Seattle City Light

NATURAL RESOURCES AND
HYDRO LICENSING DIVISION

Wildlife Research Program Grant Opportunity

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Program Overview

BACKGROUND

Seattle City Light established the **Wildlife Research Program** in response to federal licensing requirements related to the Skagit River Hydroelectric Project. The primary goal of the Wildlife Research Program is to provide funding for projects that develop improved methods for the **understanding, management, and protection of wildlife resources in the North Cascades ecoregion**, with an emphasis on the Skagit River Watershed. A secondary goal of the program is to contribute to the training of new researchers.

Since 1995, City Light has funded research projects on a wide range of subjects, including riparian plant communities, invertebrates, snow geese and shorebirds in the Skagit Delta, lynx, land birds, beaver, mountain goats, American pika, wolverines, amphibians, and grizzly bears.

FUNDING AVAILABLE

- **Grant awards can range from $5,000 to $75,000**, depending on the scope and quality of the proposal.
- The amount of funds disbursed each year depends on the number and quality of the proposals received and overall budget status.
- In certain circumstances, the Wildlife Research Advisory Committee may choose to commit future funds to a proposal received in the current year. If this happens, one or more years may pass before additional funds become available.

KEY QUALIFICATION CRITERIA

- Projects must meet all the Wildlife Research Program's goals as outlined in the Mission & Goals statements below.
- Selected projects should complement or build onto the existing body of wildlife research.
- Professional standards must be met for all research funded.
- Projects may not duplicate or substitute for usual agency responsibilities and programs.
- Due to the limited grant budget, applicants are strongly encouraged to contribute in-kind services and obtain co-funding from other sources.

PROGRAM MISSION & GOALS

Mission

The mission of the Wildlife Research Program is to support research on wildlife resources and wildlife habitats in the U.S. portion of the North Cascades ecosystem, emphasizing the Skagit River watershed.

Goals

1. **Research:** To facilitate the development of new scientific information and methods that extend the understanding, management, and protection of wildlife and ecosystems in the Skagit watershed and North Cascades by:
    - **a.** Encouraging research that focuses on applied science and management, while still considering projects with broader applicability.
    - **b.** Encouraging research that meets the long-term wildlife and ecosystem research needs for the North Cascades.
    - **c.** Ensuring that all research funded by the Wildlife Research Program meets high professional scientific standards.
2. **Collaboration:** To promote interagency/organizational research partnerships (i.e. between agencies, tribes, academic institutions, the public, etc.) to facilitate the exchange of information and ideas by:
    - **a.** Encouraging innovative research studies that involve and benefit multiple land and resource management agencies.
    - **b.** Encouraging grant proposals that utilize multiple funding sources.
3. **Education:** To contribute to the education and training of new researchers and investigators, primarily graduate students, by:
    - **a.** Ensuring that all major colleges and universities in the Pacific Northwest (Wash., Ore. and Ida.) receive information about the program in a timely and effective manner.
    - **b.** Giving greater value to proposals that provide a graduate research component.
4. **Dissemination:** To ensure that information generated by the Wildlife Research Program is easily accessed by natural resource professionals, academic researchers, environmental educators, and the public, by:
    - **a.** Requiring research reporting that includes multiple channels for disseminating reports and information funded by the Wildlife Research Program.
    - **b.** Making the results of Wildlife Research Program projects available on a website.
    - **c.** Requiring grant recipients to present the results of their studies at an annual researcher's meeting.

