Jurisdictional Scan of Beaver Relocation Policy

HOLLY KINAS, MIISTAKIS INSTITUTE

Document prepared for the *Working with Beavers* project
2026

miistakis institute
APPLIED CONSERVATION RESEARCH

WORKING WITH BEAVERS

COWS & FISH
RIPARIAN MANAGEMENT SOCIETY

Table of Contents

Acknowledgements 2

Executive Summary 3

Introduction 8

Alberta Regulatory Context 9

Methods 10

Results – Key Jurisdictions 11

- California, United States of America 12
  - Context 12
  - Key Elements for Relocation 13
  - Lessons Learned for the Alberta Context 14
- Washington State, United States of America 16
  - Context 16
  - Key Elements for Relocation 16
  - Lessons Learned for the Alberta Context 19
- Scotland 21
  - Context 21
  - Key Elements for Relocation 23
  - Lessons Learned for the Alberta Context 25

Results – Additional Jurisdictions 27

Results – Resources 32

Recommendations for Beaver Relocation in Alberta 34

Conclusions 39

References 40

Appendix A: California 46

- Beaver Depredation Policy[27] 46
- *Beaver Restoration Project Proposal Form*[29] 51
- CDFW Beaver Restoration Program – Release Site Suitability Assessment[30] 55

Appendix B: Washington 57

- WAC 220-450-230: Beaver Relocation Permits—Requirements and Restrictions[36] 57
- RCW 77.32.585: Release of wild beavers 63
- Landowner Attestation Form [41] 65
- Release Site Suitability Assessment for Landowners [40] 66

Appendix C: Scotland 68

- Translocation Project Form from *The Scottish Code for Translocations – Best Practice Guidelines for Conservation Translocations in Scotland Version 1.1*[10] 68

Acknowledgements

Thank you to the following individuals for their valuable feedback and resources contributed throughout the development of this jurisdictional scan.

Molly Alves, California Department of Fish and Wildlife

Norine Ambrose, Cows and Fish (Riparian Management Society)

Elizabeth Anderson, Waterton Biosphere Reserve Association

Amy Berlando, Cows and Fish (Riparian Management Society)

Danah Duke, Miistakis Institute

Melanie Whalen, Calgary Wildlife Rehabilitation Society

Alexa Whipple, Methow Okanogan Beaver Project

We acknowledge the work of IUCN SSC Conservation Planning Specialist Group on Scotland's Beaver Strategy 2022-2045 (2022), from which direct quotations were used in this jurisdictional scan. All quoted material is cited in the text and included in the reference list.

Cover page photo credit: Tony LePrieur

This work was generously supported by the Alberta Ecotrust Foundation and Department of Fisheries and Oceans:

Fisheries and Oceans Canada

Pêches et Océans Canada

Executive Summary

Beavers are gaining recognition for the ecosystem services they provide such as water storage during droughts,[1] attenuation of flood peaks,[2] and supporting sustained water flow release later in the season.[3] By slowing water and trapping sediment, they significantly improve water quality[4] and quantity.[1,3] These processes help stabilize landscapes facing increasingly variable climate conditions and reduce wildfire risk by maintaining wetter, more fire-resistant habitats.[5] In addition, beavers create essential habitat for a wide range of fish and wildlife species. The provision of ecosystem services provided by beavers means they are truly a nature-based solution to climate change. This has led to a growing interest in beaver relocation, moving nuisance beavers from one area to another for environmental benefits and restoration of degraded stream systems.

The Miistakis Institute and Cows and Fish (Riparian Management Society) have been collaborating on the *Working with Beavers* project for over a decade, partnering with Alberta land managers (landowners, municipalities, First Nations communities, industry, provincial government agencies and non-governmental organizations) to realize positive watershed outcomes through increased awareness and participation in watershed restoration, providing training on coexistence tools, and researching new methods to support restoration and coexistence with beavers.

This jurisdictional scan is part of a 2025 Alberta beaver relocation pilot project aimed at navigating regulatory requirements, identifying best practices, engaging supportive communities, and ultimately relocating beavers to appropriate habitats. The scan includes a literature and policy review of beaver relocation/translocation practices from other jurisdictions to inform an appropriate approach for consideration in Alberta.

In Alberta, there is no specific policy addressing beaver relocation; however, beavers can be relocated using a research and collection licence strictly for research purposes. [6,7] However, unlike other species, there are no protocols for beaver handling and care.[8]

In this scan, we focus on three key jurisdictions that have established beaver relocation policies: two in North America (California and Washington states), and one in Europe (Scotland). For each jurisdiction a summary section outlines the relocation context and policies that then provide lessons learned for the Alberta context. Five other jurisdictions with relocation policies and three alternative relocation resources provide additional context.

The lessons learned for each key jurisdiction are summarized below.

CALIFORNIA

- **Policy Integration Enhances Impact**: California's beaver program is embedded in climate resilience policy, demonstrating the value of linking beaver restoration with broader goals including drought and wildfire mitigation. This approach also enables alternative funding channels for beaver coexistence and relocation work.

- **Structured Conflict Management**: A tiered policy that prioritizes non-lethal tools before any relocation or removal actions are taken offers a clear, ethical approach to managing conflicts.
- **Centralized Leadership**: California's Beaver Restoration Program manages all relocations, ensuring high standards, consistency, and coordination—an effective model to consider for other jurisdictions.
- **Landowner Engagement and Site Assessment**: California's stepwise process for evaluating relocation sites builds trust and ensures ecological suitability.
- **Pilot Projects**: Beginning with pilot projects allows lessons to be learned before scaling up towards long-term success.
- **Data-Driven Planning**: California invests in modelling, mapping, and surveying to understand beaver presence and guide decisions, prioritizing evidence-based decision-making.
- **Depredation Permits Linked to Relocation Opportunities**: Coordination of beaver damage (depredation) permit requests and relocation efforts provides a win-win—offering a non-lethal solution for some conflicts while supplying beavers for restoration.

WASHINGTON

- **Pilot-to-Policy Progression**: Pilot projects offer a valuable way to gradually develop a beaver relocation program by allowing processes to be tested, refined, and improved before full implementation—helping to mitigate risks and build stakeholder confidence. Washington's program followed this path, starting with a multi-year pilot (2019–2022) that demonstrated ecological benefits and operational feasibility. It ultimately led to formal adoption as state regulation (WAC 220-450-230).
- **Clear Regulatory Framework**: The program is grounded in specific legislation that outlines criteria for capture, care, release, accountability, and liability release—offering a model to ensure transparency and compliance.
- **Training and Permitting**: Washington builds capacity by only issuing permits to trained individuals for beaver relocation. They have developed a training and certification system to ensure relocators follow best practices, enhancing capacity. This expands the number of permitted relocators beyond government staff, an approach that leverages the expertise and commitment of certified organizations and individuals dedicated to advancing beaver conservation.
- **Habitat Suitability and Welfare First**: Strict criteria for site selection, health screening, and family group relocation prioritizes animal welfare and ecological success.

- **Landowner Consent and Community Engagement**: Landowners and neighbouring property owners must approve releases; building trust and reducing conflict.
- **Data-Informed Monitoring**: Although low-intervention, Washington's monitoring revealed strong early indicators of success, including increased surface water. Post-release monitoring to assess outcomes and adaptation as needed are critical components.
- **Relocation as a Conflict Mitigation Tool**: By tying relocation permits to conflict scenarios where mitigation has failed, Washington offers a regulated alternative to lethal control, within a hierarchical framework prioritizing coexistence.

SCOTLAND

- **A Comprehensive Beaver Strategy**: *Scotland's Beaver Strategy 2022–2045* [9] aligns conservation, mitigation, and research, emphasizing the need for coordinated, multi-sector planning.
- **A Hierarchical Management Approach**: Translocation is only considered in Scotland after accommodation and mitigation options are exhausted—offering a model for responsible decision-making especially when facing human-wildlife conflict.
- **Clear Licensing and Assessment Processes**: Scotland's licensing is guided by the *Scottish Code for Conservation Translocations* (based on IUCN standards), requiring detailed applications, stakeholder consultation, habitat assessments, and monitoring and mitigation plans.
    - The form provided by the *Scottish Code for Conservation Translocations* could be used as a beaver relocation pilot in Alberta.[10]
- **Animal Welfare and Post-Release Monitoring**: Scotland's protocols include mandatory disease screening, use of humane trap types, strict welfare standards, and long-term post-release monitoring.
- **Collaboration and Public Engagement**: *Scotland's Beaver Strategy 2022–2045* [9] was co-developed with 45 organizations and uses targeted stakeholder engagement. This collaborative model, including landowner outreach, lends to increased public trust.
- **Centralized Guidance and Resources**: NatureScot provides expert guidance, funding support, and standard operating procedures. A centralized body to coordinate expertise, permit oversight, and data-sharing enhances consistency, reduces duplication of effort, and supports more effective and transparent translocation outcomes.
- **Pilot Programs Towards Long-Term Success**: Scotland's early beaver reintroduction efforts—such as the Scottish Beaver Trial—provided critical data,

stakeholder insights, and public awareness that informed the development of its current national strategy. By starting with small, scientifically monitored projects, Scotland was able to test and refine policies, assess ecological and social outcomes, and build institutional readiness. Launching well-documented pilot programs allows for learning-by-doing, building public trust, and shaping effective long-term relocation policies grounded in real-world experience.

We combine and distill the lessons learned from each jurisdiction into recommendations for beaver relocation in Alberta (Figure 1).

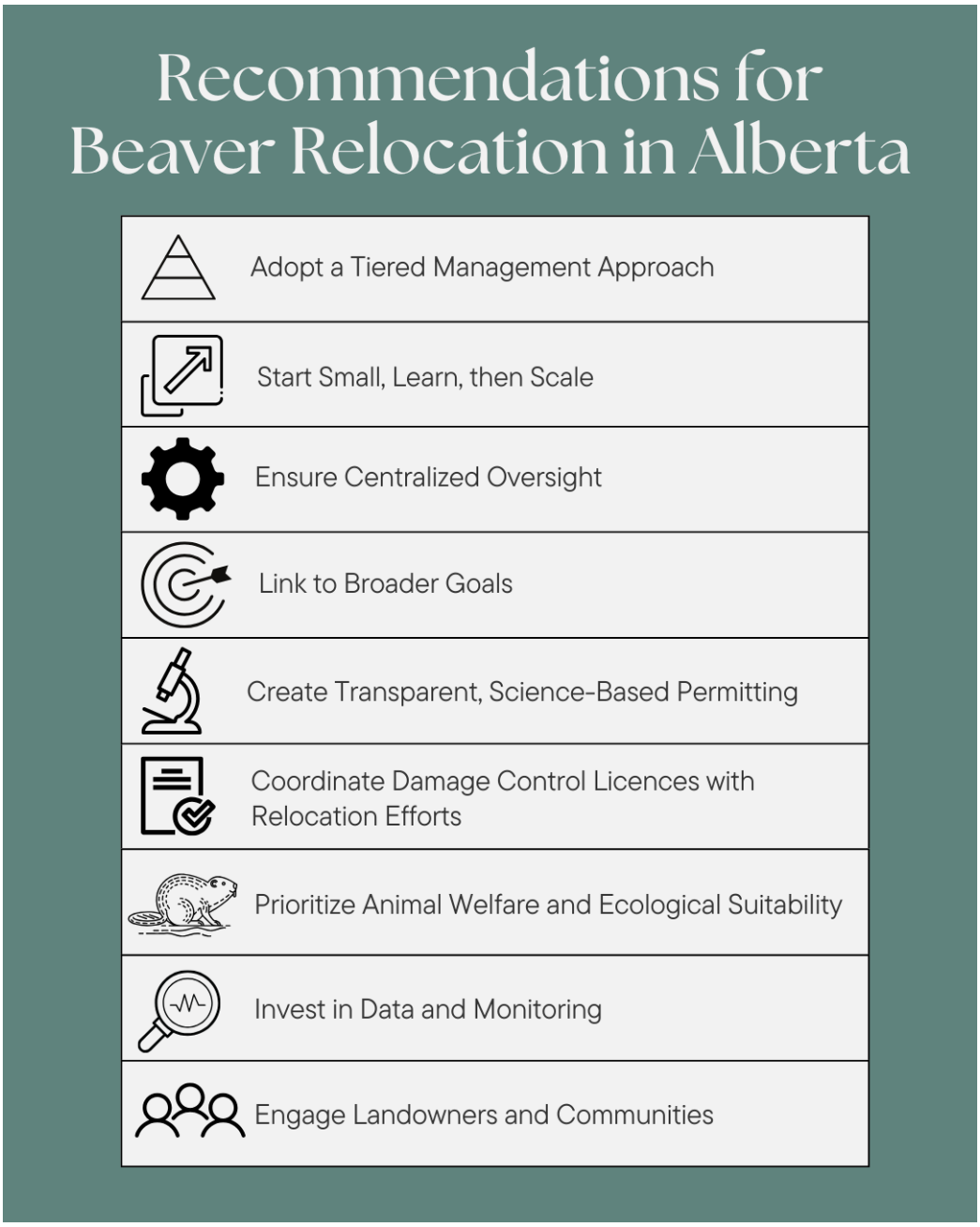


Figure 1: Recommendations for Beaver Relocation in Alberta

Insights from this jurisdictional scan, combined with pilot project results, will support updates to the *Alberta Beaver Beneficial Management Practices (BMPs)* that were developed to support beaver coexistence in Alberta. These outcomes will also be used to further refine and support recommendations for the Government of Alberta, advocating for improvements to the province's relocation policies and promoting the adoption of effective, evidence-based beaver relocation guidance and other beaver beneficial management practices in the province.

Introduction

Since the 16th century, beaver populations have been shaped by the fur trade and the widespread agricultural development that transformed much of North America. Indigenous Peoples of Turtle Island (North America) have held knowledge of the importance of beavers to healthy ecosystems since time immemorial. However, non-Indigenous peoples were less aware of their keystone importance, more recently labelling them as pests or nuisances at the human-beaver interface where conflicts such as flooding of infrastructure and crops often occur.

In Alberta, most of our beaver populations were lost during the fur trade era. It is estimated that the fur trade era resulted in a beaver population loss of 90-97% across North America.[11] There is common consensus that beaver populations are still only a fraction of what they once were. As a result, many streams in Alberta are still void of beavers and, where they are present, are often lethally removed due to conflict. Thus, Alberta is currently not fully realizing the ecological, social, and economic benefits afforded by the presence of beavers on the landscape.

Now, in the face of a global climate crisis, a shift has happened, and beavers are regaining recognition of the ecosystem services they provide. Beaver ponds naturally store water during droughts,[1] attenuate flood peaks,[2] and support the sustained release of flows later in the season.[3] By slowing water and trapping sediment, they significantly improve water quality[4] and quantity.[1,3] These processes help stabilize landscapes facing increasingly variable climate conditions and reduce wildfire risk by maintaining wetter, more fire-resistant habitats.[5] In addition, beavers create essential habitat for a wide range of fish and wildlife species.

