

# Implementing the Great Northern LCC Business Model By Delivering Shared Landscape Outcomes

## Executive Summary

**What** – The Advisory Team is proposing two potential management pilot projects that the GNLCC partners could sponsor collaboratively on issues relevant to our goals, at the scale of the GNLCC, and on issues that enhance the GNLCC enterprise while demonstrating its relevance.

**Why** – We expect these pilot projects to increase GNLCC collaborative capacity, build on GNLCC project-level science investments, deepen multi-agency and multi-jurisdictional cooperation, and demonstrate GNLCC relevance to current and broader socio-political-economic realities.

**How** – The Advisory Team is seeking Steering Committee approval to move forward on this initiative, by:

- Supporting the development of two pilot projects that will help unify partnerships of GNLCC members through the implementation of shared strategies across jurisdictional boundaries.
- Dedicating GNLCC funds to support the potential pilot projects.
- Directing the Advisory Team to more fully develop the funding and implementation requirements and report back to the SC at the spring meeting for final implementation approval.

**When** – Today we are asking the Steering Committee to approve the concept, ask for additional development, and to set aside sufficient funds for starting up this initiative.

**Where** – The pilot projects initially address invasive species and natural landscape integrity and connectivity across the GNLCC. These projects will be designed so that they can support “scaled up” management responses that can be applied across GNLCC jurisdictions and implemented at the scale of the GNLCC.

## Context

The purpose of the Great Northern Landscape Conservation Cooperative (GNLCC) is to address common landscape conservation goals, work across boundaries and jurisdictions, and to share data, science and capacity to achieve commonly-desired goals. To date collaborative efforts in the GNLCC partnership have focused on: developing our structure and operations, collaborative science funding, and consensus on broad goals.

**Strategic Conservation Framework** – The GNLCC recently completed development of a Strategic Conservation Framework which includes a collective vision for a sustainable landscape built upon the goals of ecological integrity and ecosystem diversity of natural and cultural resources. Over time, four strategic sub goals: maintaining large, intact landscapes; conserving connectivity and permeability; maintaining hydrological regimes and disturbance regimes; and, maintaining aquatic integrity, will be evaluated in the context of three main landscape stressors: climate change, land use change and invasive species. The framework also includes conservation targets for ecosystem process, habitats, and species that have been developed collectively by the GNLCC partners to serve as the metrics for measuring progress toward the goals.

**Science Plan** – The GNLCC is currently developing a Science Plan, as the next step in implementing the Framework. The Science Plan will describe the functional relationships that explain how the conservation targets are used to measure progress toward landscape goals and sub goals. The plan incorporates conceptual models and established science; information, data and tools needed to describe the functional relationships; and, also identifies critical gaps in scientific information. These “science gaps” will inform and guide GNLCC annual work plans. The Steering Committee supports undertaking a comprehensive, science-based strategy for delivering on the Strategic Conservation Framework. The Steering Committee also recognizes that doing so will require a deliberate, logical, and systematic, ‘full context’ five-year planned approach in which delivering implementation/collaborative management is a final step.

**Management Plan** – The GNLCC intends to honor the objectives and management actions identified locally, and work with the local partners to roll them up to evaluate their contribution to higher level measures of ecological integrity at the

landscape scale. This approach will take time to develop and implement, and the participation, enfranchisement, and commitment of the partners will be essential ingredients for success. We estimate it may take up to three years to compile, measure, and analyze the information necessary to quantify, measure, and evaluate our progress. The long time frame that will precede full implementation does not take advantage of the enthusiasm of the partners for action today. Recognizing this tension, the Steering Committee agreed in Leavenworth, Washington, that it was important to begin developing implementation strategies for our management model now. These should run concurrently with the development of the Science Plan, and one could inform the other, thereby creating an opportunity for action that would promote learning.

### **Implementing Our Business Model**

The Science Plan and the Management Plan are distinct components of the Framework. They are intended to be complimentary and to converge over time. In order to initiate movement towards this intersection, the Advisory Team proposes developing and implementing a subset of strategies in the framework, as a “proof-of-concept” exercise for testing our business model. The idea is to start now by using information that is already available to develop components of the Management Plan, while we identify and collect the information that we don’t have that is relevant to the Science Plan. By testing an approach for how the GNLCC could implement its business model, we will help create the foundation on which to develop conservation actions.