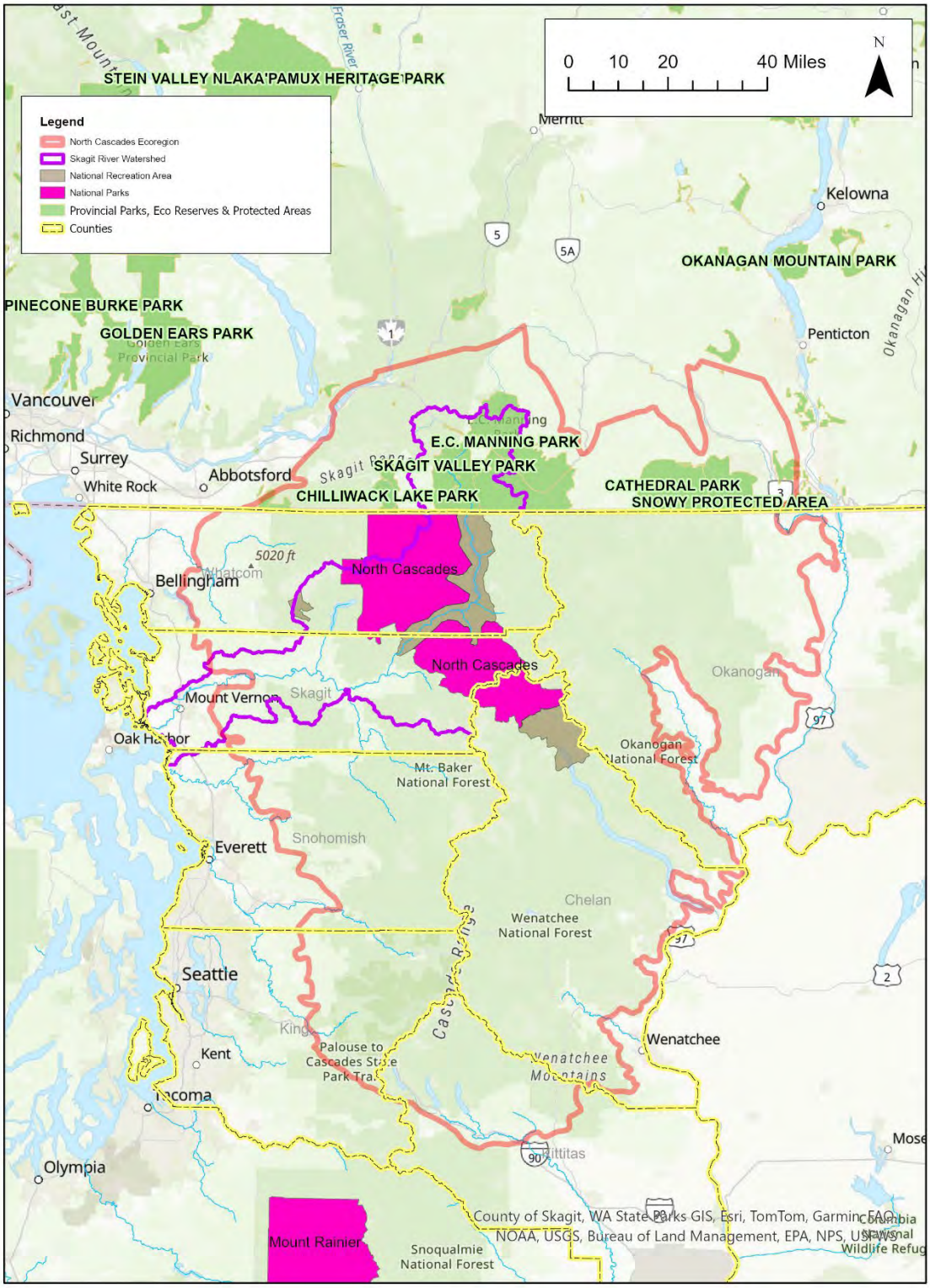
RESEARCH PRIORITIES

The Wildlife Research Advisory Committee will prioritize research proposals that address issues that are of particular interest to resource agencies in the Skagit River Hydroelectric Project Area, the Skagit River watershed, and North Cascades/Western Okanogan ecoregions **(see map)**.

The proposals should either include study areas within these ecoregions or if located elsewhere, be directly applicable to management in the region. We strongly encourage applicants to consult with the Wildlife Research Advisory Committee prior to proposal development to appropriately focus proposals.

Below are some of the current priorities:

- Habitat connectivity, population estimates and/or demography of federal candidate, threatened or endangered wildlife species in the North Cascades (includes spotted owl, marbled murrelet, wolverine, fisher, grizzly bear, gray wolf, Mount Rainier white-tailed ptarmigan).



