- 1. Project name: Conserving Shorebirds through Community Engagement at Key Sites in Canada, the United States and Mexico
- 2. Two-year budget: C\$500,000
- 3. Short statement on the need identified (including current status), the project objective and the outcomes (achievable by June 2019) to address it:

A recent report on the state of North America's birds highlighted shorebirds as priority species in great conservation need and identified habitat degradation at migratory stopover sites as a key reason for declines. Through a 2015–2017 CEC project, an assessment of existing information was completed to confirm the location of key sites used by these birds; communities at seven of those sites in Canada, Mexico and the United States were then successfully engaged to identify threats and begin conservation actions based on priorities that they identified. Building on these foundations, the current project will focus on continuing the implementation of the identified actions at these sites, along with an additional site in Mexico (for a total of eight sites). It will also better collect and use Traditional Ecological Knowledge to augment conservation actions of priority species throughout their annual cycle, and identify measures of success for all action items, to inform future management decisions and support effective community-level shorebird habitat conservation.

4. Select the strategic priority(ies) that the project addresses:

2015–2020 Strategic Priorities	Priority Areas
Sustainable Communities and Ecosystems	Reduce and recover food waste
	Black carbon inventory
	Priority species and ecosystems (e.g., transboundary invasive alien
	species)
	Health of oceans (e.g., marine litter; ocean acidification; marine protected
	areas)
	Syndromic surveillance systems
	Mexican Emissions Control Area (ECA)
	TEK case studies

5. Explain how the project can achieve more impact by working trinationally, and why the CEC is the most effective vehicle to undertake this work:

North America shorebirds use stopover sites in middle North America to refuel during their biannual migrations between breeding grounds in the Arctic and wintering grounds in Mexico. The loss of a site anywhere along the route will severely affect the survival of the birds, so conservation must be coordinated. In each country, the federal government has a mandate for the conservation and protection of shorebirds. However, to successfully conserve specific sites, engagement of the public at a local scale is critical. The CEC's history of facilitating this type of multi-sectoral activity will help accomplish the proposed objectives.

6. Describe how the project may capitalize on, or advance, the relationship between ecosystems, job creation, gender impacts, and income generation:

The large flocks of shorebirds that congregate at stopover and overwintering sites are a spectacle that attracts visitors in large numbers. As part of this project, site managers will create economic and educational opportunities for communities to engage in shorebird habitat conservation by fostering and introducing shorebird festivals at key sites. The project will develop entrepreneurial capacity to develop festivals by holding site interchanges, where managers of sites that already hold festivals can share experience and "know-how" with people from other sites, demonstrating the value of festivals to host communities across the migratory flyway. TEK studies in Nunavut will train local researchers in study methods and TEK data analysis. This skill is "marketable" in the Arctic, as TEK is being used more frequently in making resource management decisions. Indigenous communities in Alaska and Mexico will participate in festivals that celebrate shorebirds and help inform the public of the importance of their breeding grounds; of spawning Gulf grunion (west coast fish) to shorebirds; and of reducing human disturbance to shorebirds from recreation visitors.

Objectives (must be SMART) ¹	Main activities to achieve objectives	Measurable results
By 30 June 2019, communities at the selected sites will be engaged in citizen science for shorebird conservation.	 Development of citizen science projects that will build a diverse constituency of support for shorebird conservation (e.g., youth projects; integration of shorebird education materials in tourist locations. increased Indigenous engagement; volunteer monitoring programs). Implementation of the projects. 	Citizen science projects engaging a cross- section of the local community are implemented, creating a network of local supporters actively involved in shorebird habitat conservation.
By 30 June 2019, sites have established knowledge-action networks of shared experiences and best practices of outreach for conservation of shorebird sites.	 Visits of site representatives to others' sites, with presentations to town councils/county/chamber of commerce to learn from and support conservation activities (e.g., festivals). Identification of outreach projects and activities to share among sites. 	Successful community-based outreach activities and projects are identified, shared and implemented through cross-site collaboration
By 30 June 2019, conservation action items will be informed by TEK and implemented at the sites.	 Implementation of action items from action plans developed at each site. Traditional ecological knowledge integration in management of sites. 	Conservation actions informed by recommendations from Indigenous and local people are implemented, with local community participation.
By 30 June 2019, the effectiveness of conservation	 Develop methodology to measure success of conservation actions and of 	Data on community engagement, habitat and shorebirds are available to measure

7. List the objectives and activities to be conducted to achieve measurable results:

¹ SMART: Specific, measurable, achievable, realistic and time-bound.

actions and community engagement will be measured, to help inform future decisions.	•	community engagement efforts. Document level of community engagement through time.	effectiveness of actions over time, for use by local conservation partnerships.
	•	Document status of site and use by shorebirds.	