Research has shown that beavers provide a value of $930 CAD per hectare of beaver-managed wetlands per year of ecosystem services including habitat and biodiversity provision, GHG sequestration, recreation, moderation of extreme weather events (floods and droughts), water purification, and increased water supply.[12]

With enhanced interest in beavers as a nature-based solution to climate change, there has been an upswell of interest in beaver relocation, moving nuisance beavers from conflict areas for environmental benefits in other areas. Landowners play a critical role in this process, both as potential recipients of relocated beavers and as key partners to ensure suitable habitat conditions, long-term site stewardship, and local community acceptance. The Miistakis Institute and Cows and Fish (Riparian Management Society) have been collaborating on the *Working with Beavers* project for over a decade, partnering with Alberta land managers (landowners, municipalities, First Nations communities, industry, provincial government agencies and non-governmental organizations) to realize positive watershed outcomes through increasing awareness and participation in watershed restoration, providing training on coexistence tools, and researching new methods to support restoration and coexistence with beavers.

As part of this work, and in response to an increasing interest in beaver relocation, we identified key challenges and gaps associated with implementing relocation as a viable management tool in Alberta. This jurisdictional scan is part of a 2025 Alberta beaver relocation pilot project aimed at navigating regulatory requirements, identifying best practices, engaging supportive communities, and ultimately relocating beavers to appropriate habitats. The scan includes a literature and policy review of beaver relocation/translocation practices from other jurisdictions to inform an appropriate approach to be considered in Alberta. Insights from this review will support the *Alberta Beaver Beneficial Management Practices (BMPs)* that were developed to support beaver coexistence in Alberta. The outcomes—combined with lessons learned during the pilot—will be used to develop recommendations for the Government of Alberta, advocating for improvements to the province's relocation policies and promoting the adoption of effective, evidence-based BMPs.

This jurisdictional scan builds on the Miistakis Institute's 2015 report *Beaver Restoration Across Boundaries.*[13] Since then, beaver relocation practices have evolved significantly, and this updated scan provides a current overview of beaver relocation policies and guidance from around the world, spanning local to national jurisdictions.

For the purposes of this report, we will be using the terms relocation and translocation interchangeably, respecting the terms favoured by each jurisdiction. We define relocation and translocation as the intentional, human-assisted movement of wildlife from one location to another.[14] Additional terms that are used include transplantation, reintroduction, and assisted migration.

Alberta Regulatory Context

In 2021, Miistakis created *Challenges to Using Beaver Coexistence Tools in Alberta*, a report focused on the barriers landowners meet when trying to coexist with beavers.[14] One of the tools highlighted in this report was relocation. We found that the greatest challenge to managing beavers using relocation in Alberta was a lack of guidance and criteria for proper, regulated action.[14] As described in the report, beaver relocations are occurring in Alberta without regulation and oversight, revealed through communications with landowners, municipal employees, problem-wildlife staff, trappers, and others.[14] Unregulated beaver relocation is concerning because it presents risks for the well-being of the individual animal, local beaver populations, and for the watershed it is introduced to.[14] There is also a social and economic risk, potentially introducing beavers to an area where they are not welcome or may cause infrastructure damage.[14]

In Alberta, beavers are managed as a fur-bearing species under the Alberta Wildlife Act. The Alberta Government webpage on beaver human-wildlife conflict[15] states:

> "Beavers may be hunted and trapped without a licence and during all seasons on privately owned land by the owner or occupant of the land, or by a resident with written permission from the owner or occupant of the land. Additionally, beavers may be trapped under a Fur Management Licence during an open trapping season or by someone who holds a Damage Control Licence (this can be issued from any Fish and Wildlife Office). A Damage Control Licence authorizes the removal of beavers outside of normal trapping seasons.
>
> It is against the law to disturb or remove a dam (if a lodge is nearby), den or lodge without a Damage Control Licence on both private property and Crown Land.
>
> In some cases, federal approval may be required to breach or remove a lodge or dam."[15]

There is no specific policy addressing beaver translocation in Alberta.[6] While the Wildlife Act and regulations allow for the movement of wildlife, it requires authorization through a Research Permit and Collection Licence.[6,7] There is no specific class protocol for beavers within a Research Permit and Collection Licence.[8] However, a Research Permit and Collection Licence would only apply in situations where the relocation was occurring for the purpose of research, and not for situations where relocation is intended for ecological restoration or conflict mitigation. Additional regulations and permits may apply in situations where the release site is located on First Nation's, municipal, provincial, or national lands or parks.

Applications for beaver relocation in-province are approved by the Government of Alberta's Fish and Wildlife staff on a case-by-case basis. There is currently no publicly available provincial guidance specific to beavers, including humane handling, considerations for disease or genetics, or requirements related to recipient waters, habitat, or neighbouring landowners—all of which are important factors to address when undertaking beaver relocation. However, the Government of Alberta does provide care protocols for other classes of species such as greater sage grouse, ungulates, and amphibians, within Research and Collection Licences.[8] We recommend developing a class protocol for beavers.

The absence of clear guidance for beavers, coupled with growing public interest in coexisting and working with beavers to support watershed health, prompted the revision of beaver relocation considerations within the *Alberta Beaver Beneficial Management Practices*.[16] It also informed the completion of this jurisdictional policy scan and the development of recommendations for the Government of Alberta—guiding safer, more effective beaver relocation practices that benefit both people and wildlife.

Methods

This jurisdictional scan was conducted using the Google search engine and a Mount Royal University Library search. Relevant resources occurred in the first three to five pages of results.

Search terms used:

- Beaver relocation policy
- Beaver relocation procedure
- Beaver relocation guidelines
- Beaver relocation best management practices
- Beaver relocation regulations
- Beaver translocation policy
- Beaver translocation procedure
- Beaver translocation guidelines
- Beaver translocation best management practices
- Beaver translocation regulations

An additional search was conducted using Perplexity and Scite with the following initial prompt:

- What jurisdictions have policy on beaver relocation or translocation?

After we completed the preliminary searches, we selected jurisdictions based on a combination of the following: existence of legislated policy, the amount of information they contained related to beaver relocation and expert opinion.

Results – Key Jurisdictions

Formal policies or guidance on beaver management is limited among jurisdictions. Where they do exist, they are typically oriented toward lethal control, reflecting an approach that frames beavers primarily as nuisance or pest species. Few jurisdictions endorse non-lethal coexistence strategies, and even fewer explicitly support or encourage beaver relocation. However, this is beginning to change. As public awareness grows and decision makers increasingly recognize the ecological and climate benefits of beavers, more jurisdictions are starting to develop beaver relocation policies and frameworks that reflect this shift in perspective.

Despite this emerging interest in relocation as a management tool, many jurisdictions and organizations continue to discourage or prohibit the practice due to a range of perceived and practical challenges. For example, Vermont (USA)[17], Nova Scotia (Canada)[18], and organizations such as the BC SPCA,[19] Western Beavers Cooperative,[20] and the U.S. Department of Agriculture Animal and Plant Health Inspection Service - Wildlife Services[21,22] discourage or prohibit relocation of beavers. This is due to perceptions or real concerns

around cost and difficulty, disease transmission, animal welfare (injuries or death related to capture, holding, and release), lack of suitable habitat, existing high beaver populations, human conflict at the release site, and low relocation success resulting from mortality, beavers moving from site, and/or project restoration objectives not being achieved.[17–22]

Whether relocating a single beaver or implementing a province-wide program, each effort must carefully address key considerations in advance. This underscores the need for clear policy and beneficial management practices and highlights the value of drawing on the experience of other jurisdictions to inform and strengthen Alberta's approach to successful beaver relocation.

We focused our scan on three jurisdictions that have beaver relocation policies in place: two in North America (California and Washington states) and one in Europe (Scotland). These jurisdictions have some of the most comprehensive guidance related to beaver relocation that has been developed following years of research, pilot projects, and advocacy and leadership from non-governmental organizations such as environmental non-profits or First Nations. For each jurisdiction, we provide a summary section outlining the relocation context and policies that is then used to provide lessons learned in an Alberta context.

In addition to the three focal jurisdictions, a summary table of five additional jurisdictions with some form of beaver relocation policy or guidance is provided (Table 1-2).

California, United States of America

Context

In California, beavers are classified as fur-bearing mammals and are subject to multiple Fish and Game Code (FGC) and California Code of Regulations (CCR) provisions. Recreational and commercial trapping of furbearers, including beavers, is prohibited. Landowners may apply for permits to address property damage (depredation) caused by beavers, but the use of non-lethal deterrents and exclusion methods is encouraged on their website by providing information and resources on coexistence solutions.[23] Depredation permits to kill beavers causing damage are available, but animals killed under such permits cannot be sold or shipped from the premises.[24] Additionally, legal killing of beavers must follow specific regulations regarding season, location, and bag limits. Any activity that alters a waterway, including modifying a beaver dam or lodge, may require a Lake and Streambed Alteration (LSA) Agreement from the California Department of Fish and Wildlife (CDFW). For further details on the regulatory context, please visit the California Department of Fish and Wildlife Beaver webpage.[23]

California is one of the jurisdictional leaders in beaver management, bridging gaps between conflict management, with an emphasis on coexistence, and beaver-based restoration. The California Department of Fish and Wildlife's (CDFW) management and conservation of beavers is closely linked to their use of nature-based solutions to achieve state climate goals. [23] In 2022, CDFW was tasked with creating a Beaver Restoration

Program (BRP), as part of Governor Newsom's *Initiative to Expand Nature-Based Solutions*, with the purpose of supporting habitat restoration and species conservation, restoring ecosystem function, and improving climate change, drought, and wildfire resilience throughout the state.[25] Funding for the BRP was approved by the California Legislature in 2022.[26]

In 2023, the CDFW implemented a Beaver Depredation Policy, formally issued by CDFW on June 5, 2023, as Departmental Bulletin 2023-02 (Appendix A). The policy mandates a tiered approach to beaver conflict management, prioritizing non-lethal deterrents and coexistence measures before lethal removal is considered.[27] It also supports coordination between California's Human-Wildlife Conflict Program and the BRP to facilitate translocation for restoration and reintroduction when appropriate. [27,28]

> "The overarching goals of the BRP are to improve human-beaver coexistence, gather a comprehensive understanding of where, when, and how beavers can be utilized to restore ecosystem processes and habitats in California, communicate those findings in clear and meaningful ways, and with that knowledge, effectively utilize beavers as a tool (i.e., nature-based solution) in restoring and conserving habitats and watersheds in California."[23]

Key Elements for Relocation

In California, only the BRP staff (CDFW) can relocate beavers. Landowners are able to receive relocated beavers; however they cannot apply to donate a beaver for relocation. Landowners with a beaver conflict submit a report to California's incident reporting system. Then, the BRP and Human-Wildlife Conflict Program staff work together to review these conflicts to identify beavers suitable for translocation projects, focusing on situations where coexistence tools are not appropriate or feasible.[23]

As of 2025, the program is continuing two translocation pilot projects, and anticipates conducting three types of translocation projects: [23]

- external requests on public and private lands,
- internal projects on CDFW lands, and
- CDFW-proposed or supported, large-scale/multi-landowner collaborations in priority watersheds.

The process for external landowner projects is as follows: [23]

1. The landowner must complete the *Beaver Restoration Project Proposal Form* [29] with land and project details (Appendix A).
2. CDFW conducts a release site suitability assessment[30] that includes a detailed site assessment, ground truthing, and an evaluation of habitat suitability and potential for conflicts and risks (Appendix A).

3. Each viable project will then have a capture and translocation plan created, consistent with CDFW's Conservation Translocation Policy.
4. Proposals are ranked and prioritized based on their potential ecological benefits. Not all projects will be viable or some may require remediation of issues (e.g., habitat improvements, conflict mitigation) or longer-term planning. Projects that are not selected in a given year will remain in consideration for subsequent years. [23]

CDFW sends out regular updates to a mailing list and posts to the Beaver Restoration Updates webpage. [31] They use this page and mailing list to connect with landowners and land managers interested in receiving translocated beavers and host workshops to walk them through the application process.[31] This video highlights the recent efforts of the beaver relocation program pilot projects.[23]

In addition to the relocation program, California's beaver conservation efforts include conducting research, funding projects that benefit beavers, and enhancing knowledge of their current distribution and range. [23] A mapping and observation survey is underway to improve understanding of beaver presence in the state, as no comprehensive population survey has been conducted to date. [23] Additionally, the Beaver Restoration Assessment Tool (BRAT), a model that determines beaver dam building potential, is being run for the State (Molly Alves, personal communication, July 2, 2025). In 2025, CDFW plan to release their comprehensive beaver management plan, which will include the results of their ongoing efforts.

Lessons Learned for the Alberta Context

- **Policy Integration Enhances Impact**: California's approach to beaver management is embedded in climate resilience policy, demonstrating the value of linking beaver restoration with broader goals including drought and wildfire mitigation. This also expands opportunities for funding beaver coexistence and relocation work.
- **Structured Conflict Management**: A tiered policy that prioritizes non-lethal tools before relocation or removal offers a clear, ethical approach to managing conflicts.
- **Centralized Leadership Ensures Consistency**: California's Beaver Restoration Program manages all relocations, ensuring high standards, consistency, and coordination—an effective model to be considered by other jurisdictions.
- **Landowner Engagement and Site Assessment**: California's stepwise process for evaluating relocation sites builds trust and ensures ecological suitability.
- **Pilots Support Long-Term Success**: Starting with pilot projects allows lessons to be learned before scaling up.
- **Data-Driven Planning**: California invests in modelling, mapping, and surveying to understand beaver presence and guide decisions, prioritizing evidence-based decision-making.

- **Depredation Permits Linked to Relocation Opportunities**: Coordinating beaver damage (depredation) permit requests and relocation efforts provides a win-win—offering a non-lethal solution for some conflicts while supplying beavers for restoration.

Washington State, United States of America

Context

The state of Washington recognizes the role beavers play in maintaining the health of their watersheds and supports the appropriate use of relocation as a tool as "a natural mechanism for improving the environmental conditions in Washington's riparian ecosystems without having to resort to governmental regulation or expensive publicly funded engineering projects." [32]

As with many other jurisdictions, Washington State manages their beavers as a fur-bearing species.[33] A trapping licence during an open, regulated season is required to trap and harvest beavers.[33] If a beaver is threatening human safety or causing property damage, the landowner (or employee) may live trap and relocate the beaver to another area of that property without a permit. However, a special permit is required for lethal trapping or for relocation to a different property and additional permits are required for removal or modification of a beaver dam (for regulatory details, visit the Washington Department of Fish and Wildlife (WDFW) beaver webpage).[33] Information on their webpage includes detailed information on beaver coexistence options and resources to avoid the need for relocation or lethal management.