Map of Skagit River Watershed and North Cascades Ecoregion.

- Priority species or animal aggregations, as identified by federal or state agencies or tribes due to their population status, sensitivity to hydrologic conditions or habitat alteration, and/or recreational, commercial or tribal importance for the North Cascades (elk, mountain goats, spotted frogs, etc.).
- Wildlife or ecosystem relationships for Washington Department of Fish and Wildlife's Priority Habitats and Species in the Skagit watershed (see http://wdfw.wa.gov/hab/phspage.htm).
- Effects of the hydroelectric project operation on wildlife species.
- Forest carnivore habitat use, population estimates, abundance of potential prey, and demography.
- Big Game (*Oreamnos americanus*) habitat use.
- Impacts of human activities on wildlife.
- Impacts of climate change on wildlife and responses of wildlife to climate change, for example:
    - What species are expected to be most affected by climate change or the combination of climate change and ongoing habitat conversion?
    - Are high-elevation pollinator populations changing?
    - How are climate and habitat fragmentation influencing the distribution of predators, and how will changes in predator distributions change prey abundance and distribution? o How does climate change affect high-elevation mammal populations such as heather voles, marmots, and pikas? (see ongoing North Cascades research at http://sciencelive.org/index.html)
    - What is the status of ptarmigan populations, and how are they affected by climate change?
    - Are species distributions shifting due to climate change? o Are hybridization rates along suture lines changing with the influence of climate change?

REPRESENTATIVE PROJECTS

Projects that will be given strong consideration include those that:

- Improve the understanding and management of rare, threatened, endangered and sensitive species, habitats, communities and ecosystems and the biological diversity of the Skagit watershed and North Cascades.
- Contribute to the understanding, control and eradication (if needed) of invasive exotic plant and animal species in forests, wetlands, riparian areas, alpine lakes and other sensitive habitats.
- Monitor the effectiveness of management activities (such as restrictions on human uses, road closures, placement of artificial habitat structures, silviculture treatments, planned dispersal areas, etc.) used by resource management agencies to mitigate the impacts of human-induced disturbances.
- Contribute to the management and protection of wildlife species (i.e. grizzly bear, mountain goat, deer and elk) that are of most concern and importance to the tribes and First Nations of the Skagit watershed.
- Improve the understanding of how natural processes (such as flooding, fire, migratory and dispersal patterns, etc.) have been modified by the Skagit Hydroelectric Project and other human-induced ecosystem modifications.
- Establish long-term ecological monitoring, baseline inventories and pilot studies to understand, manage and protect the ecological health of sensitive habitats, communities and ecosystems.

Grant Application Process

GRANT SELECTION STEPS

- **Pre-Proposals:** Interested, qualified applicants submit a pre-proposal document according to the guidelines below.
- **Advisory Committee Review:** The Wildlife Research Advisory Committee, which oversees the Wildlife Research Program, reviews and selects pre-proposals that best meet the program's goals. All applicants will be notified in writing of their pre-proposal status.
- **Full Proposals:** Applicants with pre-proposals that pass the initial screening will be invited to submit a complete proposal. Full proposal guidelines will be e-mailed to all qualifying applicants. The Wildlife Research Advisory Committee may ask some qualifying applicants to modify their proposals.
- **Scientific Peer Review:** The full proposals will be distributed to independent peer reviewers for scientific review.
- **Final Selection:** The Wildlife Research Advisory Committee will make final selection and funding decisions based on how well the proposal meets the Wildlife Research Program's goals and based on the peer reviews.
- **Grant Agreement:** Successful applicants will be required to enter into a grant agreement with Seattle City Light.

The application process is competitive through the pre-proposal and full proposal stages. If an applicant is invited to submit a full proposal, there is no guarantee that an award will be made for that project.

APPLICATION SCHEDULE

Proposals will be accepted according to the schedule on the project website: https://www.seattle.gov/ city-light/energy-and-environment/environmental-stewardship/fish-and-bird-protection-programs/wildliferesearch-grants-program.

