

**FINAL LICENSE APPLICATION
EXHIBIT E**

APPENDIX T

WILDLIFE PROTECTION AND ENHANCEMENT PLAN

**WILDLIFE PROTECTION AND ENHANCEMENT PLAN
ANNOTATED OUTLINE**

**SKAGIT RIVER HYDROELECTRIC PROJECT
FERC NO. 553**

Seattle City Light

April 2023

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List of Acronyms and Abbreviations

BAS.....	Best Available Science
BMP	Best Management Practices
City Light.....	Seattle City Light
ESA.....	Endangered Species Act
FERC.....	Federal Energy Regulatory Commission
GIS	Geographic Information System
I&E.....	Information and Education
IGBC	Interagency Grizzly Bear Committee
NPS	National Park Service
O&M.....	Operations and Maintenance
PHS	Priority Habitats and Species
Project	Skagit River Hydroelectric Project
ROW	Right-of-Way
SRCC	Skagit Resource Coordinating Committee
SWAP	State Wildlife Action Plan
USFS	U.S Forest Service
USFWS	U.S. Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife
WSDOT	Washington State Department of Transportation

1.0 INTRODUCTION

This document describes Seattle City Light's (City Light) proposed Wildlife Protection and Enhancement Plan (Wildlife Plan) for the Skagit River Hydroelectric Project (Project or Skagit River Project), Federal Energy Regulatory Commission (FERC) No. 553. This Wildlife Plan will provide guidance for the management of wildlife species and habitats within the Project Boundary. The goal of this plan is to protect and enhance terrestrial wildlife species and their habitats, and to minimize effects of Project operations and maintenance (O&M) or new construction. Information obtained through the implementation of the Wildlife Plan will be used to inform decision-making regarding wildlife and wildlife habitats in an adaptive management context.

City Light will coordinate the efforts required under this Wildlife Plan with other license article obligations, including other Project resource management plans included in the new license.

2.0 PURPOSE AND SCOPE OF THE PLAN

This Wildlife Plan provides the best management practices (BMP) and procedures to avoid, mitigate, and minimize impacts of Project O&M and visitor use on wildlife resources. This Wildlife Plan will be effective for the term of the new license and is subject to annual reporting and periodic five (5) year review and updates in consultation with the Skagit Resource Coordinating Committee (SRCC).¹

City Light will coordinate the efforts required under this Wildlife Plan with other license article obligations, including other Project resource management plans included in the new license.

2.1 Goals and Objectives

This section will present goals and objectives for protecting wildlife species and protecting or enhancing wildlife habitat impacted by the Project. The primary goals of this Wildlife Plan are as follows:

- **Goal** – Protect and enhance terrestrial wildlife and their habitats in the ecosystem, and avoid, mitigate, and/or minimize impacts of Project O&M (including ground disturbance activities), and visitor use on non-avian² wildlife resources, including wildlife behavior and habitat connectivity.
 - Objective – Eliminate wildlife attractants in visitor use areas, townsites, at powerhouses, dams and other infrastructure, and work sites throughout the Project Boundary.
 - Objective – Integrate best available science (BAS) and follow BMPs for Project O&M activities and new construction projects to minimize wildlife disturbance and habitat modification.
 - Objective – Monitor select wildlife species of management concern in specific areas to assess Project O&M and new construction effects on wildlife movement and to inform adaptive protection actions.
 - Objective – Develop and implement a wildlife reporting program to document sightings of species of management concern (including early detection of non-native wildlife species such as bullfrogs) and track all wildlife mortalities documented within the Project Boundary.
- **Goal** – Comply with Endangered Species Act (ESA), and other regulatory requirements of the U.S. Fish and Wildlife Service (USFWS) and the Washington Department of Fish and Wildlife (WDFW).
 - Objective – Implement BMPs to minimize effects on listed wildlife species.
 - Objective – As necessary, conduct assessments for new construction projects.

¹ The Skagit Resource Coordinating Committee includes agency representatives that will collaborate regarding implementation and monitoring of this Wildlife Plan and contribute to adaptive management decisions.

² Avian species and habitats are addressed in City Light's Avian Species Protection Plan (City Light 2023a).