**How to Deliver Conservation as a Business Practice** – The Advisory Team has conceived two potential management pilot projects and recommend that the GNLCC partners sponsor collaboratively on issues relevant to our goals, at the extent of the GNLCC, and in areas that might enhance the GNLCC enterprise while demonstrating its relevance. It is anticipated that these pilot projects will build GNLCC capacity, increase comfort in the collaborative and aligned exercise of jurisdictions, and demonstrate GNLCC relevance to current, broader socio-political-economic realities.

We recommend starting with two regional scale management pilot projects that are issue focused. A phased approach could be used to add more pilot projects over time which would consecutively be informed by Science Plan deliverables, thus growing our effort as we learn from our experience. The rationale for these pilot projects is to demonstrate an ability to act collectively, not just study collectively, while the Science Plan is completed. The Pilots will provide test cases for carrying the science to implementation in a management setting. Consequently, the pilot projects will focus on issues where the management/ implementation connection is immediate and/or relevant information and data is already available.

To get started, each of the pilot projects will connect a GNLCC-identified Conservation Goal and a GNLCC-identified Stressor with a commonly-desired outcome that GNLCC partner agencies can individually and collectively work towards, as follows:

Pilot Project 1: Aquatic Integrity (Conservation Goal 3) and Invasives (stressor)

Pilot Project 2: Connectivity (Conservation Goal 2) and Land Use Change (stressor)

A conscious choice was made to select two pilot projects that were very different from each other in order to foster learning by gaining different experience. Consequently, these two pilot projects are intended to provide “book-ends,” that encompass the range of issues that exist within the GNLCC. Pilot Project 1 is comparatively simple (data-poor environment), whereas Pilot Project 2 is more complex (data-rich environment). Specifically:

Pilot Project 1: Aquatic Integrity is representative of issues that are recognized as important, but are insufficiently addressed in terms of funding, leadership, or organizational structures.

Pilot Project 2: The conservation of intact landscapes and connectivity among them in anticipation of landscape change is representative of issues that may enjoy sufficient funding, leadership, and organizational structures, but are challenged by fragmentation of funding, competing leadership, and a proliferation of organizational structures.

If we can achieve a positive experience with these initial pilot projects, we would plan to initiate additional pilots that address other issues that encompass a GNLCC-identified Conservation Goal and a GNLCC-identified Stressor. If the Steering Committee decides to sponsor these pilot projects, it will require the support of the Steering Committee as we

chart a path from the initial planning phase to actually measuring the effectiveness of actions in a way that will support the cumulative assessment of management actions.

We acknowledge that for now, the pilot projects are a more aggressive approach than is indicated in the Strategic Conservation Framework. However, given the gap between the guidance in the Framework, and the need for guidance for on the ground actions, we anticipate that these pilot projects and the experiential learning they generate will provide stepping stones to bridge the gap.

### **Pilot Project 1: Aquatic Integrity (Conservation Goal 3) and Invasives (stressor)**

**Rationale – Coordinated management action:** The challenge of managing for invasive species creates an opportunity for the GNLCC to provide leadership on landscape scale stressors where there is a need for coordination of planning and on the ground activities. Currently, to the best of our knowledge, the north-western part of the North American continent remains free of quagga and zebra mussels. Infestation of aquatic systems in the GNLCC by quagga and zebra mussels would be economically, socially and environmentally devastating. An infestation in one of the jurisdictions within the mussel-free northwest would likely lead to domino effect. It is therefore critical that managers recognize the interconnectedness of the ecosystems comprising the GNLCC and take action to coordinate preventative measures across them by utilizing the information, experience, and data that is available today.