Key Elements for Relocation

In Washington, individuals are trained by WDFW staff to conduct relocations and currently, there are six people with permits to relocate beavers in the state. [34] The WDFW issues beaver relocation permits to these approved relocators, allowing the capture, transport, housing, and relocation of beavers. [34]

Permits are only granted when non-lethal mitigation has failed or is not feasible, when beavers pose a public safety risk, or when other irresolvable issues exist.[34] The relocation of wild beavers in Washington is regulated to ensure ecological suitability and minimize nuisance issues.[35] The permits for relocation are issued by the WDFW governed by specific permit requirements and restrictions outlined in Washington state administrative code WAC 220-450-230[36] (WAC) (Appendix B). The program began as a pilot project in 2019 and transitioned to a permanent project when this WAC was enacted in December 2024,[34] after a public hearing and comment period.[37] The purpose of the beaver relocation permit is to allow citizens to relocate beavers while establishing criteria to: reduce lethal management, ensure humane care during the relocation process, and select suitable release sites to ensure success of the relocation. [36]

The WAC articulates clear requirements under the following categories: application requirements and general criteria; capture; housing and caretaking; release; and permit modification, suspension or revocation (Appendix B). [36]

Application requirements and general criteria

- Must have access to a beaver husbandry facility that meets minimum standards.

- Must complete comprehensive training on beaver relocation in Washington.[36] The 2022 curriculum for this program was developed by WDFW in partnership with Molly Alves with the Tulalip Tribes, Julie Nelson with the Methow Beaver Project, and Elyssa Kerr with Beavers Northwest.[38]
- Must submit a detailed relocation plan.
- Only beavers causing damage to infrastructure may be relocated.
- Must submit an annual report using the designated report form, submitted by the date listed on the permit. Some information required in the report includes
    i. documentation of captured beavers that are lactating,
    ii. daily log of beaver observations (disease or injury monitoring) while in captivity,
    iii. copy of Landowner Attestation Forms (Appendix B).
- Permittees cannot trap beavers within 2 miles of a permitted beaver relocation release site for two years after the release date.
- The permittee is responsible for performing the habitat suitability assessment following instructions on the WDFW-approved site assessment form (Appendix B), selecting the site for release, and ensuring that post-release monitoring is conducted by appropriately trained personnel.

Capture

- Captured beavers must be checked for lactation at the trap site as an indicator of kits, which must also be captured so the family can be relocated together.

Housing and caretaking

- Must be kept in approved beaver husbandry facility (subject to yearly WDFW inspection).
- Beaver(s) to be kept for less than 14 days.
- Reduce beaver conflict by housing distinct family groups separately.
- Minimize contact with humans and domestic animals.
- Observe daily for illness or injury.
- Requirements for humane euthanasia if necessary.
- Appropriate disposal of deceased beavers.
- Use of ear tags and passive integrated transponder (PIT) tags, or temporary marking (e.g., non-toxic paint) only.

Release

- Conduct a site evaluation of the property to receive beaver(s) and assess habitat suitability following WDFW protocols **prior** to capture, handling, and holding of beaver(s). The permittee may not conduct the capture before securing a release site for those animals.
- Select sites that meet the following criteria:
    i. No current sign of beaver occupancy within 610 m (2000 feet) both upstream and downstream of the site.
    ii. No culverts, buildings, or infrastructure that may be impacted by flooding or beaver structures within 610 m (2000 feet) both upstream and downstream of the site.
    iii. No sign of heavy livestock or native ungulate presence within 610 m (2000 feet) both upstream and downstream of the site.
    iv. Does not include transport of beavers across the boundary between Eastern and Western Washington.
    v. Site assessed for habitat suitability criteria listed in RCW 77.32.585 – Release of Wild Beavers[39] (see summary below with full details in Appendix B).
        1. Beavers can be released on public land or private lands with agreement from the property owner.
        2. WDFW may limit release to areas of the state where:
            - there is low probability of beavers becoming a nuisance or causing damage;
            - conditions exist for beaver to improve, maintain, or manage stream or riparian ecosystem functions; and
            - there is evidence of historic endemic beaver populations.
        3. WDFW may apply conditions to maximize relocation success or minimize risk, including consideration of stream gradient, water supply, stream geomorphology, adequacy of a food source, valley width, age of the beavers relocated, times of year for capture and relocation, requirements for the permit holder to initially provide supplemental food and lodge building materials.
- The permittee must get a signed Landowner Attestation Form from the release site landowner, land manager, or their designee before any beaver can be captured for release on the property. This includes an agreement to gain approval from neighbouring property owners within one mile downstream of the release site. A formal agreement with a government or

tribal land management agency is acceptable *in lieu* of a Landowner Attestation Form for releases on public or tribal land.

- Permittees may not be held liable for property damage caused by beaver released using a beaver relocation permit.

Landowners can apply to receive relocated beavers. The application includes a habitat suitability assessment to determine if there are enough resources for beavers as well as suitable stream conditions, low risk of human-beaver conflict, and protection from predators (Appendix B - *Release Site Suitability Assessment for Landowner [40]*).[34] If there is suitable habitat, the landowner must notify neighbours of their intentions and ask if they would accept beavers should they move onto their property.[34] If the neighbours agree, the landowner can then contact a permitted beaver relocator who will conduct their own habitat suitability assessment.[34] If the permitted relocator approves, the landowner must complete a *Landowner Attestation Form* (Appendix B) and follow the permittee's directions for the relocation.[34] The *Landowner Attestation Form* clearly states that the landowner receiving the beaver acknowledges the risks including potential beaver mortality, property damage, transfer of invasive species, and will not hold WDFW liable.[41]

In a status update (2019–2022), WDFW outlined the outcomes and lessons learned from the relocation permit pilot program.[38] From 2019 to 2022, 33 permits were issued in 17 counties, resulting in the relocation of 68 beavers that would otherwise have been lethally removed.[38] While long-term survival is difficult to monitor due to the program's low-intervention approach (i.e., no tagging), initial post-release monitoring shows a 60% likelihood of detecting beaver sign one month after relocation.[38] Preliminary GIS analysis indicates an 11% increase in surface water near release sites, suggesting positive ecological impacts.[38]

Lessons Learned for the Alberta Context

- **Pilot-to-Policy Progression**: Pilot projects offer a valuable way to gradually develop a beaver relocation program by allowing processes to be tested, refined, and improved before full implementation—helping to mitigate risks and build stakeholder confidence. Washington's program followed this path, starting with a multi-year pilot (2019–2022) that demonstrated ecological benefits and operational feasibility. It ultimately led to formal adoption as state regulation (WAC 220-450-230).
- **Clear Regulatory Framework**: The program is grounded in specific legislation that outlines criteria for capture, care, release, accountability, and liability release—offering a model to ensure transparency and compliance.
- **Training and Permitting Build Capacity**: Only trained individuals can relocate beavers under permit. Developing a training and certification system to ensure relocators follow beneficial practices allows for enhanced capacity. This not only adds to the permitted relocators provided by government staff, it also leverages the

expertise and commitment of certified organizations and individuals dedicated to advancing beaver conservation.

- **Habitat Suitability and Animal Welfare**: Strict criteria for site selection, health screening, and family group relocation prioritizes animal welfare and ecological success.
- **Landowner Consent and Community Engagement**: Landowners and neighbouring property owners must approve releases—building trust and reducing conflict.
- **Data-Informed Monitoring**: Although low-intervention, Washington's monitoring revealed strong early indicators of success, including increased surface water. Post-release monitoring to assess outcomes and adaptation (as needed) are critical components.
- **Relocation as a Conflict Mitigation Tool**: By tying relocation permits to conflict scenarios where mitigation has failed, Washington offers a regulated alternative to lethal control, within a hierarchical framework prioritizing coexistence.

Scotland

Context

Globally, there are two species of beavers: the Eurasian beaver (C*astor fibre)* and the North American beaver (*Castor canadensis)* that share similar ecological roles and behaviours.[42] This section focuses on the Eurasian beaver, a species native to Scotland but extirpated by the 16th century due to overharvesting for the fur trade.[9,42] While the ecological and regulatory contexts of beavers in Scotland and Alberta differ significantly, Scotland offers valuable insights, having emerged as a leader in best practices for beaver relocation.

Beaver reintroduction in Scotland began with feasibility assessments in the 1990s.[9] In 2009, the Scottish Government authorized the *Scottish Beaver Trial*, a scientifically monitored reintroduction project evaluating ecological, hydrological, and public health impacts.[9,43] Concurrently, unlicensed beaver releases were reported, prompting additional research that, along with international findings, informed the *Beavers in Scotland* report to government in 2015.[9,44]

In 2016, the Scottish Government committed to maintaining beavers in the wild, and in 2019, the Eurasian beaver was formally designated a European Protected Species in Scotland.[9] This was accompanied by a *Beaver Management Framework* addressing mitigation, licensing, and translocation.[9] In 2021, policy shifted to actively promote beaver translocation to support population expansion.[9,45]

In 2022, the *Scotland's Beaver Strategy 2022–2045* was launched, drawing on research and lived experiences to guide the restoration and management of an expanding beaver population.[9] The strategy outlines a long-term vision and 10-year action framework focused on conservation translocation, management and mitigation, and research and innovation. [9,45] Developed collaboratively by stakeholders from multiple sectors, the strategy is supported by 45 organizations.[45] and reflects both the aspirations and concerns of diverse interest groups.

Scotland's Beaver Strategy 2022–2045 outlines three main goals and associated actions (directly quoted as bullet points below) as they relate to beaver translocation.[9]

Goal 1: Ensure sustained support and funding for all aspects of beaver translocation efforts.

- *"Maintain commitments by NatureScot to fund and support strategic assessment and specific practical elements associated with conservation translocations (trapping, transport, captive care, health screening), together with associated mitigation."*
- *"Maintain NatureScot funding for pre-mitigation in planned translocation sites and post-translocation mitigation where needed."*

- *"Identify additional funding sources outside of NatureScot and government funding that could also be used to support those proposing beaver translocations and those affected by them."*
- *Publish conservation translocation case studies to inform the design of future projects."*

Goal 2: Develop a strategic and adaptive approach to beaver conservation translocations that maximize ecological benefits while minimizing conflict with people and biodiversity.

- *"Use spatial assessment tools to identify interests and ground-truth this analysis."*
- *"Identify and fill knowledge gaps for other species of interest to inform spatial analysis."*
- *"Clear prioritisation of potential translocation sites."*
- *"Publish call for expressions of interest from identified priority sites."*
- *"Provide support for those interested in submitting translocation proposals in line with strategic guidance in seeking funding and expertise where required."*
- *"Engage with landowners to source beavers for translocation."*
- *"Undertake thorough, proportionate stakeholder engagement at potential release sites in line with strategic guidance on translocations."*
- *"Conduct trapping at relevant landowner properties."*
- *"Create and integrate Standard Operating Procedures to safeguard welfare into all translocation applications, with reference to the review of wild beaver welfare in Scotland being conducted by SAWC (the Scottish Animal Welfare Commission)."*
- *"Apply disease screening based on existing DRA (Disease Risk Analysis) in translocation projects."*
- *"Integrate blood/tissue sampling into all translocations for genetic analyses and management with samples banked in a shared national public resource."*
- *"Integrate genetic data into planning for ongoing population management and future translocations, including from other European populations when required."*
- *"Ensure post-release monitoring included in translocation planning (immediately after release and follow-up, including data specifically to allow an audit of the impact of mitigation procedures on beaver health and welfare), in line with existing licensing procedures."*
- *"Incorporate clear exit strategy into all translocation plans in case something goes wrong (for beavers, other organisms, or humans)."*

Goal 3: Ensure a transparent, inclusive, and efficient translocation licensing process to build trust and engagement.

- *"Provide guidance to guide applications from appropriate and prioritized locations."*
- *"Produce clear, transparent guidance on what engagement is proportionate to a given translocation proposal for beavers."*
- *"Implement strategic assessment for proposed translocations into new catchments, in line with the Scottish Code for Conservation Translocations."*
- "Produce publicly available decision documents for beaver translocation licences as standard practice."

Key Elements for Relocation

Scotland's Beaver Strategy 2022–2045 is intended to be used together with the *Scottish Code for Conservation Translocations* (the Code), which is based on the *IUCN Guidelines for Reintroductions and Other Conservation Translocations.*[9] The Code gives guidance on when conservation translocations may be appropriate and the types of situations in which they may cause problems for wildlife, people, or the environment.[10] The Code also provides a translocation project form (Appendix C) for those interested in conducting translocation projects in Scotland.[10] To view a completed example of a conservation translocation proposal form for a beaver reintroduction project, see the Cairngorms Beaver Reintroduction Project's submission.[46]

Nature Scot, Scotland's nature agency, is responsible for issuing licences for beaver translocations [47] and conducting environmental assessments of translocations to new catchments.[48] Nature Scot outlines three situations in which translocation will be considered: [49]

1. Management translocation: Beavers causing negative impacts (e.g., human-wildlife conflict) requiring intervention.
2. Conservation translocation: Beaver relocation is proposed to support a conservation project (e.g., a reintroduction).
3. Welfare translocation: Beavers that are sick, injured, or orphaned are rescued and rehabilitated, then must be released at a location away from where they were found.

The *Interim guidance on NatureScot support for and assessment of beaver translocation projects* provides specific translocation guidance.[45] Any translocation application would be expected to include: [45]

- The *Scottish Code for Conservation Translocations* application form.
- An assessment of release site suitability, including how many beaver territories are planned to be accommodated and whether a single release or a series of translocations is planned. Applications that are of a strategic nature and consider

the potential for a program of beaver restoration in the wider catchment are preferred.

- A stakeholder consultation/engagement report.
- Where the application is not by the landowner, evidence of landowner permission(s).