- **Goal** – Maintain or enhance habitat and populations of non-avian wildlife species of management concern to agencies, Indian Tribes, and Canadian First Nations.
 - Objective – Monitor amphibian populations at identified areas (e.g., spotted frogs and western toads at Ross Lake and on fish and wildlife mitigation lands) to track indices of use and to detect invasion by invasive wildlife species.
 - Objective – Incorporate wildlife considerations into shoreline erosion, wetland, and littoral habitat management actions outlined in City Light’s other management plans and measures.
 - Objective – Monitor wildlife use in areas treated for habitat enhancement through City Light’s efforts outlined in other measures.
 - Objective – Implement wildlife habitat enhancements³ by identifying target wildlife habitat to increase, maintain, or rehabilitate in the transmission line right-of-way (ROW) and other areas where City Light manages vegetation. At habitat management areas, document pre- and post-implementation wildlife habitat conditions and focus species use levels.
- **Goal** – Communicate with the SRCC at regular intervals to provide implementation updates, share data, and collaboratively update adaptive management strategies.

This plan will include BMPs consistent with implementation of the Historic Properties Management Plan (City Light 2023b) to avoid, minimize, or mitigate adverse effects to historic properties as required by the National Historic Preservation Act.

2.2 Geographic Area

The geographic scope of this Wildlife Plan is the area within the Project Boundary that supports wildlife species, except for the Project’s fish and wildlife mitigation lands, which will be managed pursuant to a Fish and Wildlife Mitigation Lands Management Plan (City Light 2023c).

2.3 Species Addressed

This Wildlife Plan will cover all non-avian species of wildlife and will be coordinated closely with the Avian Species Protection Plan (City Light 2023a). While all species are included in the protections of this Wildlife Plan, a focus will be on the wildlife species of management concern that are known to occur or have the potential to occur in the Project Boundary, and for which data collection, monitoring, and habitat enhancement may be performed. City Light will update this list every five (5) years based on review of updated agency species lists, information on species occurrence in the Project Boundary, and discussions with the SRCC. Wildlife species of management concern may include:

- **ESA Federally Listed or Proposed Species** – Species that are listed and protected under the ESA of 1973 as endangered or threatened or proposed for listing.

³ Implementation of vegetation management is addressed in City Light’s Vegetation Management Plan (City Light 2023d).

- **ESA Candidate Species** – Species that USFWS has sufficient information on their biological status and threats to propose them as endangered or threatened under the ESA, but for which development of a proposed listing regulation has not occurred because of other higher priority listing activities. Candidate species receive no statutory protection under the ESA. However, USFWS encourages the formation of partnerships to conserve these species.
- **WDFW Priority Habitats and Species (PHS)** – Species that are priorities for conservation and management. These include as endangered, threatened, sensitive,⁴ or candidates and species most in need of conservation action as reported in the State Wildlife Action Plans (SWAP; WDFW 2015) as Species of Greatest Conservation Need. This list includes species that are experiencing threats to their life history needs or habitats; few or low in abundance or distribution; or currently not rare but showing declines in abundance or habitat. The PHS list also includes vulnerable species habitats (e.g., heron rookeries and bat colonies) and vulnerable species of recreational, commercial, or Tribal importance.
- **U.S. Forest Service (USFS) Sensitive Species** – Species on the Regional Forester’s List of Sensitive Species for the Mt. Baker-Snoqualmie National Forest (USFS 2004). The Regional Forester’s List does not include species already protected under the ESA.
- **National Park Service (NPS) Management Priority Species** – Species that are categorized as “species that warrant particular management attention as determined by park management staff.” Select species from this extensive list are included as species of management concern, as advised in collaboration with NPS staff. Fourteen wildlife species of management concern documented are likely to occur or have potentially suitable habitat in the Project Boundary.
- **Culturally Important Species** – Species of particular importance to Indian Tribes and Canadian First Nations. This will include ungulates such as black-tailed deer (*Odocoileus hemionus columbianus*), mountain goat (*Oreamnos americanus*), elk (*Cervus canadensis*), and moose (*Alces alces*), forest carnivores; and other species indicated by the Indian Tribes and Canadian First Nations during plan development and implementation.

⁴ State endangered species include “a species native to the state of Washington that is seriously threatened with extinction throughout all or a significant portion of its range within the state.” State threatened species include any “species native to the state of Washington that is likely to become an endangered species within the foreseeable future throughout a significant portion of its range within the state without cooperative management or removal of threats.” State sensitive species are defined as “a species native to the state of Washington that is vulnerable or declining and is likely to become endangered or threatened in a significant portion of its range within the state without cooperative management or removal of threats” (WDFW 2021).