Various large-scale, jurisdictional-based and trans-boundary collaborative initiatives deal with components of the aquatic invasive species (AIS) challenge, but in a fragmented fashion, and with limited resources. Examples include:

- Crown Managers Partnership (CMP): Building on Montana and Idaho program experience, Alberta has developed a comprehensive AIS pilot program for SW Alberta. The CMP is currently developing a Trans-Boundary AIS Management Protocol for the Crown of the Continent Ecosystem.
- America's Great Outdoors (AGO): the White House's 21st Century conservation and recreation agenda. The Crown of the Continent Ecosystem is an AGO Priority Landscape and coordination of invasive species information is a current project priority.
- Pacific North West Economic Forum (PNWER): a western state/provincial economic collaborative with many regional priorities. AIS are one priority and there is an active invasive species working group.
- Western Regional Panel on Aquatic Nuisance Species: interstate information network attempting to limit the introduction, spread and impacts of AIS in the Western Region of North America.
- New West Partnership: aquatic invasive species has been raised as an issue for action on this interprovincial forum (British Columbia, Alberta & Saskatchewan).
- 100<sup>th</sup> Meridian Initiative: specifically targets quagga and zebra mussels, though all AIS are in scope. Focus is local, state, provincial, regional and state agency cooperation.
- Pacific States Marine Fisheries Commission (PSMFC): interstate compact agency with an AIS Prevention Program.
- Pacific North West Aquatic Monitoring Program (PNAMP): facilitating an integrated approach to monitoring at a regional scale, by providing partners with guidance and the tools needed.
- Columbia Basin Partner Forum (CBPF): protecting aquatic resources of the shared Columbia Basin, currently focused on coordinated research and monitoring.

All of these initiatives share the common objective of preventing and/or managing invasive species across the GNLCC. Yet there is no formal effort underway to develop a process for interfacing these efforts as a way to align objectives, coordinating activities, and facilitate integration of data. By implementing this pilot, the GNLCC could sponsor the development of an over-arching, collaborative management strategy that is both coherent and comprehensive. This pilot project provides the GNLCC with a leadership opportunity to help forge collaboration among all the main jurisdictional entities that would address identified science priorities and important data gaps. The success of initiatives such as PNAMP that have adopted this philosophy confirms the utility of this approach. All actions undertaken as part of the work proposed here will be done using a collaborative approach that invites the participation of GNLCC members.

The initiatives listed above involve many of the State, Provincial, Tribal, First Nation, and Federal agencies responsible for the management of AIS in the northwest. Aligning these groups with GNLCC goals related to AIS would greatly

enhance efforts to scale up AIS prevention efforts within the broader landscape. The GNLCC can add great value by identifying opportunities to adopt consistent protocols across the GNLCC. GNLCC leadership can help to coordinate and deliver an over-arching AIS management strategy while also providing a forum for involvement by the entities who would like to engage on these issues, but lack the organizational structure to do so.

**Objectives:** The objectives are to: 1) contribute to the conservation goal of promoting Aquatic Integrity by keeping the GNLCC free of quagga and zebra mussels; 2) identify collaborative monitoring and response protocols; 3) identify the potential benefits of concerted action (enhance capacity, limit individual agency/jurisdiction costs); 4) develop a strategy that enhances and complements state programs; 5) incorporate findings from the work at the partner forum scale (Crown Managers Partnership); and 6) support the Pacific Northwest Economic Region (PNWER) agenda (e.g., perimeter control) and other initiatives at the meso-regional scale. The intent is to develop a well-conceived regional approach to prevention that can be endorsed by all jurisdictions and stimulate new thinking at the federal level in the USA and Canada about how to fund collaborative, regional efforts.