Nature Scot is developing standard protocols for disease risk assessment, welfare during translocation, and post-release monitoring. [45] To support potential applicants, NatureScot has also published a decision notice for translocation licence application 241208, outlining the assessment process, alignment with the Scottish Code for Conservation Translocations, and any additional licence conditions beyond the standard requirements.[50] Details on release sites, trapping, health screening and tagging, and monitoring from this application are outlined here:

Release sites

- Are within previously assessed areas that need population increases and improved connectivity between populations.[50]
- Are low risk of human-beaver conflict.[50]
- Promote genetic diversity of the population.[50]
- Surveyed and found to be unoccupied by beavers. [50]

Trapping

- Trapping, transporting and releases must avoid kit dependency period (April 1 to August 16). [50]
- Bavarian beaver traps must be used to keep the beaver safe and secure until the relocators can collect it.[51] These are the only live trap type permitted for beavers in Britain due to welfare considerations.[51]
- Traps to be checked daily[51]
- Traps must include a sign indicating that it is a legally set trap, explain why it's being used, that it follows animal welfare guidelines, and includes contact information of the licence holder.[51]

Health Screening and Tagging

- Health screening of the beaver must be conducted following NatureScot's internal protocol.[50]
- The Beaver Trust, an organization that supports and translocate beavers in Scotland, outlines recommended health screening they undertake for translocation:
  - Beavers held at a purpose-built facility at Five Sisters Zoo. [51]
  - Weight and body measurements to determine age. [52]

        - Sexing. [52]
        - Fecal sample to test for diseases and parasites. [52]
        - Blood sample from tail, to test for genetics and diseases. [52]
    - Passive Integrated Transponders (PIT) must be inserted to monitor beavers post-release and to enable future, potentially *post mortem*, identification. [50,52]

  Monitoring (varies between projects)

    - Monitor beaver occupancy for 2–5 years post-release to assess survival and whether new territories are established.[50,53]
    - Relocation project managers regularly review monitoring data and provide lessons learned in reporting. [53]
    - Monitoring results are to be shared with adjacent landowners. [53]

Lessons Learned for the Alberta Context

- **Develop a Comprehensive Beaver Strategy**: *Scotland's Beaver Strategy 2022–2045* [9] aligns conservation, mitigation, and research, emphasizing the need for coordinated, multi-sector planning.
- **Adopt a Hierarchical Management Approach**: Translocation is only considered in Scotland after accommodation and mitigation options are exhausted—providing a model for responsible decision-making especially when facing human-wildlife conflict.
- **Establish Clear Licensing and Assessment Processes**: Scotland's licensing is guided by the *Scottish Code for Conservation Translocations* (based on IUCN standards), requiring detailed applications, stakeholder consultation, habitat assessments, and monitoring and mitigation plans.
    - The form provided by the *Scottish Code for Conservation Translocations* could be used for a pilot project for relocation in Alberta.[10]
- **Prioritize Animal Welfare and Post-Release Monitoring**: Scotland's protocols include mandatory disease screening, use of humane trap types, strict welfare standards, and long-term post-release monitoring.
- **Encourage Collaboration and Public Engagement**: *Scotland's Beaver Strategy 2022–2045* [9] was co-developed with 45 organizations and uses targeted stakeholder engagement. This collaborative model, including outreach to landowners, lends to increased public trust.
- **Provide Centralized Guidance and Resources**: NatureScot offers expert guidance, funding support, and standard operating procedures. A centralized body to coordinate expertise, permit oversight, and data sharing enhances consistency,

reduces duplication of effort, and supports more effective and transparent translocation outcomes.

- **Pilot Programs Build Foundations for Long-Term Success**: Scotland's early beaver reintroduction efforts, such as the Scottish Beaver Trial, provided critical data, stakeholder insights, and public awareness that informed the development of its current national strategy. By starting with small, scientifically monitored projects, Scotland was able to test and refine policies, assess ecological and social outcomes, and build institutional readiness. Launching well-documented pilot programs allows for learning-by-doing, building public trust, and shaping effective long-term relocation policies grounded in real-world experience.

Results – Additional Jurisdictions

Many other jurisdictions undertake beaver relocation with varying degrees of supporting policy and regulation. In Table 1 we include examples to highlight additional considerations.

Policies and practices are subject to change and may vary by project or permit conditions.

Table 1: Additional Jurisdictions with Beaver Relocation Policies or Guidance

Jurisdiction	Relocation Context	Relocation Insights
British Columbia, Canada	The Government of British Columbia, Ministry of Forests, Lands and Natural Resource Operations, Fish and Wildlife branch, authorizes all wildlife translocations and has a *Procedure Manual* in place.[54] However, it is unclear if this *Procedure* applies to beaver relocation as it is not explicitly stated. It is reasonable to assume that similar requirements would apply for beaver relocation applications. A provincial *Wildlife Act* permit and relocation plan are required by the Government of British Columbia.[55] Relocation will only be considered by the Government if an appropriate release site can be identified and confirmed by a wildlife biologist, and the Ministry of Environment accepts the relocation plan.[55] The City of Port Moody, British Columbia, Canada developed a beaver management plan in 2019, which includes relocation as a management technique. However it identifies relocation as a less favourable technique due to high beaver population numbers in the local area, low survival of relocated beavers, high probability of relocated beavers moving from release site, and the rapid recolonization of beavers at the conflict site.[55]	• Relocation in British Columbia is uncommon. • City of Port Moody, BC, included relocation as part of their beaver management plan. • A beaver relocation project was recently completed, moving nuisance beavers from Pass Creek to the lower Duncan floodplain.[56] After the project, project partners provided high-level documentation of their planning and permitting process as well as their relocation protocol.[56] Their permit application was submitted to Front Counter BC for the capture, handling and disease/parasite sampling of the beavers. *Wildlife Act* and Animal Care permits were granted and the project completed within the year.[56]

Jurisdiction	Relocation Context	Relocation Insights
Montana, United States of America	Montana Fish, Wildlife and Parks (FWP) regulates and permits beaver management in the state, including transplantation (i.e., relocation).[57] Relocation is seen as a last resort when beavers cannot naturally recolonize the site.[57] Only "FWP personnel or those authorized and subsequently supervised by FWP" can conduct relocation.[57] There is no formal policy in place for relocating beavers in Montana. However there was an approved Proposed Policy for a local restoration project that "outlines the procedures used in FWP-initiated projects" that could be applied as an example of conditions for beaver relocation in Montana.[57] *Beavers and Their Role in Riparian Restoration in Montana* was created in 2023 by Montana Fish, Wildlife and Parks (FWP) to guide, "individuals and organizations in Montana looking to undertake stream restoration that involves beavers, either as a short-term or long-term project component."[57] Specific requirements for relocation projects, including scenarios where they would be approved and protocols for relocation are outlined in the document's appendix.[57]	• There are five forms of beaver restoration considered in the document *Beavers and Their Role in Riparian Restoration in Montana*: conflict management, changes to land management, beaver mimicry, encouraging natural colonization, and beaver transplants (i.e., relocation). [57] • *Beavers and Their Role in Riparian Restoration in Montana* incorporates the Beaver Restoration Assessment Tool (BRAT) model and other surveys to help determine suitable beaver restoration sites.[57] • Beavers *and Their Role in Riparian Restoration in Montana* includes multiple decision-making flow charts, project planning and maintenance, and monitoring resources. It also includes detailed information on beaver-based restoration effects on other species. [57] • The Protocol for Translocation Beavers in Montana, described in *Beavers and Their Role in Riparian Restoration in Montana,* is one of the most robust publicly available protocols for relocation.

Jurisdiction	Relocation Context	Relocation Insights
New Mexico, United Stated of America	New Mexico Department of Game and Fish (NMDGF) created *Project Guidelines – Beavers in New Mexico: Coexistence and Relocation* in 2025, which outlines the benefits of beavers and strategies to coexist including the use of relocation.[58] The guidelines encourage the use of beaver coexistence strategies before relocation (i.e., a mitigation hierarchy). [58,59] Where coexistence is not feasible, the NMDGF supports relocation as part of a beaver conservation strategy in New Mexico and is the issuing authority for relocation permits.[58] NMDGF Conservation officers are responsible for assessing the situation to determine if relocation is a suitable option for a conflict situation. They will then determine if a relocation site is available and if so, will live trap the beavers and relocate them to the release site. [58] NMDGF biologists should be consulted before relocation occurs to address disease risk and impacts on species at risk.[58] NMGFD has an interest in short- and long-term monitoring of relocation success and effects.[58]	• Guidelines outline the benefits of using beaver mimicry (beaver dam analogues and post-assisted log structures) and willow plantings to restore degraded systems. This promotes natural beaver recolonization and provides functional habitat for relocated beavers.[58] They also explain that having a conservation-orientated grazing management plan in place can support beavers and riparian restoration.[58] • New Mexico has several beaver organizations that operate in the state and support beaver coexistence efforts — Defenders of Wildlife and the New Mexico beaver project.[58] • Defenders of Wildlife have created a Beaver Habitat Mapper, a statewide interactive map to support land managers in coexistence and relocation efforts.[58,59] • Guidelines highlight the importance of release site criteria such as neighbourhood support, low-gradient streams, unconfined valleys, abundant food and building materials, persistent water availability, no current beaver occupancy, and avoiding saline areas.[58]

Jurisdiction	Relocation Context	Relocation Insights
		• Having clear and concise guidelines from the state game and fish department supports implementation of beaver management hierarchy and builds public trust and understanding.
Oregon, United States of America	The Oregon Department of Fish and Wildlife (ODFW) is the permitting authority for beaver relocation in the state.[60] They created *Requirements for Relocation of Beaver in Oregon* that clearly outlines the regulatory process as well as detailed requirements and recommendations (beneficial management practices) for capture, release, and handling and transport, to improve relocation success.[60] The document also includes the *Application and Post-Release Monitoring Report*, and *Beaver Capture/Handle Report* forms, all of which are required to obtain a relocation permit, called a *Live Trap and Transport Permit.*[60] In 2023, ODFW created a 3-year action plan "to advance the protection and restoration of beaver habitat and beaver-modified habitat" across the state.[61] They have mapped specific areas where they plan to implement various actions outlined in the document.[61] In June 2025, Oregon Senate formally recognized the restorative role beavers play in ecosystems by passing a House Bill to close beaver hunting and trapping on impaired public lands waterways; relying on beaver as a means to restore these waterways.[62] The City of Portland created their own Beaver Management Plan that includes relocation as a management option.[63] The	• ODFW created a 10-page, publicly available document that clearly outlines the regulatory process as well as detailed requirements and recommendations for capture, release, and handing and transport.[60] They also provided the required forms for permit application (including site assessment) and reporting within this document.[60] • ODFW encourages relocation applicants to work with local Watershed Councils or other groups that have experience or projects relocating beavers in the area.[60] • The relocation permitting process is flexible, allowing for single permits, or abridged processes in long-term relocation programs.[60] • City of Portland, OR, provides a good example of relocation being included as part of a beaver management plan. They have created a 5-year translocation pilot program.

Jurisdiction	Relocation Context	Relocation Insights
	plan aligns with state beaver regulations and relocation requirements.[63] The City also partnered with ODFW and others to conduct a pilot beaver translocation program and run a holding facility.[64]	
Utah, United States of America	Beavers are classified as protected wildlife in Utah, with an open trapping season from October to early April.[65] Removal of damage-causing beavers is allowed year-round under permit from the Utah Division of Wildlife Resources (UDWR), who is responsible for beaver management in the state.[65,66] The state has a Beaver Management Plan that provides direction for beaver management "and where appropriate expand the current distribution to historic range."[65] Utah State University runs a *Beaver Ecology & Relocation Collaborative* program to support relocation efforts and conduct research to improve relocation success.[67]	• Relocation is included as a tool for watershed restoration in the Utah Beaver Management Plan.[65] *The Protocol for Live Trapping, Holding and Transplanting Beaver* was developed and nuisance beavers have since been successfully relocated to watersheds throughout the state.[65] Relocation as an objective for watershed restoration also includes the use of the Beaver Restoration Assessment Tool (BRAT) to assist in site selection to improve relocation success.[65] They also encourage conservation-oriented grazing management within beaver habitat, among other recommendations.[65] • Utah State University's *Beaver Ecology & Relocation Collaborative* program supports relocation efforts by offering live trapping, transport, care, and release of nuisance beavers, and has a specialized transport trailer and holding facility called the Beaver Bunkhouse.[67]

Jurisdiction	Relocation Context	Relocation Insights
		The program also conducts research on improving relocation success conducted by Utah State University.[67] • The specified relocation trailer can be used for holding and transporting beavers for projects far from the bunkhouse and for out-of-state relocation projects.[68] • UDWR requires a 72-hour quarantine period for relocated beavers to reduce the risk of spreading disease and to ensure entire families are captured.[68]

Results – Resources

In addition to information provided in each of the jurisdictions in this review, Table 2 highlights several key resources and organizations that provide guidance on beaver relocation, offering practical protocols, lived experience, and lessons learned.

Table 2: Beaver Relocation Resources

Beaver Relocation Resource	Relocation Insights
Beaver Restoration Guidebook[69]	A highly regarded resource for all aspects of beaver management. This resource has been mentioned by multiple jurisdictions and organizations as an important resource. Chapter 5 focuses on beaver relocation.
Methow Beaver Project[70]	This is considered to be one of the largest and most successful relocation projects in North America.[57]

Beaver Relocation Resource	Relocation Insights
	Includes a widely used Habitat Scoring sheet, *Methow Beaver Project Release Site Score Card*, for release site selection (page 59 of the Beaver Restoration Guidebook).[69] Contributed to the development of The Beaver Restoration Guidebook Version 2.02, where they outline many relocation protocols.[69] The Methow Beaver Project is based in Washington State, where they are one of a few permitted beaver relocators. [34] The project uses a fish hatchery as their beaver holding facility.[70] All beavers are weighed, measured, and PIT tagged.[70]
Beaver Trust[51]	Located in the United Kingdom, the Beaver Trust is one of the world's leading organizations on beaver reintroduction and animal welfare, with staff that have published research on aspects of beaver relocation such as *captive care and welfare considerations for beavers.*[71] The Beaver Trust participated in the development of Scotland's Beaver Strategy 2022–2045.[9]

Recommendations for Beaver Relocation in Alberta

Drawing on experience from leading jurisdictions such as California, Washington, and Scotland, this section provides key recommendations to inform and guide the development and application of a beaver relocation strategy in Alberta. These lessons highlight the importance of structured, science-based, and collaborative strategies that prioritize animal welfare, ecological integrity, and community engagement. We further identify the key roles played by state or provincial fish and wildlife agencies in creating plans, guidelines, and/or protocols to guide beaver management and riparian restoration. Albertans are ready for the province to lead development of a beaver management approach and the following recommendations will support Alberta in creating a thoughtful, effective, and scalable framework for beaver translocation.

1. **Adopt a Tiered Management Approach**

   The jurisdictions reviewed emphasize a management decision hierarchy: promote coexistence first, then consider relocation, with lethal removal as a last resort. The *Alberta Beaver Beneficial Management Practices* provide information regarding available beaver management tools with the goal of improving implementation of beaver coexistence tools in Alberta, such as pond levellers, culvert protectors and tree wiring.[16]

   We recommend developing a framework such as a beaver management plan that clearly articulates a tiered management approach. A beaver management plan could be created at any decision-making level including federal, provincial, regional (by way of the Alberta Land Stewardship Act[66] or other legislation), municipal, or community.

   This approach models responsible and transparent decision-making, while reducing human-wildlife conflict and the use of lethal control.