PRE-PROPOSAL GUIDELINES

Application Package

Complete application packages MUST include the following:

1. Application Form (fillable form is included as an attachment to this booklet)
2. Map(s) showing location(s) of proposed study area(s)
3. Scientific research pre-proposal (format described below)

No additional materials will be accepted.

Format of Scientific Pre-Proposals

Pre-proposals should be brief and MUST address all of the following items:

1. Summarize the issue(s) and the importance of the problem(s).
2. Describe your project's goals and objectives.
3. What is the geographical location of the study?
4. How does this study relate to the Skagit watershed and/or the North Cascades ecosystem?
5. Discuss the application of the study results to the management of wildlife resources in the North Cascades.
6. What is the project's timeframe and duration?
7. Identify the principal investigator(s) and key project staff and state their titles and organizational affiliation.
8. How will the project train new researchers or educate others in the application of the scientific method? If it is a graduate student doing the work, add a layperson's summary of their thesis research proposal to the application.
9. What is your anticipated budget for this project? What in-kind contributions and co-funding will you be including? (Note: Overhead costs may not exceed 15% of the total project cost.)
10. How does your project meet the Wildlife Research Program mission and all four goals stated on p. 2-3 of this booklet?
11. Provide a one paragraph describing the research approach you will use. Explain how the sample size and methodology design will meet the research objectives.
12. Provide names of two (2) potential peer reviewers who are experts in the research topic. The purpose of the agency and peer review is to provide technical and policy perspectives to assist the Wildlife Research Advisory Committee in choosing projects to fund. Agency/peer reviewers may not be affiliated with the applicant's organization or stand to directly benefit from the project.

a.)	Name:	Title:
	Organization:	Phone/Fax:
	Email address:	
b.)	Name:	Title:
	Organization:	Phone/Fax:
	Email address:	

Pre-proposals may not exceed 3 single-sided pages for items 1-12. The application form, cover letter, and the map requested above are not included in the 3-page limit. Pre-proposals should be prepared on 8 1/2 x 11 paper with 12-point font and 1-inch margins.

For more information, please contact:

Ron Tressler, Wildlife Research Program Manager
Email: ron.tressler@seattle.gov
Phone: 206.386.4506

Submission

Please email a complete package in PDF format to Ron Tressler at ron.tressler@seattle.gov. Your preproposal application package must be received by 5:00 p.m. PST on the due date listed in the schedule. Incomplete and/or late application packages will not be considered. Multi-year or multi-phase proposals must be clearly indicated. If the value or completion of research in one phase is dependent on funding for subsequent phases, this must also be stated, and the subsequent phases must be sufficiently detailed and described.

CONTRACTS AND FUNDING

Successful grantees must enter into a contract with Seattle City Light that stipulates the conditions that must be met during the term of the funding award. Indirect costs cannot constitute more than 15% of the total grant amount. Ten percent (10%) of the final contract amount will be withheld until the applicant has completed all contract requirements and submitted a final invoice. Researchers may only submit invoices for work that has actually been completed (monthly or quarterly); no up-front payments will be made.

While there may be more than one principal investigator for a project, one agency/organization must assume the lead role. For each project, Seattle City Light will enter into a grant agreement with only one agency/organization; multi-party agreements are not permissible.

Additional Information

WILDLIFE RESEARCH ADVISORY COMMITTEE

- Seattle City Light (Ron Tressler, Chair)
- National Park Service, North Cascades National Park Complex
- Washington Department of Fish and Wildlife
- U.S. Forest Service, Mt. Baker-Snoqualmie National Forest
- U.S. Fish and Wildlife Service, North Pacific Coast Ecoregion Western Washington Office
- University Representative (Rotates)