**Strategies:**

1. Document strategies and recommendations underway within individual jurisdictions and through collaborative initiatives such as PNWER, Western Regional Panel, PMFC, CRB Team, the CMP, AGO and others to prevent AIS infestations.
2. Support and encourage action items from groups such as PNWER: regional “perimeter defense” approach to aquatic invasive species prevention; regional compact for invasive species; regional noxious weed list; regional aquatic invasive species passport program informing and encouraging involvement on AIS prevention from US and Canadian elected officials; encourage rapid response and monitoring of invasive species in all jurisdictions.
3. Develop a strategy for Pacific Northwest AIS prevention efforts at the large landscape scale that is integrated with and complements state programs.
4. Work with the various AIS initiative groups and liaise with North Pacific LCC to develop an integrated GNLCC AIS prevention and response strategy for collective actions to complement, support and enhance existing measures, and to fill gaps as needed at the large landscape scale. For instance, informing AIS initiative groups within the Columbia River Basin that are unaware of *The Columbia River Basin Interagency Invasive Species Response Plan: Zebra Mussels and Other Dreissenid Species* that has the US States of Idaho, Montana, Oregon, and Washington and the province of British Columbia, Canada as signatories (see: [http://www.100thmeridian.org/ActionTeams/Columbia/CRB\\_Dreissenid\\_Rapid\\_Response\\_Plan\\_September\\_19\\_2011.pdf](http://www.100thmeridian.org/ActionTeams/Columbia/CRB_Dreissenid_Rapid_Response_Plan_September_19_2011.pdf)) or expanding this plan to include areas and entities outside of the Columbia River Basin but within the GNLCC.
5. Promote education and outreach activities to inform constituents about AIS issues. Enhance existing actions throughout the GNLCC by expanding and promoting efforts such as PSMFC’s Watercraft Inspection Training program (<http://www.aquaticnuisance.org/wit>), multi-agency Building a Consensus process (<http://seagrant.oregonstate.edu/invasive-species/invasive-mussels-west>) and other activities by the 100<sup>th</sup> Meridian Columbia River Basin Team.
6. Track actions and measures and report on progress toward outcome.

**Implementation Activities:** Assess the interaction of Aquatic Integrity and Invasives by:

1. Identify opportunities to develop and promote the use of consistent monitoring protocols within the GNLCC.
2. Develop an integrated long-term monitoring network for AIS in portions of the GNLCC that will establish baseline conditions, provide data that can be used to inform Decision Support Systems, and provide for an assessment of long-term trends.
3. Develop Decision Support Systems to help managers understand the potential for bio-invasions in their geographical area and the potential effects on important resources they are charged with managing.
4. Compile a toolbox, based on materials and tools already developed, that can be used by entities and managers across the landscape to assess risk, promote prevention, and better address AIS in the event of an infestation.
5. Develop an invasive species information management system that builds on existing efforts.
6. Provide letters of support and where possible, resources for advancing action items arising from the various AIS initiatives that would lend to an integrated regional approach to aquatic invasive species prevention.

**Specific Actions for 2014-2015:** Action during 2014-2015 will focus on the immediate use of existing information to build a foundation for collaboration as the GNLCC moves forward with addressing invasive species issues and efforts to exclude quagga and zebra mussels in particular.

1. Conceptualize and formulate strategic plan for establishing boat inspection stations that would serve as a regional perimeter for identifying watercraft infested with quagga and zebra mussels and convey that information to interested groups such as the PNWER. We will draw upon existing literature and watercraft inspection station mapping products to provide a synthesis of existing activities prior to meeting with interest groups.

Background: Although each Pacific Northwest state has a program for inspecting boats at their border, each program is operated independently with minimal coordination of effort. For example, a boat inspected in Washington may have passed through inspection stations in Wyoming, Montana, Idaho, and Oregon prior to inspection in Washington. This duplication of effort limits the hours and days that individual states and Provinces can keep inspection stations open. Developing a regional prevention program that builds on and complements state programs will fill gaps and assist individual jurisdictions in optimizing allocation of their own resources to benefit the entire region. The strategy will be circulated for endorsement by the organizations mentioned above and be presented to PNWER for consideration as a priority in their budget advocacy in Washington DC and Ottawa.<sup>1</sup> A perimeter defense against mussels has been a priority for PNWER for several years.

2. Characterize existing, and facilitate discussions on collecting standardized, recreational use data for assessing risk of introduction of quagga and zebra mussels in the GNLCC.

Background: Currently various metrics that describe the relative recreational use of water bodies are being used to help prioritize the allocation of early detection monitoring efforts throughout the GN LCC. However, because of the paucity of available data, each individual state or province uses different types and sources of data, making the prioritization of early detection efforts at a regional scale impossible. Characterizing existing, and facilitating discussions on collecting standardized, recreational use data and promoting a better understanding of boat travel patterns within the GNLCC would help entities within the GNLCC move towards a better understanding of the risk of introduction at the scale of the GNLCC.

3. Characterize existing, and facilitate discussions on collecting standardized, water quality data for assessing risk of establishment of quagga and zebra mussels in the GNLCC.