2. **Start Small, Learn, then Scale**

   Pilot projects are a critical first step for testing relocation procedures, refining policies, and building stakeholder trust. All three jurisdictions—California, Washington, and Scotland—used pilot efforts as a foundation for broader strategies or formal regulations. Alberta should adopt a similar approach by documenting lessons learned from early relocations to guide the development of a comprehensive, long-term Beaver Management Strategy.

3. Ensure Centralized Oversight

A dedicated provincial body or program ensures consistent standards, guidance, data collection, and permit management. Alberta would benefit from a coordinating, centralized authority that considers the following options:

a. Relocations are conducted by Alberta Fish and Wildlife staff
    - A F&W Maintains control of relocations. Ensures high standards, consistency, and coordination.
    - This position or team would be responsible for all beaver relocation efforts in the province, leading to efficiencies and clarity in the program implementation for government staff in multiple departments and landowners applying to donate or receive a beaver.
    - Funding would be required to support a provincial program, leading to job creation.
    - Supports a streamlined site assessment process for the province.

b. Relocations are conducted by approved and trained organizations or individuals
    - A provincial training and certification system would ensure that relocators follow best practices.
    - This would also allow for enhanced capacity by increasing the number of permitted relocators beyond government staff while leveraging the expertise and commitment of certified organizations and individuals dedicated to advancing beaver conservation.
    - Permit conditions would need to be clearly outlined by the Government of Alberta to ensure permit applications have the required information and considerations.
    - Each application is reviewed and approved by the Government of Alberta, who holds decision-making authority on granting permits.

c. Relocations are conducted by organizations or individuals under conditions identified in a permit
    - Permit conditions would need to be clearly stated by the Government of Alberta to ensure permit applications have the required information and considerations.
    - Each application is reviewed and approved by the Government of Alberta, who holds decision-making authority on granting permits.

Additional considerations for centralized oversight include:

a. Consider developing a centralized, digital Damage Control Licence (DCL) system that streamlines the application process for landowners while

enabling a provincial beaver team to review requests and respond with consistent, informed recommendations. Examples include tiered management approach, coexistence tools, relocation opportunities, or issuing a lethal Damage Control Licence when necessary.

b. A digital platform would improve efficiency, ensure consistency across the province, and reduce the administrative burden. Additionally, it could notify permitted relocators of DCLs issued near potential release sites, creating a valuable opportunity to identify candidate beavers for relocation efforts, turning conflict situations into restoration opportunities.

4. Link to Broader Goals

Embedding beaver restoration in climate resilience, biodiversity, and water management objectives—like in California and Scotland—can unlock funding, raise political and public support, and increase relevance to Alberta's environmental goals (e.g., drought, flood, and wildfire mitigation).

5. Create Transparent, Science-Based Permitting

Scotland's licensing follows IUCN guidelines and includes clear application requirements, stakeholder consultation, and animal welfare protocols. Alberta could use the Scottish process—particularly the translocation form (Appendix C)—as a model for pilot projects. Alberta could also undertake a similar guideline development process, as outlined in *Scotland's Beaver Strategy 2022–2045,*[9] to create guidelines tailored to Alberta.

Additional recommendations related to permitting:

a. A clear framework that outlines criteria for capture, care, release, accountability, and liability to ensure transparency and compliance.

b. Policies can include liability releases to protect the province, as seen in Washington State and other jurisdictions.

c. Within Research and Collection Licences the Government of Alberta provides care protocols for classes of species such as greater sage grouse, ungulates, and amphibians.[8] We recommend developing a class protocol for beavers as one currently does not exist.

d. Improve language clarity related to beaver management on the Government of Alberta's Human-wildlife Conflict – Beavers webpage.[15] For instance, in the sentence: "It is against the law to disturb or remove a dam (if a lodge is nearby), den or lodge without a Damage Control Licence on both private property and Crown Land."[15] The term "nearby" needs to be defined. We

recommend that "nearby" be defined as a set distance upstream (Washington State specifies 610 m [2000 feet]) or within the same waterbody.

6. Coordinate Damage Control Licences with Relocation Efforts

Both California and Washington State tie depredation (damage) permits to potential relocation opportunities, turning conflict situations into restoration benefits. Alberta could adopt a similar dual-purpose system. Below we suggest some considerations for sourcing beavers used in relocations:

a. Source beavers from areas of conflict where mitigation, such as pond levellers or culvert protectors, is not feasible. This could include sites where conflict has been reported by the landowner or in Wildlife Damage Control Licences by regional Fish and Wildlife officers.

b. At the 2024 BeaverCon conference, hosted by the Beaver Institute, there was a panel discussion on beaver relocation and translocation. Panelists were asked how they source nuisance beavers[72]. Most of the panelists, spanning seven different jurisdictions, responded that the governing agency who issues nuisance removal licences contacts the relocator, or less frequently, the landowners themselves will contact the relocator.[72] The Government of Alberta could adopt a process where Damage Control Licences are considered as source beaver populations for relocation programs.

7. Prioritize Animal Welfare and Ecological Suitability

All jurisdictions require strict health screening, family group relocation, and careful site selection. Alberta should embed these best practices to ensure welfare and ecological success. The *Alberta Beaver Beneficial Management Practices*[16] will include considerations for relocations following completion of a pilot relocation project in 2026.

8. Invest in Data and Monitoring

Mapping, site assessments, and post-release monitoring are critical for evaluating success and adapting policy. Alberta should support knowledge building and commit to tracking ecological outcomes. Examples of this could include:

a. Conducting Alberta-wide assessment of potential beaver habitat or dam-building capacity using tools such as the Beaver Restoration Assessment Tool (GIS-based, dam-building capacity model).

b. Data-Informed Monitoring. For example, Washington's monitoring revealed strong early indicators of success, including increased surface water. Alberta

should include post-release monitoring in its program to assess outcomes and adapt as needed.

9. Engage Landowners and Communities

Scotland, California, and Washington State require landowner and neighbouring landowner consent, fostering collaboration and transparency. Alberta should consider adopting an engagement model where relocation permittees obtain landowner and neighbouring landowner permissions at release sites to ensure social acceptance and reduce future conflicts.

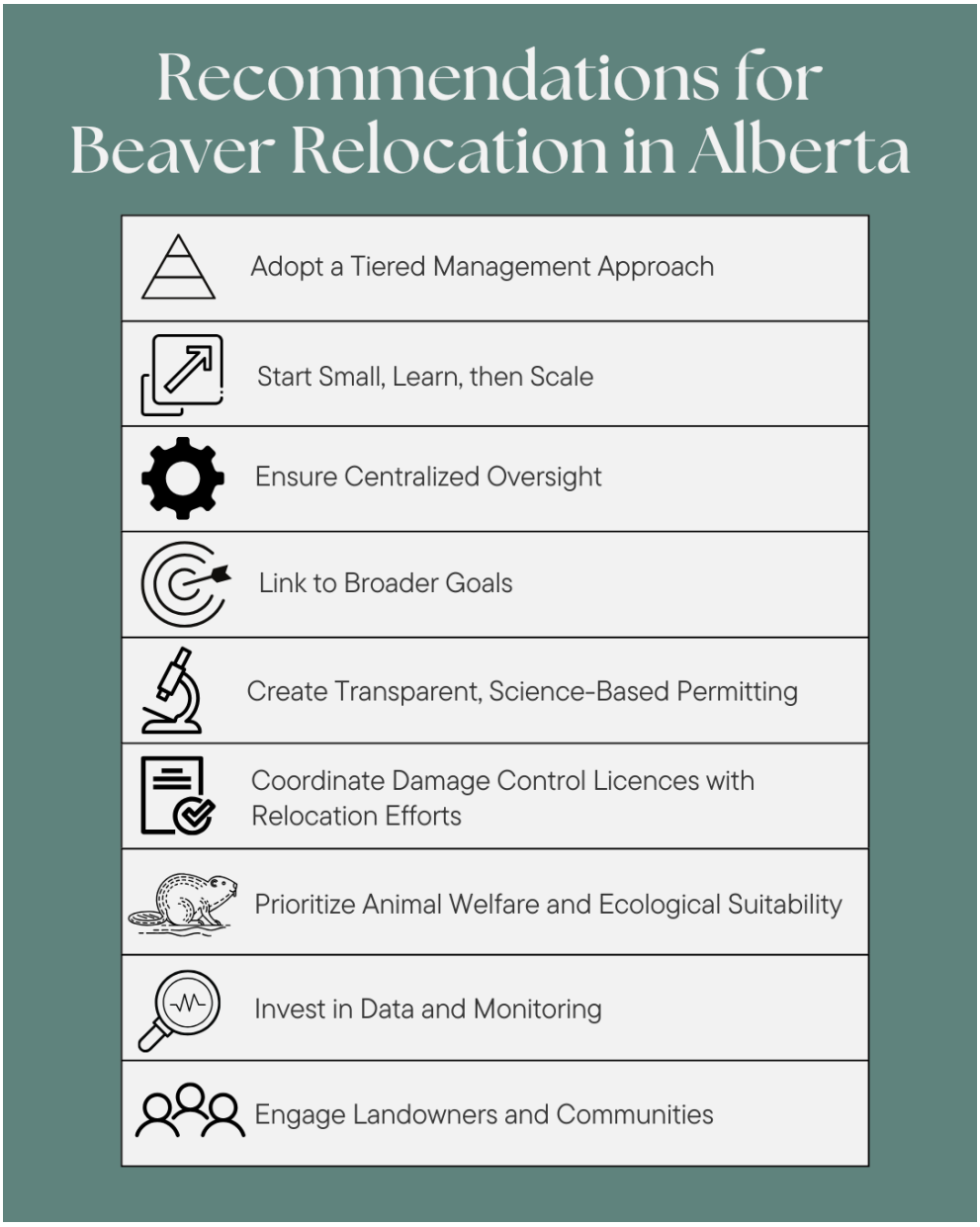


Figure 1: Recommendations for Beaver Relocation in Alberta

Conclusions

There is increasing interest in beaver relocation in Alberta. This is driven by growing recognition among land managers of the ecological benefits beavers provide such as drought resilience and wildfire mitigation, as well as public demand for non-lethal management alternatives.

Despite existing regulations that discourage relocation, it is occurring without oversight or authorization, raising concerns for both ecosystem integrity and public trust. Improved regulation that is clear, consistent, mutually beneficial and accessible could stop this. Whether relocating an individual beaver or launching a province-wide program, careful planning of capture, care, release, and long-term accountability is essential. This underscores the need for clear policy direction and beneficial management practices grounded in science and the experiences of other jurisdictions.

The lessons from this jurisdictional scan suggest that a successful Alberta beaver relocation policy should be strategic, science-based, animal welfare-focused, and co-developed with stakeholders from the outset.

References

1. Hood GA, Bayley SE. Beaver (Castor canadensis) mitigate the effects of climate on the area of open water in boreal wetlands in western Canada. *Biol Conserv*. 2008;141(2):556-567. doi:10.1016/j.biocon.2007.12.003
2. Westbrook CJ, Ronnquist A, Bedard-Haughn A. Hydrological functioning of a beaver dam sequence and regional dam persistence during an extreme rainstorm. *Hydrol Process*. 2020;34(18):3726-3737. doi:10.1002/hyp.13828
3. Westbrook CJ, Cooper DJ, Baker BW. Beaver dams and overbank floods influence groundwater-surface water interactions of a Rocky Mountain riparian area. *Water Resour Res*. 2006;42(6):1-12. doi:10.1029/2005WR004560
4. Puttock A, Graham HA, Cunliffe AM, Elliott M, Brazier RE. Eurasian beaver activity increases water storage, attenuates flow and mitigates diffuse pollution from intensively-managed grasslands. *Science of the Total Environment*. 2017;576:430-443. doi:10.1016/j.scitotenv.2016.10.122
5. Fairfax E, Whittle A. Smokey the Beaver: beaver-dammed riparian corridors stay green during wildfire throughout the western United States. Published online 2020. doi:10.1002/eap
6. Stepnisky D. Beaver Management and Regulation in Alberta. In: *Putting Beavers to Work for Watershed Resiliency and Restoration Symposium*. Alberta Environment and Parks; 2017:12. https://www.rockies.ca/beavers/files/Stepnisky_Beaver Workshop Presentation_Dec7_2017_posting version.pdf
7. Alberta Environment and Parks. *Wildlife Research Permit and Collection Licence Background and Interpretation*.; 2020. Accessed July 23, 2025. https://open.alberta.ca/dataset/6a4af093-2405-48dc-a003-fba3685effd7/resource/9356d4ab-c64a-40ab-b823-3eb053fadde2/download/aep-wildlife-research-permit-and-collection-licence-background-interpretation-2020.pdf
8. Government of Alberta: Environment and Protected Areas. Wildlife research and collection. 2025. https://www.alberta.ca/wildlife-research-and-collection
9. IUCN/CPSG. *Scotland's Beaver Strategy 2022-2045*. IUCN SSC Conservation Planning Specialist Group; 2022.
10. National Species Reintroduction Forum. *The Scottish Code for Conservation Translocations - Best Practice Guidelines for Conservation Translocations in Scotland Version 1.1*.; 2014.
11. Naiman RJ, Melillo JM, Hobbie JE. Ecosystem Alteration of Boreal Forest Streams by Beaver (Castor Canadensis). *Ecology*. 1986;67(5):1254-1269. https://www.jstor.org/stable/1938681
12. Thompson S, Vehkaoja M, Pellikka J, Nummi P. Ecosystem services provided by beavers Castor spp. *Mamm Rev.Blackwell Publishing Ltd*. 2021;51(1):25-39. doi:10.1111/mam.12220