PROJECTS PREVIOUSLY FUNDED BY THE WILDLIFE RESEARCH PROGRAM

Year	Project Name	Amount
2025	How do beavers influence basal carbon sources and salmon growth rates in streams and tidal channels?	$64,827
2025	Lynx Habitat Use in the Face of Increasing Fire in the North Cascades (Amendment)	$50,000
2024	Assessing Winter Distribution of Wrangel Island lesser snow geese and impacts on resource use in the Skagit River Delta	$57,638
2024	Investigation of Increased Winter Coat Color Mismatch in Snowshoe Hare Due to Wildfire-Driven Earlier Snowmelt Timing in Post-Fire Forests	$29,653
2024	Lynx Habitat Use in the Face of Increasing Fire in the North Cascades	$25,000
2024	The Cascades Carnivore Monitoring Program	$60,000
2023	Bumblebee Community Composition and Phenology	$20,125
2023	Weaving snowshoe hares into the food web of climate-resilient forests	$46,608
2023	Relating Talus Characteristics to Habitat Use by Vulnerable Alpine Mammals	$68,335
2023	Life on the Edge: Large Mammal Pops on a Wolf Recolonization Frontier	$40,000
2022	Will Beaver Dam Analogs be an Effective Strategy for Ecosystem Function in Wildfire-Impacted PNW Watersheds?	$67,316
2022	Implications of wildfire and climate change on lynx habitat and populations	$29,000
2022	Will Beaver Dam Analogs be an Effective Strategy for Ecosystem Function in Wildfire-Impacted PNW Watersheds?	$27,695
2022	Fine-Scale Structure, Genetic Diversity, and Demography of Canada Lynx	$35,073
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2021	Impacts of Outdoor Recreation on Black Bears in the North Cascades Under Changing Climate	$42,337
2021	Wildlife Response to State Route 20, a Seasonally Closed Highway in the Skagit River Watershed Ecosystem	$13,674
2021	Implementing a Collaborative, Long-Term Monitoring Program for Wolverines, Canada Lynx, and Other Montane Carnivores	$18,000
2021	Climate Change in the North Cascades: understanding declines of riparian and alpine beetle ground beetles	$11,683
2021	Hybrid-Zone Movement in the North Cascades	$63,682
2021	Will Beaver Dam Analogs be an Effective Strategy for Ecosystem Function in Wildfire-Impacted PNW Watersheds?	$41,712
2020	Identifying Key Prey of Wolverine, Canada Lynx, and Cascade Red Fox	$15,498
2020	Estimating Population Density of Black-tailed Deer in Northwestern Washington	$39,042

Year	Project Name	Amount
2020	Relationships between fishers and mountain beavers in the North Cascades	$63,508
2020	North Cascades streamfly diversity and distribution	$23,626
2020	Long-term monitoring program for wolverines, Canada lynx, and other carnivores	$21,948
2019	Beaver Moderated Fire Resiliency	$14,537
2019	Visualizing Dynamic Spatial Priorities for a Biodiverse Cascadia	$41,250
2019	Mountain Goat Population - Reproduction and Juvenile Survival	$28,370
2019	Long-term Monitoring Program for Wolverines, Lynx and other Carnivores	$28,647
2018	Effects of Montane Carnivores on Marmot Declines in North Cascades National Park	$35,870
2018	Maximizing Restoration Success for Fishers in the North Cascades	$49,191
2018	Snowshoe hare population ecology in lynx-occupied areas of Washington	$20,194
2017	Fawn Fates: Survival and Recruitment of Black-tailed Deer Fawns in the Nooksack and Sauk Game Management Units	$41,562
2017	Mechanisms of Wood Decay in PNW Snags	$9,570
2017	Characterizing habitat connectivity and gene flow of the montane butterfly (*Parnassius clodius*) in the North Cascades	$7,000
2017	Landscape scale movement, habitat selection and resource tracking by the Clark's nutcracker, a conifer seed disperser	$42,360
2016	Determining the value of post-fire landscapes for American marten	$63,825
2016	Resilience of Alpine Mammals to Weather Anomalies Associated with Climate Change	$35,675
2016	Assessment of the Status and Distribution of Canada lynx in Washington: Largescale Camera Surveys in the Okanogan	$54,448
2015	Evaluation of Population Augmentation Scenarios for Mountain Goats (*Oreamnos americanus*) in the Cascade Range	$26,027
2015	Climate Change and Canada Lynx in the Cascades: building a better understanding of southern range dynamics of a threatened species	$26,234
2015	Interactions between wolves and cougars in NE Washington	$46,173
2015	Fine-scale habitat suitability for mountain goat restoration in the North Cascades	$15,594
2014	Do wolves indirectly affect deer neonate survival by suppressing coyotes?	$51,864
2014	Assessing biodiversity and connectivity of cold-adapted alpine insects	$10,000
2014	Methow Beaver Project	$31,000
2013	Climate Effects on Mesocarnivores	$24,052