8. Describe how the project complements or avoids duplication with other national or international work:

This project helps meet habitat conservation objectives identified by the Atlantic and Pacific flyway shorebird initiatives, the Arctic Council's Arctic Migratory Bird Initiative, and the Western Hemisphere Shorebird Reserve Network. Each of these groups strives to protect and monitor migratory shorebirds and habitats through the protection of key sites and is linked to this proposal. The project provides a community-based, citizen-science approach that will build local support for the preservation of the sites, while the aforementioned initiatives focus on large-scale conservation goals aimed at protecting shorebirds more globally.

9. Describe opportunities for inclusion of traditional ecological knowledge (TEK), if applicable, and how these opportunities are incorporated into the project:

As part of the nomination process and management of Western Hemisphere Shorebird Reserve Network, representatives of the sites will include, where relevant, use of traditional and local ecological knowledge. This could include: 1) combining Indigenous knowledge with increasing participation in monitoring, at James Bay, Ontario, site (Moose Cree First Nation); 2) collecting Inuit traditional knowledge with regard to managing the destruction of shorebird habitat by overabundant snow geese, at two communities in Nunavut, Canada; (3) having representatives from Indigenous communities in Western and Northern Alaska participate in festivals to learn of the economic and traditional strength of hosting similar events in their communities (Yupik and Iñupiat); 4) documenting TEK from local fishermen and Indigenous people harvesting spawning grunion (species of fish) that produce eggs used by wintering shorebirds, at Colorado River Delta, Mexico (Cocopah Indigenous community); 5) engagement of youth, local women, and Indigenous groups to participate in bird and grunion festivals, shorebird monitoring, and other actions to reduce or mitigate human disturbance during shorebird staging in Mexico.

10. Describe opportunities for youth engagement, if applicable, and how these opportunities are incorporated into the project:

To build a diverse constituency of support for shorebird conservation at sites, youth will be engaged during community activities, which would include citizen science, such as eBird and INaturalist; sign development, slogan/theme creation; integration of shorebird education materials into schools; beach cleanups; and incorporating shorebird components into major area events and festivals. In addition, actions to collect Inuit traditional knowledge will engage youth as study videographers, and assistants to elders. Youth will also be engaged to monitor shorebirds and human recreational use, and provide outreach to reduce disturbance by tourists visiting sites in Mexico during Easter season, when birds are there for their spring migration.

11. List significant involvement of other levels of government, Indigenous groups, local communities, experts, private sector, civil society and others, as applicable:

Shorebird habitat conservation can happen only through collaboration of a broad range of partners from all levels of government, local communities and Indigenous groups, technical and process experts, nongovernmental organizations and private landowners spread across the broad geography occupied by these birds. The project will build on existing collaborations and involve the

following actors in shorebird habitat conservation throughout North America: Western Hemisphere Shorebird Reserve Network, Arctic Migratory Bird Initiative, Atlantic Flyway Shorebird Initiative, Pacific America Shorebird Conservation Strategy, Mushkegowuk Council, Moose Cree First Nation, Mi'kmaq First Nation, Nature Canada, Nature Conservancy of Canada, Bird Studies Canada, Eastern Habitat Joint Venture, Town of Dorchester (New Brunswick), Point Blue, Manomet Center for Conservation Science, Washington Department of Fish and Wildlife, Pacific Birds Habitat Joint Venture, US Forest Service, Prince William Sound Science Center, Washington Audubon, Terra Peninsular, Arviat and Coral Harbour Hunters and Trappers Organization, regional Alaska native organizations, schools and youth groups in communities, Nunavut General Monitoring Program, Alaska Migratory Bird Co-Management Council, Alaska Department of Fish and Game, *Centro de Investigacion Cientifica de Educacion Superior de Ensenada* (CICESE), National Comission for the Knowledge and Use of Biodiversity (Conabio, Mexico), National Comission for Protected Areas (Conanp, Mexico), and Bird Festival coordinators in Cordova, Willapa Bay, and Bahía de Todos Santos.

12. Identify relevant committee members and their federal agencies in each country committed to developing this project, and implementing it, if approved:

Canada: Garry Donaldson, Vicky Johnston (Environment and Climate Change Canada) Mexico: Humberto Berlanga (*Comisión Nacional para el Conocimiento y Uso de la Biodiversidad*) United States: Richard Lanctot, Gilbert Castellanos (US Fish and Wildlife Service, Department of the Interior)