13. Haddock R. Beaver Restoration across Boundaries. *Miistakis Institute*. Preprint posted online 2015:38. http://www.rockies.ca/project_info/Beaver Restoration Across Boundaries_Mar_26_2015.pdf
14. Kinas H, Duke D, Ambrose N, Mcleod A. *Challenges to Using Beaver Coexistence Tools in Alberta*.; 2021. Accessed June 3, 2025. https://workingwithbeavers.ca/files/Challenges%20to%20Beaver%20Coexistence%20Tool%20Use%20in%20Alberta.pdf
15. Government of Alberta: Environment and Protected Areas. Human-wildlife conflict – Beavers. 2025. https://www.alberta.ca/beavers
16. Kinas HL, O'Shaughnessy K, McLeod A. *Alberta Beaver Beneficial Management Practices*.; 2024. Accessed July 23, 2025. https://workingwithbeavers.ca/files/Beaver_BMPs_v2.pdf
17. WildlifeHelp.org. Can I trap and relocate problem beavers? Accessed July 14, 2025. https://wildlifehelp.org/solution/vermont/beaver/can-i-trap-and-relocate-problem-beavers/112
18. Government of Nova Scotia. When Beavers Become a Nuisance - Prevention, Control and Precautions. 2021. Accessed July 14, 2025. https://novascotia.ca/natr/wildlife/nuisance/beavers-prevention.asp
19. BC SPCA. *Beavers - Wildlife Control Best Practices*.; 2024. Accessed July 14, 2025. https://spca.bc.ca/wp-content/uploads/best-practices-beavers.pdf
20. Western Beavers Cooperative. On Beaver Relocation. 2025. Accessed July 14, 2025. https://westernbeavers.org/why-we-dont-relocate-beavers/
21. Taylor JD, Yarrow GK, Miller JE. *Beavers*.; 2017. Accessed July 14, 2025. https://www.aphis.usda.gov/sites/default/files/Beaver-WDM-Technical-Series.pdf
22. Mengak MT. *Wildlife Translocation*.; 2018. Accessed July 14, 2025. https://www.aphis.usda.gov/sites/default/files/Wildlife-Translocation-WDM-Technical-Series.pdf
23. California Department of Fish and Wildlife. Beaver. Accessed June 26, 2025. https://wildlife.ca.gov/Conservation/Mammals/Beaver
24. California Legislature. *Fish and Game Code § 4181: Depredators*.; 2023. https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=FGC&sectionNum=4181.
25. Beaver Restoration Program. *Status Report on Beaver Restoration Pilot Projects*.; 2025. Accessed June 26, 2025. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=231105&inline
26. Occidental Arts & Ecology Center. About the Campaign. 2025. Accessed June 29, 2025. https://oaec.org/our-work/water-institute/beaver-home/about-the-beaver-campaign/
27. California Department of Fish and Wildlife. Beaver Depredation Policy in California. *California Department of Fish and Wildlife*. 2023;(Departmental Bulletin). Accessed June 26, 2025. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=213134&inline
28. Occidental Arts & Ecology Center. OAEC Recognized as New CDFW Beaver Depredation Policy is Announced! Published online July 2023.

https://oaec.org/news/oaec-recognized-as-new-cdfw-beaver-depredation-policy-is-announced/
29. Beaver Restoration Program. Beaver Restoration Project Proposal Form. *California Department of Fish and Wildlife*. Preprint posted online March 2025. Accessed June 26, 2025. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=220133&inline
30. Beaver Restoration Program. CDFW Beaver Restoration Program Release Site Suitability Assessment. *California Department of Fish and Wildlife*.
31. California Department of Fish and Wildlife. Beaver Restoration Updates. Accessed June 26, 2025. https://wildlife.ca.gov/Conservation/Mammals/Beaver/Updates
32. Washington State Legislature. *Substitute House Bill 2349, Chapter 167, Laws of 2012. Beaver Management*.; 2012. Accessed June 29, 2025. https://lawfilesext.leg.wa.gov/biennium/2011-12/Pdf/Bills/Session%20Laws/House/2349-S.SL.pdf?cite=2012%20c%20167%20s%201
33. Washington Department of Fish and Wildlife. Beaver (Castor canadensis). 2025. Accessed June 29, 2025. https://wdfw.wa.gov/species-habitats/species/castor-canadensis#regs-seasons
34. Washington Department of Fish and Wildlife. Beaver relocation in Washington. 2025. Accessed June 29, 2025. https://wdfw.wa.gov/species-habitats/living/nuisance-wildlife/beaver-relocation
35. Washington State Legislature. *RCW 77.32.585: Release of Wild Beavers*.; 2023. Accessed June 29, 2025. https://app.leg.wa.gov/rcw/default.aspx?cite=77.32.585
36. Washington State Legislature. *WAC 220-450-230: Beaver Relocation Permits—Requirements and Restrictions*.; 2024. Accessed June 29, 2025. https://app.leg.wa.gov/WAC/default.aspx?cite=220-450-230&pdf=true
37. Washington Department of Fish and Wildlife. 2024 Beaver Relocation. 2024. Accessed July 2, 2025. https://wdfw.wa.gov/about/regulations/adopted/2024-beaver-relocation
38. Washington Department of Fish and Wildlife. *Beaver Relocation Permit Program - Status Update: 2019-2022*.; 2022. Accessed July 2, 2025. https://wdfw.wa.gov/sites/default/files/2022-12/20221208-7-beaver-relocation-pilot-program-report.pdf
39. Washington State Legislature. *RCW 77.32.585: Release of Wild Beavers*.; 2023. Accessed July 1, 2025. https://app.leg.wa.gov/RCW/default.aspx?cite=77.32.585
40. Washington Department of Fish and Wildlife. Release Site Suitability Assessment for Landowner. Preprint posted online 2019. Accessed July 1, 2025. https://wdfw.wa.gov/sites/default/files/2019-07/ReleaseSiteAssessment_Landowner.pdf
41. Washington Department of Fish and Wildlife. Beaver Relocation Pilot - Landowner Attestation Form. Accessed July 22, 2025. https://wdfw.wa.gov/sites/default/files/2019-07/LandownerAttestation.pdf
42. Campbell-Palmer R, Schwab G, Girling S, Lisle S, Gow D. *Managing Wild Eurasian Beavers: A Review of European Management Practices with Consideration for Scottish Application*.; 2015. Accessed July 2, 2025.

https://www.nature.scot/sites/default/files/2017-07/Publication%202015%20-%20SNH%20Commissioned%20Report%20812%20-%20Managing%20wild%20Eurasian%20beavers%20a%20review%20of%20European%20management%20practices%20with%20consideration%20for%20Scottish%20application.pdf
43. Nature Scot. Scottish Beaver Trial. November 13, 2024. Accessed July 6, 2025. https://www.nature.scot/professional-advice/protected-areas-and-species/protected-species/protected-species-z-guide/beaver/scottish-beaver-trial
44. Gaywood Martin. *Beavers in Scotland: A Report to the Scottish Government*. Scottish Natural Heritage; 2015.
45. Nature Scot. Beavers in Scotland - Conservation translocation guidance for applicants, consultees and interested parties. 2025. https://www.nature.scot/doc/beavers-scotland-conservation-translocation-guidance-applicants-consultees-and-interested-parties
46. Cairngorms National Park Authority. Bringing beavers back to the Cairngorms. 2025. Accessed July 9, 2025. https://cairngorms.co.uk/our-work/bringing-beavers-back-to-the-cairngorms
47. NatureScot. Beavers in Scotland. 2025. https://www.nature.scot/professional-advice/protected-areas-and-species/protected-species/protected-species-z-guide/beavers-scotland
48. Nature Scot. Translocation of beavers in Scotland. March 5, 2025. Accessed July 6, 2025. https://www.nature.scot/professional-advice/protected-areas-and-species/protected-species/protected-species-z-guide/beaver/translocation-beavers-scotland
49. Nature Scot. Guidance - Translocation of beavers in Scotland. April 6, 2024. https://www.nature.scot/doc/guidance-translocation-beavers-scotland
50. Nature Scot. Beaver Decision Notice - Licence Application 241208. 2023. https://www.nature.scot/doc/beaver-decision-notice-licence-application-241208
51. Beaver Trust. Beaver trapping & translocation. 2025. Accessed July 2, 2025. https://beavertrust.org/our-work/beaver-management/beaver-trapping-and-translocation/
52. Beaver Trust. How does beaver health screening work? [Video]. *YouTube*. Preprint posted online September 20, 2022. Accessed August 18, 2025. https://www.youtube.com/watch?v=8bFWBgf-mHY
53. Campbell-Palmer R, Puttock A, Needham R, Brazier R. *Spey Catchment: Beaver Feasibility and Potential Release Site Assessment*.; 2023. Accessed July 9, 2025. https://cairngorms.co.uk/uploads/documents/Redacted-Appendix-2-Spey-Catchment-Beaver-Feasibility-and-Potential-Release-Site-Assessment.pdf
54. Government of British Columbia. *Translocations of Native and Non-Native Wildlife - Procedures Manual (Policy 4-7-13.02)*.; 2016. Accessed August 21, 2025. https://www2.gov.bc.ca/assets/gov/environment/natural-resource-policy-legislation/fish-and-wildlife-policy/4-7-1302_-_translocation_of_native_and_non-native_wildlife_-_procedures.pdf

55. JBL Environmental Services Ltd. *Beaver Management Plan For The City of Port Moody*.; 2019. https://www.portmoody.ca/en/recreation-parks-and-environment/resources/Documents/Beaver-management-plan-r.pdf
56. Kootenay Conservation Program. *Appendix A: Translocation of Beavers from Pass Creek to the Lower Duncan Floodplain*.; 2024. Accessed August 21, 2025. https://kootenayconservation.ca/wp-content/uploads/2024/07/NKConsulting_KC_DL_2023-Beaver-Translocation-Report_24Apr2024.pdf
57. Ritter T, McGree M, Schmetterling D, Gower C, Boccadori V. *Beavers and Their Role in Riparian Restoration in Montana*.; 2023. Accessed November 29, 2023. https://fwp.mt.gov/binaries/content/assets/fwp/conservation/beaver/beaver-restoration-white-paper---version-1.0---fwp---2023.pdf
58. New Mexico Department of Game and Fish. *Project Guidelines - Beavers in New Mexico: Coexistence and Relocation*.; 2025. Accessed August 20, 2025. https://wildlife.dgf.nm.gov/download/beavers-in-new-mexico-coexistence-and-relocation/
59. Defenders of Wildlife. Beaver Habitat Mapper. August 2020. Accessed August 20, 2025. https://www.arcgis.com/apps/webappviewer/index.html?id=d77ed2b5d1754cc58ef8b660087dd969&extent=-12622333.3839%2C3728743.8311%2C-11056903.0446%2C4474769.2272%2C102100
60. Oregon Department of Fish and Wildlife. *Requirements for Relocation of Beaver in Oregon*.; 2017. Accessed August 21, 2025. https://www.dfw.state.or.us/wildlife/living_with/docs/Oregon_Beaver_Relocation_Requirements_Forms.pdf
61. Oregon Department of Fish and Wildlife. *ODFW's 3-Year Action Plan for Beaver-Modified Landscapes: August 2022 – 2025*.; 2023. Accessed August 21, 2025. https://www.dfw.state.or.us/wildlife/living_with/docs/ODFW_3YBeaverModLandscapesActionPlan_Final_20230616.pdf
62. Western Environmental Law Center. Oregon lawmakers pass beaver protection bill to restore more than 100,000 miles of impaired waterways - Western Environmental Law Center.https://westernlaw.org/oregon-lawmakers-pass-beaver-protection-bill-to-restore-nearly-100000-miles-of-impaired-waterways/. June 16, 2025. Accessed August 21, 2025.
63. City of Portland Environmental Services. *Beaver Management Plan 2.1*.; 2024.
64. Helzer D. Pilot Beaver Translocation Program and Holding Facility. *City of Portland Environmental Services*. Preprint posted online 2020. Accessed August 21, 2025. https://www.dfw.state.or.us/wildlife/living_with/docs/2020_beaver_wg/1%20Holding%20and%20Translocation%20Pilot_Helzer_BWG%20Feb%202020.pdf
65. Utah Division of Wildlife Resources, Beaver Advisory Committee. *Utah Beaver Management Plan*.; 2017. https://wildlife.utah.gov/pdf/furbearer/beaver_plan_2010-2020.pdf

66. Specht E. *Using Beavers as a Watershed Management Tool: Articulating Alberta's Regulatory Context*.
67. Utah State University. Beaver Ecology & Relocation Collaborative. Accessed August 21, 2025. https://qanr.usu.edu/beaver-restoration/
68. Utah State University. About the Beaver Bunkhouse. Accessed August 21, 2025. https://qanr.usu.edu/beaver-restoration/beaver-bunkhouse
69. Pollock MM, Lewallen GM, Woodruff K, Jordan CE, Castro JM (Editors). *The Beaver Restoration Guidebook: Working with Beaver to Restore Streams, Wetlands, and Floodplains. Version 2.02*.; 2023. Accessed November 1, 2023. https://www.fws.gov/media/beaver-restoration-guidebook
70. Methow Beaver Project. Beaver Relocation – Methow Beaver Project. 2025. Accessed August 21, 2025. https://methowbeaverproject.org/what-we-do/beaver-relocation/
71. Campbell-Palmer R, Rosell F. Captive care and welfare considerations for beavers. *Zoo Biol*. 2015;34(2):101-109. doi:10.1002/zoo.21200
72. Beaver Institute. *Beaver Relocation & Translocation Presentations & Panel Discussion [Video Online]*. YouTube; 2025. Accessed July 9, 2025. https://www.youtube.com/watch?v=8AbzAzSbbIw

Appendix A: California

Beaver Depredation Policy[27]

Department of Fish and Wildlife
DEPARTMENTAL BULLETIN

Number: 2023-02
Date Issued: June 5, 2023
Expires: Until Superseded

To: Department of Fish and Wildlife Staff

Subject: Beaver Depredation Policy in California

Overview and Background

As a keystone species and ecosystem engineer, the North American beaver (*Castor canadensis*) provides ecosystem services that promote biodiversity protection, habitat restoration, and wildfire-resilient landscapes in California, as aligned with the State Wildlife Action Plan (SWAP, 2015) and the state's Natural and Working Lands Climate Smart Strategy (Executive Order N-82-20). Beavers also have an ecological relationship to many species listed under the California Endangered Species Act (CESA; Fish & Game Code (FGC), §2050 et seq.) and/or federal Endangered Species Act (ESA; 16 U.S.C. §§1531-1544). The Department of Fish and Wildlife (Department) is committed to ensuring that humans and beavers can coexist, recognition of their ecological value, and that the removal of any depredation beaver is done in a thoughtful manner.

Issue Statement

The Policy outlined in this document is intended to implement a deliberative, tiered approach when responding to reported beaver depredation. The Department will promote the use of various nonlethal beaver damage deterrent techniques to resolve depredation conflicts where feasible. This approach is consistent with FGC section 4181, California Code of Regulations (CCR) Title 14 section 401, the CDFW Ecosystem Services Policy (DB 2017-06), and the Fish and Game Commission Policy on Depredation Control. Therefore, we are providing the following direction for all beaver depredation permits issued in the state. Authorizing the removal of beaver dams is beyond the scope of this policy and may require federal, state, and/or local authorizations (e.g., FGC section 1602 agreement, FGC section 1610 emergency notification, CESA Incidental Take Permit).

Additionally, this Policy is intended to support coordination between the Human-Wildlife Conflict (HWC) Program, HWC staff, wildlife unit biologist, and others (responders), and the newly established Beaver Restoration Program (BRP). Upon completion of the Department's new Beaver Management and Restoration Plan, the BRP will conduct beaver conservation translocations to restoration and reintroduction sites approved by the Department. When and where opportunities exist, the BRP will seek to utilize depredation beavers in its projects. Such efforts will require advance communication among the BRP and appropriate Department staff about impending translocation projects, BRP capacity to intake beavers, and depredation reports that may warrant beaver take.