Year	Project Name	Amount
2013	Wolverine Distribution and Ecology in the North Cascades Ecosystem	$32,400
2013	Investigating the Genetic Basis Of Climate Adaptation In The American Pika	$36,816
2013	Modeling Elk (*Cervus elaphus*) Highway Crossing Behavior	$4,835
2012	Wolverine Distribution and Ecology in the North Cascades Ecosystem – Argos satellite telemetry	$22,146
2012	Evaluating the Impacts of Hydroelectric Dams and Elevation Gradients on Amphibian Population Genetic Structure	$40,000
2012	Assessing Population Connectivity of American Pikas in the Cascades Using a Landscape Genetic Approach	$25,639
2012	Landscape Effects on Connectivity and Genetic Diversity of Cougar (*Puma concolor*) Populations in Washington	$6,471
2011	Ecology and Conservation of the Western Gray Squirrel (*Sciurus griseus*) in the North Cascades	$31,420
2011	Climate and Habitat Factors Affecting Pika Populations in the North Cascades National Park Service Complex: Year Three	$12,000
2011	Cascades Carnivore Connectivity Project: Year 3	$42,000
2010	Cascades Carnivore Connectivity Project: Year 2	$32,000
2010	Factors affecting pika population dynamics in the North Cascades National Park Service Complex	$32,000
2009	Canada Lynx Conservation in the North Cascades: habitat use of GPS marked animals.	$75,699
2009	The Cascades Carnivore Connectivity Project: Evaluating Habitat Connectivity for Carnivores in Washington's Cascade Mountains	$70,000
2009	Pilot Study on factors affecting pika population dynamics in the North Cascades Ecosystem	$57,920
2008	Wolverine Distribution and Ecology in the North Cascades Ecosystem	$47,950
2008	Factors Affecting Spotted Owl Persistence in Northwest Washington: A 20 year Retrospective	$64,000
2007	Lynx Cycles and Barriers: Evaluating dispersal versus climate change in flatlining populations	$20,000
2007	Identifying Key Habitats and Spatial Requirements of Mountain Goats in the North Cascades	$40,000
2007	Mountain Goat Conservation in the Washington Cascades: a Genetic Approach	$30,070
2006	Wolverine distribution and ecology in the north cascades	$32,270

Year	Project Name	Amount
2006	Clark's nutcracker habitat use and relative abundance in the Cascade range	$78,900
2006	Space use and habitat selection by dunlin in the Skagit river delta	$50,782
2005	Mountain goat sightability surveys	$32,625
2003	Grizzly Bear Outreach Project Evaluation	$49,952
2003	Mountain Goat Habitat Relations in the North Cascades	$59,137
2003	Potential impact of regulated flows on the life history and ecology of black cottonwood along the Skagit River	$58,771
2001	Avian Distributions and Habitat Relationships Across North Cascades National Park Service Complex	$44,200
2001	Macroinvertebrate Drift in Headwater Streams of the North Cascades	$39,052
2000	Grizzly Bear Presence and Population Estimate for the North Cascades	$25,000
2000	Species Identification and Genetic Differentiation Among Ranid Frog Populations in the Skagit River Watershed	$29,642
2000	Pilot Study to Develop a Long-term Landbird Monitoring Program at North Cascades National Park Service Complex	$20,000
2000	Macroinvertebrate drift in non-fish bearing streams within the North Cascades Ecoregion	$15,000
2000	Habitat Selection by Lynx in the North Cascades	$74,555
1999	Do Introduced Trout Reduce the Genetic Integrity of long-toed Salamanders in High Elevation Lakes	$51,667
1999	Grizzly Bear Presence and Population Estimate for the North Cascades	$61,331