3.0 PLAN IMPLEMENTATION

Upon approval by FERC, this Wildlife Plan will be implemented in consultation with the SRCC. City Light will implement wildlife assessments and protection measures for routine O&M and new construction. This Wildlife Plan will inform and work in concert with City Light's Vegetation Management Plan (City Light 2023d), Invasive Plants Management Plan (City Light 2023e), and Roads, Trails, and Transmission Line ROW Erosion Management Plan (City Light 2023f) to incorporate wildlife protection and enhancement measures and identify habitat and wildlife metrics to gauge effectiveness of management actions. Implementation achievements and effectiveness monitoring will be reported to the SRCC annually and formal reports will be submitted to FERC every five (5) years. Additionally, changes will be incorporated to adapt management actions if new data indicate change is necessary. Implementation of this Wildlife Plan will include:

- Collect data regarding locations of wildlife use, habitat connectivity, locations for enhancement of habitat connectivity, and wildlife mortalities.
- Implement protective measures outlined in Section 3.3 of this Wildlife Plan, including the implementation of BMPs.
- Inform City Light's vegetation management crew to increase, maintain, or rehabilitate the quantity, quality, and diversity of wildlife habitat through treatments at select locations.
- Conduct annual reporting activities and consultation with SRCC and appropriate resource agencies.

3.1 Habitat Connectivity

This section will describe the data City Light will collect and synthesize to identify habitat connectivity, potential movement barriers or risks to wildlife, particularly near Project infrastructure, and locations where City Light actions can enhance habitat connectivity within the Project Boundary. Current habitat connectivity will be assessed through Geographic Information System (GIS) inspection of upland, wetland and riparian vegetation mapping (TR-01 Vegetation Mapping Study [City Light 2023g] and TR-02 Wetland Assessment [2023h]); Habitat Connectivity Analysis (Washington Connectivity Habitat Working Group 2023) data; and available information from Washington State Department of Transportation (WSDOT), NPS, Indian Tribes, and Canadian First Nations.

City Light will complement the GIS habitat analyses by monitoring ungulate and forest carnivore occurrence in suitable habitat near Project facilities within the Project Boundary using camera traps. The protocol and design of the camera trap program will be determined through consultation with the SRCC. Assessment results and potential enhancements and adaptive management decisions will also be determined through consultation with the SRCC.

3.2 Wildlife Observations

This section will describe City Light's protocol for reporting observations of species of management concern and wildlife mortalities within the Project Boundary. Data will be tracked via a GIS database that will provide a platform for City Light staff to report sightings of live and dead wildlife, and for compilation of monitoring data (e.g., camera trapping).

City Light will coordinate with NPS, WDFW, and USFWS regarding wildlife carcasses found in the Project Boundary. City Light will either report carcass locations to the agencies for collection or follow established protocols for collection and transfer to the appropriate agency. If a necropsy is performed, results will provide cause of death and inform possible associations with the Project- or visitor-related actions, and to support NPS contaminant exposure monitoring.

To track populations of spotted frogs documented at Ross Lake and western toads (*Anaxyrus boreas*) at Ross Lake, City Light will develop a protocol to survey locations with known occurrences and assess habitat conditions on a regular basis. This protocol will be developed in conjunction with the SRCC.

3.3 Wildlife Protections

3.3.1 Operations & Maintenance

This section will include BMPs for normal Project O&M and compliance with City Light's existing programs to minimize risk of environmental contamination and disturbance to wildlife and their habitats. Routine O&M activities include woody debris management on Project reservoirs, vegetation management throughout the Project Boundary, road and culvert maintenance, and basic maintenance of infrastructure. These BMPs will include the following:

- Implement City Light's existing Pesticide Reduction Program (City Light undated), spill prevention, and other environmental compliance and management programs;
- Follow WDFW and NPS management recommendations for proper bat management at Project buildings;
- Implement BMPs that minimize effects of loud Project equipment activities during critical times of year in select locations;
- Inform the application of specific BMPs based on wildlife species and habitat maps, and the O&M activities to be performed;
- Follow BMPs for City Light helicopter flights to reduce disturbance to wildlife, including buffer zones and timing considerations; and
- Additional BMPs as determined.