Page **1** of **5**

Department of Fish and Wildlife
DEPARTMENTAL BULLETIN

STEPWISE PROCESS FOR BEAVER DEPREDATION INCIDENTS IN CALIFORNIA

1. **Confirmation of depredation.** Per Fish and Game Code section 4181, a beaver depredation reported by the reporting party (RP) must be verified by a Department responder.

    a. Responders will collect the following information:
        i. Full description of the property damaged, destroyed, or immediately threatened, including pictures as available, and the date(s) occurred.
        ii. Method of identifying the species suspected of damaging, destroying, or threatening land or property (e.g., camera trap, chew marks).
        iii. Description of nonlethal or less-lethal measures used to prevent beaver damage prior to requesting the permit.
        iv. If the location of the property with reported damages is located within the known range of a species listed pursuant to CESA or ESA (see 3b).

    b. Responders will assess if the damage to the property pose an imminent threat to public safety.
        i. If the responder determines that the beaver activity poses an imminent threat to public safety (e.g., catastrophic infrastructure damage), the responder, in consultation with their chain of command, may prioritize issuance of a depredation permit upon request of the RP. The responder, at their discretion, shall add terms and conditions to the permit necessary to protect wildlife and ensure public safety.

2. **Education.** To help reduce requests for permits, the responder shall first educate the RP regarding beaver behavior, ecology and ecosystem benefits, and site-specific options to mitigate beaver damage.

    a. Responder will have reasonable situational awareness, such as understanding of relevant research, population dynamics, co-occurring species, habitats, or natural communities that may be impacted, as well as any other pertinent factors.

    b. Responder shall provide the RP options to institute logistically and economically feasible corrective actions to prevent future occurrence of the beaver damage. The concurrent use of multiple methods is recommended. Potential actions may include, but are not limited to:
        i. Install water-flow management devices (e.g., flexible pond levelers, Clemson levelers, “beaver deceivers”, “Beaver Back-Saver Device”).
        ii. Install trapezoidal fencing with or without pond leveler device attached.
        iii. Install cylindrical cages, exclusion fencing (e.g., electric fence, hardware cloth around trees).
        iv. Deploy repellents (e.g., coating trees with paint/sand mixture).
        v. Eliminate local attractants (e.g., gardens, crops, lush vegetation).

vi. Subject matter experts may be consulted to help identify appropriate nonlethal measures and corrective actions.

3. **RP requests a permit.** If the RP requests a depredation permit, the Department may issue a revocable permit that authorizes take of the animal(s) by the permittee and their authorized agents, pursuant to FGC section 4181 and CCR section 401.

   a. Consistent with Fish and Game Code section 86, "take" means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.

   b. Responder shall provide technical guidance to reduce the risk of incidental take of a non-target species.

   c. If the BRP has communicated with HWC staff or wildlife biologists that beavers are needed for an approved project, the responder will consult BRP staff to determine whether to request voluntary cooperation from the RP to live capture/relocate the depredation beaver(s). This action would occur in place of issuing a permit. If there is no active request for beavers, BRP consultation is not required.

4. **Terms and conditions of permit**. The Department, at its discretion, shall add terms and conditions to the permit necessary to protect wildlife and ensure public safety, including but not limited to conditions that require the permittee to implement corrective actions to prevent future damages.

   a. Valid period. Permit issued for beaver shall be valid for a period deemed reasonable *only* for removal of the number of offending animals authorized to be taken (e.g., 30 days), but not to exceed one year.

   b. Number of take. Responder shall authorize only the take of beavers if satisfactory evidence shows that beavers have been damaging or destroying, or immediately threatening to damage or destroy, land or property.
      i. Responder must first determine, then specify on the permit, the number of offending animals authorized for take on the property.

   c. Corrective actions. The permit shall include a description of corrective actions that will be implemented to prevent future damages.
      i. If prior corrective actions have been implemented and failed to prevent damages, the responder shall document the reasons for that assessment.

   d. Authorized agents. The permittee may designate up to three persons, 21 years of age or older, as his/her agents to take animals under the permit.
      i. An employee of a federal, state, or local government agency, or local district or public utility with responsibilities including but not limited to animal control, animal damage control, irrigation, flood, or natural

resource reclamation, while acting in his/her official capacity, may take depredating animals on the property, when so designated per the terms of a valid permit.

e. Disposition. Beavers taken pursuant to a permit must be disposed of as required in the permit.
   i. No beavers, beaver carcasses, or beaver parts may be utilized by the permittee or designated agent. Raw furs, as defined in FGC section 4005, that are taken under FGC section 4180, shall not be sold.
   ii. If a depredation beaver is taken under a trapping license, the holder of the trapping license must submit to the Department a report of their annual take by July 1, pursuant to CCR section 467.

f. Permit renewal. Responder may renew a permit, upon request of the RP, if the offending animals are not taken under the initial permit and damages or threatened damages continue to exist.

5. **Method of take.** Animals taken pursuant to a permit may be taken in any legal manner except as herein prohibited and in accordance with the provisions of CCR section 465.5 and any other applicable regulations.

   a. Lethal methods.
      i. The permittee shall ensure that all animals are killed in a humane manner, instantly, and will prevent any injured animal from escaping.
      ii. No poison or steel-jawed leghold traps may be used.
      iii. The permit shall specify the caliber and type of firearm, ammunition, archery equipment, or crossbow to be used, if applicable.

6. **Tracking of permits.** Upon concluding the incident response, the responder shall ensure completion of the reporting requirement and close the incident in the Wildlife Incident Reporting (WIR) System.

   a. All reporting shall be completed no more than five business days after the permit expires and the incident is closed.
      i. No tags are required for beavers taken under a depredation permit.
      ii. The responder shall request that the permittee voluntarily report all beavers taken under a depredation permit.

Decision Authority

The decision to issue a depredation permit shall be made by a Regional Manager (RM) for a period of one year from the date of issuance and consistent with this policy. The RM should consider the extent to which additional input from Wildlife Branch, BRP or Law Enforcement staff is needed. To help with efficiency in decision making, at the end of one-year decisions to issue a depredation permit may made by an Environmental Program Manager (EPM) such that the EPM and RM have established an efficient and frequent communication path to thoughtfully evaluate the type and status of depredation requests in the Region. The RM will brief executive staff upon request.

Communication

The need for RM communication with executive staff on beaver depredation permit requests and approvals should be carefully considered in each situation, especially as the BRP evolves across California. Things to consider include the number of take being requested, the location and/or owner of the property, whether there are California Native American Tribes, non-governmental or local, state, or federal agencies involved, and if the beaver is located in a highly populated area.

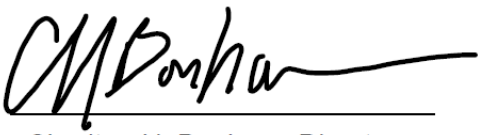
Training

Training is a necessary part of a professional and reasoned response to beaver conflict and beaver damage management. The Department has provided and will continue to provide training for HWC staff and other responders, such as the Wildlife Restraint and Chemical Immobilization Class, WIR Training, cross-trainings between Department programs (e.g., Lake and Streambed Alteration), and external trainings. The Department will assess priority needs, review, and implement training wherever possible.

Outreach and Education Resources

Throughout the state, the Department implements its HWC Program to objectively disseminate information on measures to prevent HWC and provides a HWC Toolkit accessible to the public and staff at https://wildlife.ca.gov/HWC. Staff utilizing this Policy should familiarize themselves with the Department outreach and education efforts with the public regarding human-wildlife conflicts. Beaver species information is available at https://wildlife.ca.gov/Conservation/Mammals/Beaver.

Importantly, the Department relies upon interactions with affected landowners and RPs to establish a record related to potential conflict to inform management decisions. The Department's Wildlife Incident Reporting (WIR) portal allows individuals to report beaver damage, review of information, and the issuance of a revocable permit under certain circumstances. The WIR portal is accessible at https://apps.wildlife.ca.gov/wir/



Charlton H. Bonham, Director

Beaver Restoration Project Proposal Form[29]

Beaver Restoration Project Proposal Form

Beaver Restoration Program

Project Proposal ID (CDFW use): _____

LANDOWNER INFORMATION

	Landowner*	**Land Manager**** (if applicable)
Name		
Tribe/Organization (if applicable)		
Mailing Address		
City, State, Zip		
Primary Phone		
Cell Phone		
Email		

*If proposing a collaborative project involving multiple landowners, provide the primary contact here and additional landowner information via the "Additional project information" spreadsheet.
**If applying on behalf of a landowner, provide landowner's contact information as well.

PROPERTY INFORMATION (provide the parcel number(s)/county for the property included in the project. If more than 10 parcels, use "Additional project information" spreadsheet.)

Tax APN	**County**

Tax APN	**County**

1. Property type: ◯ Private ◯ Public

2. Primary land use:

CDFW Beaver Restoration Program
P.O. Box 944209, Sacramento, CA 94244
BeaverRestoration@wildlife.ca.gov

Version 03/2025

1

3. Project Objectives: (please make sure to list any species this project is intended to benefit and describe any specific ecological and/or cultural goals for the project)

4. Access constraints: Are there any seasonal access restrictions to the site?

◯ Yes (please describe) ◯ No

HABITAT CHARACTERISTICS

5. Water availability: How persistent is water on the landscape throughout the year?

◯ Year-round ◯ Ephemeral (seasonal) ◯ Other (please describe)

6. Stream gradient: What is the dominant stream gradient across the project area?(Please attach photos)

◯ Mostly flat (0-2%) ◯ Moderately sloping (3-6%) ◯ Steep slope (≥ 7%)

7. Presence of deep pools: Are there multiple pools of water greater than 1 meter deep OR a large body of water present? (Please attach photos)

◯ Yes ◯ No

8. Valley width: What is the average width of the valley surrounding the aquatic habitat?(Please attach photos)

◯ Wide (>30 meters) ◯ Moderate (20-30 meters) ◯ Narrow (<20 meters)

9. Presence of hardwoods and herbaceous foods: Describe the abundance of hardwood trees/shrubs and herbaceous plants available as a beaver food source? (For example: aspen, cottonwood, willows, cattails, bulrush, etc.)

◯ Abundant ◯ Some ◯ Limited to none

Describe, to the best of your ability, the vegetation species present:

8. Lodge/dam building materials: Describe the density/cover of woody dam-building material near the aquatic habitat? (≤10cm diameter wood)

◯ Abundant ◯ Some ◯ Limited to none

9. Current or historic beaver use: Are there any known beavers in the area or were beavers previously known to be present on the property? (Check all that apply)

☐ Not present ☐ Currently present ☐ Present in the past

10. Please include photos of what you perceive to be the best beaver habitat/location(s) currently present in the potential project area. *Beaver habitat typically includes low-gradient streams, deep pools for cover, submergent and emergent vegetation, riparian hardwoods for food, woody vegetation for building material, and a wide (unconfined) valley/floodplain.*

Did you include habitat photos: ◯ Yes ◯ No

POTENTIAL FOR CONFLICT

11. When following the waterway (or otherwise connected aquatic habitat), what is the distance (miles) from the middle of project area to the nearest neighboring property?

12. Have you communicated with neighboring landowners about the potential project? ◯ Yes ◯ No

If yes, please provide names and feedback:

13. Is there infrastructure present on the property, or neighboring properties, that could be affected by beaver activities and may require additional coordination or contingency planning? (For example: culverts, water control structures, etc.)

◯ No ◯ Yes ◯ Unsure

CDFW Beaver Restoration Program
P.O. Box 944209, Sacramento, CA 94244
BeaverRestoration@wildlife.ca.gov

14. When following the waterway (or otherwise connected aquatic habitat), are there tree crops or other woody crops present within approximately five miles of the property? ◯ No ◯ Yes

15. Any other potential human-beaver conflicts that we should be aware of?

COMMENTS

Printed Name

Title (if applicable)

Signature

Date

- Email signed project proposal forms, including "Additional project information" spreadsheet (if applicable) and habitat photos to: BeaverRestoration@wildlife.ca.gov.
- If possible, please submit habitat photos within a separate Word document or .pdf file. Due to IT security measures, emails including .zip folders will be intercepted and the Program will be unaware of the submission. In this case, please notify the Program via a separate email, with no attachments, so we are aware and can retrieve the materials from quarantine.
- If you opt to print, wet sign, and then scan your signed form, please make sure to also include in your email the digital/fillable version of the form to allow for import of the entered data.
- If you are unable to submit proposals electronically, please mail proposal form with photos to: California Department of Fish and Wildlife
  Attn: Beaver Restoration Program
  P.O. Box 944209
  Sacramento, CA 94244

CDFW Beaver Restoration Program – Release Site Suitability Assessment[30]

CDFW Beaver Restoration Program

Release Site Suitability Assessment

Turn on Field Maps "My Tracks". Take photos!

Date:_____ Crew:_____ Site Name:_____

Sub Watershed:_____ Lat Long:_____

Elevation:_____ Description:_____

FIELD ASSESSMENT

Site Screening – If any of the following conditions occur, the site is likely not suitable for release:

❑ Heavy grazing impact	❑ Severe fire/flood (1 2 3 4 5) years ago
❑ Heavy infrastructure/Low social tolerance	❑ Habitat unit (continuous length) is <50m long

Beaver Presence – Survey the site for current beaver activity. If already present, site disqualified:

	Beaver	Active Dam	Active den	Active lodge	Tracks	Cuttings/ Chewings	Scent mounds	Other (specify)
Mark if present								

Comments: _____

_____

Site Characteristics – Add site assessment polygon on Field Maps and take photos.