Background: Currently there is an incomplete accounting of key water quality metrics that describe the relative risk of mussel establishment in the GNLCC. For instance, some water bodies that are known to have high use are lacking water quality data sufficient to assess the risk of establishment (USGS; unpublished data). Characterizing existing, and facilitating discussions on collecting standardized, water quality would help entities within the GNLCC identify information gaps and move towards a better understanding of the risk of quagga/zebra mussel establishment at the scale of the GNLCC.

4. Expansion of existing regional monitoring coordination in the US to include Alberta and British Columbia, Canada. We have contacted and received input to this proposal from Kathryn Wilson who is the Aquatic Invasive Species Program Coordinator for the Fish & Wildlife Policy Branch with Alberta Environment and Sustainable Resource Development and contacted Matthias Herborg who is the Aquatic Invasive Species Coordinator for British Columbia, Canada to enlist their participation as we move forward.

Background: The USGS, Washington State University, Pacific States Marine Fisheries Commission, Portland State University, and the Columbia Basin Team of the 100<sup>th</sup> Meridian Group are embarking upon efforts to coordinate regional early detection monitoring efforts for quagga and zebra mussels. Extending these efforts to include Alberta and British Columbia will promote coordination within the GNLCC and the conservation goal of aquatic integrity across the GNLCC.

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<sup>1</sup> CoPI Sytsma is co-chair, along with Representative Eric Anderson from Idaho, of the PNWER Invasive Species Work Group

## Specific Products for 2014-2015:

1. Assemble a report on current inspection activities in the region.
2. Host a strategy workshop with relevant agencies from throughout the region to develop a coordinated, supplemental program for prevention that focuses on perimeter defense that complements ongoing state programs.
3. Recommend that PNWER use the regional strategy to advocate for implementation funding in Ottawa and Washington DC
4. USGS open file report describing existing use of data, a strategy for moving towards the collection of standardized use data for assessing risk of introduction, and standardized water quality data for assessing risk of establishment of quagga and zebra mussels in the GNLCC. We will also work towards expanding existing regional monitoring coordination in the US to include Alberta and British Columbia, Canada.

**Results:** The Steering Committee, working with relevant regional partners, can identify potential solutions before a bio-invasion occurs that would have profound socioeconomic impacts on the region in terms of the operation of the Federal Hydropower Systems and the biological integrity of the: Columbia River Basin; the headwaters of the Missouri-Mississippi; the Peace/Athabasca; and the Saskatchewan/Nelson systems. The decision support tools we develop could be used by natural resource managers to understand the potential for invasive species to impact the geographical areas they manage. If the initial quagga and zebra strategy is successful, next steps might include developing the capacities to:

1. Assess the potential spread of existing invasive species under current conditions;
2. Determine current distributions of rare or endangered native species whose actual distributions are poorly known because they are missed in standard monitoring programs;
3. Predict changes in the distribution or abundance of native or non-native species under altered climate conditions, including the potential for new invaders to become established and/or native species to become extirpated and;
4. Develop strategy for early detection and prevention of quagga and zebra mussels and other aquatic invasive biota

### Budget

#### **Pilot Project 1: Aquatic Integrity (Conservation Goal 3) and Invasives (stressor)**

Pacific States Marine Fisheries Commission	Contractual	\$5000
	Meeting support	\$10,000
	Overhead	\$1,854
	<i>Subtotal, PSMFC</i>	<i>\$16,854</i>
Portland State University	Salaries	\$20,000
	Travel	\$3,000
	Overhead (CESU rate)	\$4,025
	<i>Subtotal, PSU</i>	<i>\$27,025</i>
USGS WFRC	Salaries	\$37,345
	Travel (20 days @ \$100 ea)	\$2,000
	Per diem (20 @ \$116 days)	\$2,320
	USGS Open File report	\$1,000
	Overhead	\$15,490
	<i>Subtotal, USGS</i>	<i>\$58,155</i>
<b>TOTAL</b>		<b>\$102,034</b>

### Roles of Project Participants

We will draw on the experience and expertise of the Pacific States Marine Fisheries Commission, Portland State University, and the USGS to conduct the Specific Actions and to produce the Specific Products outlined above.