3.3.2 Operations and Public Access/Recreation

This section will describe the actions City Light will take to reduce impacts of staff and visitor activities related to Project operations, recreation, and miscellaneous public access at City Light facilities, townsites, and transmission line ROW. These actions include:

- Reduce wildlife attractants at City Light facilities by using Interagency Grizzly Bear Committee (IGBC⁵) approved bear-resistant trash cans and dumpsters;

⁵ The IGBC is a committee that supports recovery and delisting, and ongoing conservation of grizzly bear populations and their habitats in Washington, Montana, Idaho, and Wyoming state through interagency coordination of policy, planning, management, research, and communication (<https://igbconline.org>).

- Explore options to install wildlife crossing warning signs along select sections of public roads within the Project Boundary in coordination with NPS, WSDOT, and the counties;
- Manage bats using City Light structures utilizing management recommendations from agencies and BAS; and
- Additional BMPs as determined.

3.3.3 New Construction

This section will indicate BAS and associated BMPs for new construction. New construction involves substantial work (e.g., new structures, relocating a tower or section of Project road, significant construction of shoreline habitat treatments, bridges, or major culvert replacements, etc.) that would directly affect wildlife habitat or generate substantial noise for a significant period of time. All new construction projects will be assessed for regulatory compliance (e.g., ESA) and will follow conditions of permits to avoid or minimize effects. For each project, procedures and BMPs may include (but are not limited to) the following:

- Implement seasonal or daily time restrictions to avoid or minimize disturbance, when possible;
- Minimize vegetation modification and revegetate disturbed areas using native plant species beneficial to wildlife;
- Minimize impacts to wildlife corridors using BAS to inform siting of new facilities. Site-specific habitat and noise effects assessments would be conducted, as appropriate;
- Assess habitat suitability using BAS, mapped habitat, and siting locations in the proposed Action Area⁶ and, if appropriate, conduct pre-construction surveys to inform BMPs and determine regulatory requirements for additional survey or reporting; and
- Collaborate with SRCC on proposed BMPs at proposed sites to minimize disturbance or impacts to wildlife habitats or species of management concern.

3.3.4 Emergency Situations

This section will outline a procedure for emergency situations which are instances where there is imminent risk to human life, including a threat of fire hazard, mechanical failure, or power outage. City Light would make efforts to avoid direct effects and will communicate with appropriate agencies if these situations arise.

3.3.5 Training and Outreach

This section will describe employee training, and Information and Education (I&E) Program to inform visitors to Project facilities on wildlife protection. City Light will implement proactive and reactive measures to reduce anthropogenic effects to wildlife, including the following:

- Conduct annual trainings for employees and contractors on wildlife conflict reduction and other protection BMPs;

⁶ Action area includes all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR § 402.02).

- Coordinate with NPS and USFS to use signage and informational brochures at City Light facilities and recreation sites to educate visitors on practices to minimize effects to wildlife and wildlife habitat (e.g., trash, feeding wildlife, fishing lures, reporting observations); and
- Disseminate information to staff and visitors for reporting sick or dead wildlife observed in the Project Boundary to appropriate agencies.

3.4 Wildlife Habitat Enhancement

This section will describe the process for City Light's habitat enhancement planning and implementation to increase, maintain, or rehabilitate habitat within the transmission line ROW and other areas within the Project Boundary where City Light manages vegetation. Habitat enhancement targets will incorporate natural limitations of the landscape (e.g., slope, aspect, soil type), ownership and land uses, and Project facility and roadway safety considerations. These targets are anticipated to align with the specific land ownership and associated management goals and may be focused on habitats specific to wildlife species of management concern. Target locations of management areas within the Project Boundary and specific changes in vegetation to enhance habitats will be determined collaboratively with the SRCC. Enhancements will include connectivity to adjacent areas and will be measured by vegetation structure and species composition, as well as presence of snags, logs, and other habitat features. City Light will execute vegetation management treatments to enhance wildlife habitats through City Light's Vegetation Management Plan (City Light 2023d).

4.0 MONITORING, REPORTING, AND COMMUNICATIONS

This section will describe the monitoring efforts that will document progress towards the Wildlife Plan goals and objectives. The goals of monitoring are to determine the effectiveness of protection measures and wildlife habitat enhancements and to inform adaptive management updates to this Wildlife Plan.

