. We propose to replace the older boxes with newer larger improved barn owl boxes and will also provide additional farmers and landowners with boxes which will help compensate for the loss of previously active nest sites.

**Community involvement or support for the project:**

The majority of nest boxes in Delta are monitored annually by Sofi Hindmarch. Since 2006, Sofi has studied the barn owl population on the south coast and has monitored nest sites in the Lower Mainland since 2007. She has several publications detailing the challenges which this owl is facing and also wrote the Federal and Provincial Recovery Strategy for the barn owl in 2013. She has over the years developed a strong relationship with the farming community in Delta and has a contact list of farmers who would like their nest box replaced or would like to get a barn owl nest box on their farm/property. Farmers recognize the service the barn owls provide through controlling rodents. The barn owl as a pest management ally is also a great way to promote alternatives to the usage of rat poison. On the south coast, secondary rat poisoning of predators has steadily been increasing and an awareness of this issue is a very important first step in reducing the prophylactic use of these highly toxic substances. Sofi has committed to be the liaison person and will connect the boxes with the farmers and landowners and will also help with the installation to ensure that boxes are placed in suitable locations.

During the period December 2011 to March 2015, Delta Farmland and Wildlife Trust, funded supplies for a substantial group of Barn Owl boxes (about 25), our model CP85, were installed by DFWT and Sofi (as a volunteer) mainly in barns in Delta and other locations e.g. UBC Farm, North 40 Park.

**Project Volunteers:**

The following (7) volunteers have committed to undertake the project:

- Jim Kneesch – Membership/Treasurer
- Chris McVittie – Director at Large
- Peter Ward – DNS Member and Nature Vancouver Life Member
- Ken Hall – Nature Vancouver Member and Nature Vancouver Life Member
- Jack MacDonald – DNS Member
- Roger Kenny – DNS Member
- Sofi Hindmarch - Nature Vancouver member and Wild Research member

Additional DNS club members have expressed interest in helping as needed.

No remuneration will be received by any DNS club executive or member

**Describe any potentially controversial issues:** None

**Project Budget**

Amount requested through Club Support Grant: \$2,490.00

NOTE: Honorarium payments will not be funded through a Club Support Grant, but hired professional fees and expenses may be considered.

**Publicity and Community Outreach**

We believe this project relates to BC Nature's objective 1 and 2.

1. This project will strive to support the local Delta barn owl population. As mentioned above, habitat and nest-site loss has meant this species is now in process of being federally upgraded to

threatened and it's already red-listed provincially. Installing nest boxes in Delta where there is still high quality hunting habitat will help stabilize the decline of this species. Also the continued long-term monitoring of the Delta barn owl population will help us further understand how this species is faring. Promoting barn owls as an alternative to rodenticides, will reduce the use of rodenticides in the farming community, which will also benefit other predators in the agricultural landscape.

2. Barn owls are a great species for outreach. The plan is to monitor these boxes on an annual basis and as the boxes become occupied we will take out younger volunteers to help with the banding of the young owlets. Owl banding is a great way to introduce a rare species to a young child, in particular since they can have hands-on involvement with the banding process. This fosters an appreciation for the owls, wildlife, and for the protection of our local biodiversity.



Annually young children volunteer and come owl banding. Also after going banding one of the children, as part of a larger school project, decided she wanted to be an owl bander when she grows up.

#### **How will the outcome of the project be evaluated and publicized?**

We will be giving evening talks in Delta and Vancouver about the project. We will also give interviews with newspapers such as the Delta Optimist.

Photographs taken during construction and installation will be uploaded to the Delta Naturalists online photo repository ([www.flickr.com/groups/dncb/pool](http://www.flickr.com/groups/dncb/pool)) and tagged appropriately for easy retrieval ([www.flickr.com/search/?group\\_id=3027315%40N23&view\\_all=1&text=owl%20nestbox](http://www.flickr.com/search/?group_id=3027315%40N23&view_all=1&text=owl%20nestbox)). The construction project will be summarized in blog postings on the Delta Naturalists website ([dncb.wordpress.com/nestbox/reports/](http://dncb.wordpress.com/nestbox/reports/)) and on [barnowlsbc.ca](http://barnowlsbc.ca) website. Nesting success will be monitored annually and will also be reported on the Delta Naturalists website.

## Report and Photos

We will provide photos (high resolution and with photo release) and final report to BC Nature/BC Naturalists' Foundation for publicity purposes. We have an online history of the owl box program and a library of photos.

All photographs posted on the Delta Naturalists Flickr site can be downloaded and used without further authorization, although acknowledgement of the source would be appreciated. Original-quality versions of the online photos are available upon request.

The final project report to BC Nature will also be posted on the Delta Naturalists website.

## BC Nature Funding Acknowledgement

The funding from BC Nature and BC Naturalists' Foundation will be acknowledged in the reports posted on the Delta Naturalists website and the barnowlsbc.ca website, in addition to being acknowledged as part of project presentations.

## Other

List year and amount of previous grants the club has received from BC Nature and/or the BC Naturalists' Foundation:

- Delta Nats received a BCN Foundation Grant for \$2000 for Burnsvie Secondary School Student Project to remove invasive species in Chalmer's Park next to school and plant native species. The project was very successful.

## Other comments or points not covered in the application:

Delta Naturalist have been constructing and installing owl boxes for several years, during which time the box design was improved for easier construction, installation, and protection of young owls. We have worked with a local children's nature group to introduce children to the benefits of providing bird-nesting habitat, including barn owl nest boxes.



Figure 1 Construction team with an earlier nest box design





Figure 2 Nature Kids examining owl pellets from a nest box.



Figure 3 Nature Kids on an outing to an earlier nest box design.



Figure 4 DNS volunteers and golf-course crew prepare to install a new nest box.



Figure 5 Installing the surround-balcony on the newly-raised nest box.



Figure 6 Completed installation



Figure 7 The surround balcony provides young owls with a safe place to perch and exercise before they are able to fly.



## Project Budget

Name of project: Delta Owl Nest Box Replacement Project

Total cost of project: \$5,850.00

Amount requested from BC Nature: \$2,490.00

Expenditures	Comments	Total Cost (cash and In-kind)	Amount of total that is in-kind
<b>Labour</b>			
Fabrication	12 boxes: 80 hrs @ \$ 25/hr	\$2,000.00	\$2000.00
Installation (DNS)	2 boxes: 8 hrs @ \$20/hr	\$ 160.00	\$ 160.00
Installation (others)	10 boxes 40 hrs @ \$20/hr	\$ 800.00	\$ 800.00
Lift equipment e.g. small tractor for Installation	2 boxes 4 hours @ \$100/hr	\$400.00	\$ 400.00
<b>Subtotal Labour</b>		\$3,360.00	\$3,360.00
<b>Direct Costs</b>			
<b>Travel</b>	<b>Mileage for box installation Total 600km 50 cents/km</b>	<b>\$ 300.00</b>	
<b>Owl Nest Boxes (10) ( to be installed in existing barns)</b>	<b>Construction, building materials and shop supplies \$150.00 ea.</b>	<b>\$1,500.00</b>	
<b>Pole Mount exterior Owl Nest Boxes (2) with surround Balcony (to be installed in open field)</b>	<b>Construction, building materials shop supplies, pole expenses and cement \$345.00 ea.</b>	<b>\$ 690.00</b>	
<b>Subtotal Direct Cost</b>	<b>(incl. PST &amp; GST)</b>	<b>\$ 2,490.00</b>	
<b>TOTAL</b>		<b>\$5,850.00</b>	<b>\$3,360.00</b>