The actions involve enhancing activities of the project participants to work collaboratively with key groups across the GNLCC in the US and Canada. For instance, the Pacific States Marine Fisheries Commission and Portland State University have been integrally involved in bilateral groups such as the 100<sup>th</sup> Meridian Columbia River Basin Team, PNWER, as well as the Western Regional Panel and other groups, to coordinate and enhance the management, monitoring, and research of invasive species in western North America.

The USGS has been working with multiple state and provincial members of 100<sup>th</sup> Meridian Columbia River Basin Team to help characterize regional early-detection quagga and zebra mussel monitoring activities and conduct research on AIS.

While we expect that the project participants will contribute to all of the tasks above, the PSMFC and PSU will primarily be responsible for Specific Action 1 and Specific Products 1, 2, and 3, and the USGS will primarily be responsible for Specific Actions 2-4 and Specific Product 4. The Specific Actions listed above are intended to build upon and expand existing collaborations and data, not to create entirely new structures. In order to sustain a preventative approach to the AIS challenge, it is imperative that all four Specific Actions be implemented within FY14, and not split across FY14 and FY15.

## **Pilot Project 2: Prioritizing an intact and connected landscape and informing decisions related to anticipated land use change in the GNLCC.**

**Rationale – Integrate On-going Activities:** In this pilot project, the GNLCC can play a catalytic role, by facilitating the integration of on-going work relevant to the GNLCC mission of conserving intact landscapes and addressing related stressors. The objective is to leverage work that is complete or ongoing, and learn from these activities. For example, the Wyoming Landscape Conservation Initiative (WLCI) has been studying energy development and impacts on wildlife, such as migration and habitat connectivity for several years. The methodology of the Western Governors Association crucial habitat mapping, the Washington Wildlife Habitat Connectivity Working Group, and others could be extended to additional geographies to address specialized information on the intactness of key habitats and their connectivity and permeability for species like the grizzly bear.

There are various large-scale, multi-jurisdictional, and trans-boundary collaborative initiatives dealing with components of the connectivity challenge. Examples include:

- The Western Governors' Association (WGA) Crucial Habitats and Corridors Initiative: Landscape Integrity and Connectivity analysis across 18 western states.
- Washington Wildlife Habitat Connectivity Working Group: wildlife corridor analyses for 16 focal species throughout Washington and in the Columbia Plateau region across Oregon and Washington.
- The High-Divide Collaborative Land and Water Conservation Fund Proposal: if funded, this project will improve wildlife connectivity between Yellowstone National Park and the Central Idaho Wilderness Complex.
- Crown Managers Partnership (CMP): developing and measuring ecological health indicators, including connectivity, for the trans-boundary Crown of the Continent Ecosystem.
- America's Great Outdoors (AGO): the White House's 21<sup>st</sup> Century conservation and recreation agenda. The Crown of the Continent Ecosystem is an AGO Priority Landscape and connectivity is one of the three major action items.

Despite all this activity, there is no over-arching collaborative management strategy that is coordinated, coherent, and comprehensive. The GNLCC is an overarching collaborative involving all the main jurisdictional entities. It can fill gaps through funding or organize projects to address what science is missing without actually doing them, which is the responsibility of individual jurisdictions and agencies.

**Objectives:** Conserve an intact and connected landscape of aquatic and terrestrial ecosystems, to facilitate species movement, genetic connectivity, migration, dispersal, life history, and other biophysical processes. Identify the over-arching desired 'outcome' for how land-use change (stressor) affects this goal. Implement and support management activities that conserve or restore connectivity, and avoid land use actions that would impair or reduce current levels of connectivity.

(1) an annotated map of priority intact core areas and linkages zones such that core areas and linkage zones are defined in terms of the priority conservation targets they serve, the conservation threats that threaten their integrity at the patch and landscape scales, and evaluation of the conservation actions occurring and planned within the core areas and linkage zones; the annotated map will be the principal information source for;

(2) a detailed list of prioritized conservation actions for intact core areas and linkage zones that quantify the relative conservation potential or value of each action relative to alternatives and identifies roles and responsibilities of the partners considering partners capacities and strengths and considers leverage among multiple partners. The prioritized list of conservation actions will serve as a draft Work Plan delivered to Steering Committee members for interpretation to and response from the management agencies they represent.