4.1 Monitoring Protective Measures

City Light will include the following protection monitoring elements (See Table 4.1-1 for the anticipated schedule):

- Monitor ungulate and forest carnivore use of habitats near Project facilities via camera trapping program;
- Record wildlife mortalities in Project Boundary compiled from staff observations and synthesis with NPS and other agencies mortality information, including necropsy results that could inform potential Project- and visitor-related effects and need for modifying BMPs;
- Update database and GIS maps of study-based and incidental wildlife observations within Project Boundary and movement corridors near facilities;
- Update occurrence information for species of management concern from databases maintained by agencies and Indian Tribes and Canadian First Nations; and
- Additional measures as needed.

Table 4.1-1. Timeline of protection monitoring activities.

Timeline	Monitoring Activity
Within first year of license	Develop methods and locations for monitoring ungulate and forest carnivore movement in suitable habitats near Project facilities.
	Develop methods and locations to monitor wildlife habitat enhancements (to be performed through City Light's vegetation management) to measure wildlife use at management sites in the transmission line ROW.
	Develop monitoring protocol and locations to monitor special-status amphibians and western toad habitats and abundance.
	Collaborate with the SRCC to collect information on species and number of bats using structures if warranted.
Annually	Maintain a database to compile City Light wildlife study results and incidental observations of species of management concern, to inform movement corridors.
	Coordinate with agencies on wildlife carcasses found in the Project Boundary to support long-term monitoring of environmental contaminants.
Every three (3) years following license implementation	Monitor wildlife use at habitat enhancements within the transmission line ROW.
Every five (5) years following license implementation	Implement ungulate and forest carnivore monitoring.
	Obtain updated available location data for PHS and SWAP species and NPS Management Priority Species from agencies.
	Monitor amphibians at select locations.

4.2 Monitoring Enhancement Measures

City Light will monitor the progress of target habitat enhancements by measuring habitat structure, diversity, and suitability for wildlife within enhancement locations, including:

- Habitat connectivity, structural complexity in stream and wetland buffers, and cover and diversity of native plant species;
- Wildlife habitat suitability and use pre- and post-treatment on transmission line ROW and along reservoir shorelines; and
- Adaptive management will be applied to each implementation activity through monitoring using information gathered during City Light's relicensing study data as baseline.

4.3 Reporting

This section will describe the schedule and method for regular communications with the SRCC and submittals to FERC. City Light will report annually on documented Project-related mortalities, number of protection measures implemented, monitoring results during years when data is collected, and other pertinent issues. The report will also indicate activities planned for the upcoming two (2) years. Every five (5) years, City Light will file a report with FERC describing implementation and any proposed modifications to the Wildlife Plan based upon the results of monitoring and consultation with the SRCC.

4.4 Communications

This section will describe a process for making coordinated, timely, and informed decisions while implementing the Wildlife Plan, including how City Light will coordinate and communicate its Wildlife Plan implementation actions with the SRCC. Because of simultaneous implementation of multiple resource management plans (e.g., cultural, wildlife, fish, and aquatics), cross-resource communication will be necessary. An important goal of this communication will be to achieve a balanced integration of resource goals in the Project Boundary. Coordination processes may include:

- Clarifying resource goals, objectives, and priorities;
- Ongoing consultation with relevant resource groups and other entities;
- Sharing information used to make resource decisions; and
- Solving problems and resolving issues.

If City Light and WDFW, NPS, or USFWS collaboratively determine that revisions to this Wildlife Plan should be made, City Light will make any revisions in coordination and consultation with the SRCC.

4.5 Data Management

This section will detail specific protocols for updating and maintaining GIS maps and databases indicating habitats, monitoring locations, and wildlife presence. These will be updated with information collected from monitoring efforts, using licensing study information as a baseline.

Protocols will also include specifics for data sharing with agencies, Indian Tribes, and Canadian First Nations.

5.0 REFERENCES

- Seattle City Light (City Light). Undated. City of Seattle Pesticide Use Reduction Strategy. Office of Environmental Management. Undated Online URL: <https://www.seattle.gov/documents/Departments/ParksAndRecreation/PoliciesPlanning/pesticide%20reduction%20strategy.pdf>.
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