**Results:** The recommendations resulting from this process will identify a collaborative course of action to maintain intact, connected landscapes throughout the GNLCC. The Steering Committee and partners will review the recommended actions to determine the level of engagement in the resulting workplan that they deem useful.

### **Proposed Implementation Strategies:**

1. (within the first month) Establish a technical committee of 15-20 people comprised of members from the advisory team, partner forums, and other partners with on-the-ground engagement, strategic planning capacity, and other technical expertise. This committee would meet monthly to develop and implement the following strategies.
2. (early fall 2014) Conduct a workshop of the technical committee that would compile and analyze background information (as detailed below) on foundational priority areas, produce a GNLCC-wide map of priority areas, and identify conservation actions. This workshop would be strategic in nature, focusing at the large-scale of the entire GNLCC, and would provide clarity on coarse-filter/fine-filter parameters to identify priority intact areas and the kinds of strategic actions needed. The technical committee will:
  - a. Collect information on connectivity and land use impacts based on existing efforts (e.g., Western Governors' Association Crucial Habitat and Assessment Tool Landscape Integrity and Connectivity Analysis, Washington Connected Habitat analyses, Crown of the Continent Ecological Health Project, WLCI Energy Impacts Project, and others).
  - b. Identify, acquire, and analyze relevant factors and existing data layers (land use maps, vegetation maps, roads, species connectivity, etc.) to identify intact areas, landscape linkages, wildlife corridors, and the existing and potential land use changes that may create barriers to their conservation.
  - c. Describe how indicator species and conservation targets (e.g., grizzly bear, sage grouse, wildland fire) for different ecological types (i.e., forum areas) inter-relate to understand how connectivity and land use impacts can be analyzed to indicate landscape integrity at the GNLCC-level.
  - d. Use existing or develop new conceptual models that demonstrate how connectivity between intact areas is affected by land use change.
  - e. Project future impacts of large-scale stressors, such as climate change and changes in land use and energy development, on landscape integrity and map these impacts on the landscape (as possible). Identify data gaps and needs for additional information as future funding priorities.
  - f. Document relevant existing, ongoing, or planned agency management actions, such as Land and Water Conservation Fund easements, connectivity initiatives, and road crossing to improve or maintain connectivity. Identify gaps and additional actions needed.
  - g. Create a monitoring and evaluation framework to track combined actions and measures and report on progress over the next 5 years.
3. (early winter 2014/2015) Conduct a second workshop to focus on local-scale priorities and actions. This workshop would include 50-60 participants, with a focus on partner forum break-out sessions to refine the results of the first workshop and detail more specific local priorities and actions. While still strategic, this workshop would focus at a smaller landscape scale, and produce a detailed five-year workplan for partners.



## Budget

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### **Pilot Project 2: Prioritizing an intact and connected landscape and informing decisions related to anticipated land use change in the GNLCC.**

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Workshop 1	Travel (20 people @ \$500 ea)	10,000
	Per diem (20 people @ \$225/day x 3 days)	13,500
	Facilitator (20 days prep, 5 days write up, @ \$350/day)	8,750
	Report and materials	2,000
	<i>Subtotal, workshop 1</i>	<i>34,250</i>
Workshop 2	Travel (60 people @ \$500 ea)	30,000
	Per diem (60 people @ \$225/day x 3 days)	40,500
	Facilitator (20 days prep, 5 days write up, @ \$350/day)	8,750
	Final report	1,000
	<i>Subtotal, workshop 2</i>	<i>80,250</i>
<b>Subtotal, Project 2</b>		<b>\$114,500</b>
<b>TOTAL</b>		

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## Summary

The Advisory Team proposes that the GNLCC field two pilot projects to test the premise that the GNLCC business model can facilitate the near-term coordination of regional planning and science, and information sharing among our partners in a way that can be used to measure our collective progress based upon specific management actions. This approach is intended to complement the methodical, long-term approach that the GNLCC has committed to in fully developing a detailed Science Plan as a step toward implementing the Strategic Conservation Framework.