Length of contiguous beaver habitat:

☐≥1610m ☐1250-1609m ☐900-1249m ☐550-899m ☐200-549m ☐0-199m

Dominant woody food (non-conifer):

Choose type, proximity to water's edge, and amount:

Type	☐Aspen, willow	☐Cottonwood, alder	☐Other species
Proximity (to water's edge)	☐≤ 10m	☐10m <–> 150m	☐≥ 150m
Amount	☐Sparse	☐Medium	☐Abundant

Other species present (list common or scientific names):_____

_____

Herbaceous food/Understory:

☐ Abundant grasses/forbs present ☐ Some grasses/forbs present ☐ No grasses/forbs

Species present (list common or scientific names): _____

Aquatic/semi-aquatic food:

☐ Abundant aquatic food ☐ Some aquatic food ☐No aquatic food

Species present (list common or scientific names): _____

1

Aquatic Escape Cover:

☐Many pools > 1m deep and > 10m wide ☐ Some pools >1m deep and >5m wide ☐No pools

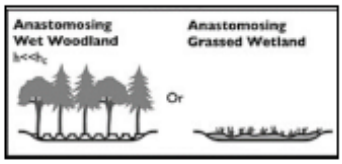
Stream flow:

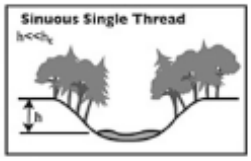
☐Ephemeral flow ☐Year-round flow, never destructive ☐ Destructive flow (inhibits damming)

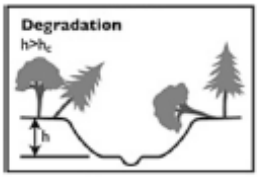
Stream gradient:

☐≤1% ☐1-3% ☐4-6% ☐ ≥7%

Floodplain connectivity (incision)*:







☐Connected at low flows ☐Connected at high flows ☐Disconnected at high flows

**Graphics courtesy of 'Stream Evolution Model' (SEM) proposed by Cluer and Thorne (2013)*

Floodplain size (confinement):

☐Unconfined floodplain ☐Relatively confined floodplain ☐ Confined floodplain

Woody building material (instream woody debris and conifers):

☐Abundant ~10cm diameter wood ☐Some woody building material ☐No building material

Dominant stream substrate:

☐Silt/Clay/Mud ☐Sand ☐Gravel ☐Cobble ☐Boulders ☐Bedrock

Grazing/Livestock impact:

☐No grazing/livestock impact ☐Some grazing/livestock impact

Historic beaver use:

☐Recent (<5 years) beaver sign/presence ☐Historic beaver sign/presence ☐No beaver sign/presence

Notes:

_____

_____

_____

Site suitable? ☐ Yes ☐ No ☐ Maybe (specify improvements or changes needed)

_____

_____

2

Appendix B: Washington

WAC 220-450-230: Beaver Relocation Permits—Requirements and Restrictions[36]

WAC 220-450-230 Beaver relocation permits—Requirements and restrictions.

Purpose

(1) Wildlife is property of the state, and as such it is unlawful to keep wildlife captive, feed wildlife, or relocate wildlife without expressed permission from the Washington department of fish and wildlife. The purpose of the beaver relocation permit is to grant the permission for citizens to perform relocation of wild American beaver (*Castor canadensis*) while establishing criteria to:

(a) Reduce lethal removal of beaver by allowing permittees to relocate conflict beaver;

(b) Ensure humane care and treatment is provided to beaver during the process of trapping, temporary captivity, and relocation; and

(c) Select release sites which maximize relocation success by providing suitable habitat for beaver with minimal likelihood for future human-beaver conflict as described in RCW 77.32.585.

Definitions

(2) For the purpose of this section, the following terms apply:

(a) "Beaver husbandry facility" means the authorized site(s), as shown on the beaver relocation permit, for the temporary holding of beaver involved in relocation.

(b) "Beaver relocation permit" means a permit issued by WDFW to allow the relocation of beaver.

(c) "Euthanasia" means compassionate killing with minimal pain and distress, in a timely manner, and safely to prevent disease transmission, public health or human safety risks, or prolonged or unrelenting animal suffering due to illness, injury, or unremitting pain as outlined in WAC 220-450-180.

(d) "Habitat suitability" means a combination of abiotic and biotic factors used to assess the likelihood of beavers occupying and thriving in a site.

(e) "Humane care" means providing care such as water, food, safe handling, clean facilities, medical treatment, and euthanasia if needed, and conditions including environments sensitive to species-typical biology and behavior, with the intent to minimize fear, pain, stress, and suffering.

(f) "Permittee" means the person listed on the beaver relocation permit who applies for and receives a beaver relocation permit and is responsible for monitoring and approving the relocation activities conducted under the permit.

(g) "Release site" means a location in a stream where beavers will be relocated to. The site is assessed by a permittee using the criteria and methods discussed in the required training, is not in proximity of ungulate grazing territory, is not in proximity to buildings or infrastructure which may impart damage from beaver activity, does not currently show beaver occupation, and is analyzed for the factors listed in RCW 77.32.585.

(h) "Subpermittee" means a person listed on the permittee's beaver relocation permit who may assist the permittee with specified aspects of beaver relocation activities limited by the criteria in this section.

Application requirements and general criteria

(3) Applicants must meet all the following criteria to be issued a beaver relocation permit:

(a) Must be at least 18 years of age;

(b) Must not have within the last three years:

Certified on 11/13/2024 WAC 220-450-230 Page 1

(i) More than one finding of "paid" or "committed," as final disposition, for an infraction under chapter 77.15 RCW; or

(ii) A conviction for a fish and wildlife crime under chapter 77.15 RCW.

(c) Must complete and submit a beaver relocation application online to the department's beaver relocation manager any time after March 1st for a permit of the same year.

(d) Must operate or have access to a beaver husbandry facility that meets minimum requirements outlined in the Beaver Relocation Handbook.

(e) Must submit a beaver relocation plan that describes the intent of relocations, area of work, and methods for identifying source beaver, capture, handling, transport, release site selection, release, and monitoring following release site factors listed in RCW 77.32.585.

(f) Must submit a statement of qualifications and relevant experience.

(g) Must demonstrate willingness and ability to comply with all requirements of the permit.

(h) Must complete a comprehensive training on beaver relocation in Washington as identified by the department within the past three years.

(4) The department may refuse a permit if the applicant submits an incomplete application or does not meet any of the requirements in this section.

(5) Permits will be valid within the dates listed on the permit and no more than one year after the application is approved.

(6) The permittee and subpermittees must provide all beavers with humane care during capture, transport, holding, and release.

(7) The permit does not authorize the permittee or any subpermittees to practice veterinary medicine.

(8) Permittees and subpermittees are responsible for abiding by all permit terms and conditions, reporting and record requirements, and compliance with state and federal regulations when conducting beaver relocation or actions associated with beaver relocation.

(9) Beaver acquired and held by a permittee, including deceased animals and parts, remain the property of the state and will not be offered for sale, sold, traded, or bartered.

(10) Beaver acquired and held by a permittee for the purposes of relocation must not be exported out of state or imported into Washington. A violation of this section is punishable under RCW 77.15.290 Unlawful transportation of fish or wildlife—Penalty.

(11) The permittee and any subpermittees must carry a digital or paper copy of the current year's beaver relocation permit while trapping, transporting, releasing, or holding beaver.

(12) Only beaver which cause human-wildlife conflict including, but not limited to, damage to private or public property or infrastructure, may be relocated. The human-wildlife conflict must be verified by the permittee. Mitigation of such conflict must be discussed with the landowner before trapping for relocation.

(13) Additional staff or volunteers may assist in the capture, transport, and relocation of beaver but only with the direct in-person supervision of the permittee.

(14) An annual report using the department's designated report form is required by the date listed on the permit so that information can be included on the department's website per RCW 77.36.160.

(15) Permittees assume all responsibility for the action of subpermittees listed on their annual permit. Subpermittees must be supervised by permittees and the permittee may assign subpermittee duties under their current year's permit for the following activities: Transport of beaver to or from the husbandry facility, feeding of beaver while in captivity, observation of beaver while in captivity, intake or prerelease measurements of beaver, and/or completion and submission of required reports.

(16) Proposed subpermittees must meet the requirements of subsection (3)(a), (b), and (f) of this section.

(17) The following subpermittees are authorized to also conduct the following activities under a valid, current year's permit depending on their current, valid certifications and licenses:

(a) A wildlife control operator (WCO) listed as a subpermittee may capture and transport beaver to an approved beaver husbandry facility or to a release site unsupervised. They may only trap beaver within the regulations of their WCO certification and may charge a fee for capturing beaver pursuant to WAC 220-440-110. Wildlife control officers listed as subpermittees cannot release beaver or select release sites without the permittee being present.

(b) A WDFW trapping license holder listed as a subpermittee may capture and transport beaver to an approved beaver husbandry facility or to a release site unsupervised. WDFW trapping license holders cannot release beaver or select release sites without the permittee being present. Participation as subpermittee does not authorize licensed trappers to harvest beaver outside of the trapping license season.

(18) Permittees or subpermittees listed on a beaver relocation permit may not trap commercially or recreationally for beaver within two miles in any direction from any site where beaver were released under a permit for two years after the release date.

(19) The permittee is responsible for performing the habitat suitability assessment per the WDFW-approved site assessment form, selecting the site for release, and ensuring that post-release monitoring is conducted by appropriately trained personnel. A subpermittee may not select sites for beaver release or release beaver without supervision by the permittee.

Beaver capture

(20) Captured beaver must be checked for lactation at the trap site. Any lactating beaver should be brought to the beaver husbandry facility while an attempt is made to capture the kits so the family group may be relocated together. If a captured beaver is lactating, it must be noted in the annual report.

(21) The permit does not authorize the use of body-gripping traps (as defined in RCW 77.15.192). A special trapping permit is required for the use of body-gripping traps (WAC 220-417-040).

Beaver housing and caretaking - Generally applicable provisions

(22) A permittee must operate or have access to at least one beaver husbandry facility that meets the minimum requirements outlined in the permit. This facility is subject to inspection by WDFW staff each permit year.

(23) The permittee and subpermittees may not house beaver at a site different than the facility(ies) indicated on their permit except in an emergency situation requiring veterinary care. Documentation of such events must be submitted to WDFW within seven days of the advent of the emergency.

(24) The normal interval for holding beaver captive before release will be less than 14 days, but permittees may hold beaver for

longer if they notify the WDFW program coordinator by the 14-day mark and receive approval from the department's beaver relocation manager (or their designee).

(25) A permittee must keep beaver which are the same sex and from different family groups separate to prevent beaver-beaver conflict.

(26) The permittee will ensure that beaver held at a beaver husbandry facility prior to relocation shall have minimal contact with humans and domestic animals to prevent habituation and/or disease transmission. Domestic animals should not be allowed at the husbandry facility. If this is unavoidable, domestic animals should be fully vaccinated and should have no direct contact with, nor direct exposure to, wildlife.

(27) The permittee will ensure that beaver housed in a beaver husbandry facility are observed daily for disease or injury and will maintain a daily log of observations. This log will be submitted to WDFW with the annual report. If disease or injury of a captive beaver is suspected, the permittee must contact a WDFW wildlife veterinarian. No beaver may be relocated that appears sick or injured without approval from a WDFW wildlife veterinarian.

(28) In cases where a captive beaver is suffering and humane euthanasia is necessary, but the permittee is unable to reach a WDFW wildlife veterinarian, the permittee may contact a local veterinarian to perform humane euthanasia. Euthanasia must be provided in accordance with an animal's welfare, using humane techniques and at a reasonable time after admission to prevent unnecessary suffering of the animal. Permittees must follow the most current American Veterinary Medical Association Guidelines on Euthanasia.

(29) The permittee must report any beaver illness or death within 24 hours to a WDFW wildlife veterinarian and the WDFW permit program coordinator and abide by the following criteria:

(a) Any beaver which has expired from or is suspected of expiring from the zoonotic diseases such as tularemia, leptospirosis, yersiniosis, or giardia must be submitted for necropsy per a WDFW wildlife veterinarian's instructions.

(b) In the case of a beaver expiring from any cause besides disease, the permittee is encouraged to donate the carcass to a permitted museum, research institution, or tribal organization; a WDFW transfer authorization must accompany any transfer of a beaver carcass unless the institution is permitted to receive specimens. Otherwise, the permittee or subpermittee will dispose of deceased beaver through lawful burial, incineration, or a licensed rendering facility (WAC 220-440-090).

(30) The permit authorizes the use of commonly used ear tags and passive integrated transponder (PIT) tags. Nonpermanent, superficial marks such as nontoxic paint or tape may be used as appropriate for distinguishing individuals in temporary captivity. The permit does not authorize the application of other devices (such as VHF transmitters).

Beaver release

(31) Permittee is responsible for selecting the release site and is required to select sites which meet the following criteria:

(a) Show no current sign of beaver occupancy within 2,000 feet both up and downstream of the site;

(b) Show no culverts, buildings, or infrastructure which may be impacted by flooding or beaver structures within 2,000 feet both up and downstream of the site;

(c) Does not show sign of heavy livestock or native ungulate presence within 2,000 feet both up and downstream of the site;

(d) Have been assessed for habitat suitability criteria listed in RCW 77.32.585; and

(e) Does not violate movement of beavers across the division of Eastern and Western Washington as defined in WAC 220-450-150.

(32) The permit does not authorize trespass or the relocation of beaver to any site without the express permission of the property owner, land manager, or their designee.

(33) The permittee must conduct a site evaluation of the property to receive beaver(s) and assess habitat suitability following WDFW protocols prior to capture, handling, and holding of beaver. The permittee or subpermittee may not capture beaver before securing a release site for that animal.

(34) The permittee must receive a signed Landowner Attestation Form from the release site landowner, land manager, or their designee before any beaver may be captured for release on the property which includes an agreement to gain approval from neighboring property owners within one mile downstream of the release site. The permittee must submit a copy of each signed Landowner Attestation Form to WDFW as part of their annual report. A formal agreement with a government or tribal land management agency is acceptable in lieu of a Landowner Attestation Form for releases on public or tribal land.

(35) Permittees and subpermittees may not be held liable for property damage caused by beaver released using a beaver relocation permit per RCW 77.32.585.

(36) A violation of this section by a person who engages in wildlife relocation without a department permit is punishable under RCW 77.15.190, 77.15.430, or other applicable sections of the RCW and WAC, depending on the circumstances of the violation.

(37) A violation of this section by a person who has a beaver relocation permit is punishable under RCW 77.15.750(1).

Permit modification, suspension, or revocation

(38) The department may modify, suspend, or revoke a beaver relocation permit if the primary permittee or a subpermittee violates any department rule related to beaver relocation, wildlife possession, wildlife rehabilitation, wildlife trafficking, or permit conditions. Violations include, but are not limited to, mal-imprinting, which is the over-habituation to where animals lose fear of humans and predators, or taming wildlife in relation to humans or domestic animals at the beaver relocation facility. In addition, the department may modify, suspend, or revoke a beaver relocation permit if a permittee or a subpermittee, within the last 10 years, was convicted of any offense involving animal or child cruelty, neglect, abuse, or found guilty practicing veterinary medicine without an active license as determined by the veterinary board of governors.

(39) A primary permittee who is in violation of permit conditions or department beaver relocation rules, or whose subpermittee is in violation of permit conditions or department beaver relocation rules shall, in this order:

(a) Receive written warning(s) outlining remedies and a deadline of not less than seven days to come into compliance after which time the department may impose permit modification to remedy those violations such as restriction of permitted counties or increased frequency of beaver husbandry facility inspections.

(b) If the permittee is noncompliant after 14 days, the permit will be suspended. A permit will only be reinstated again if the permittee successfully implements a corrective action plan within the compliance deadline.

(c) A primary permittee will have the permit revoked if written warnings, permit modifications, compliance plan remedies, and permit suspension processes with concurrent inspections do not result in permittee compliance. Nothing in this section prevents the department from acting immediately to remove animals or suspend or revoke beaver relocation permits in case of documented animal cruelty or adverse animal welfare.

(40) The department's revocation, modification, or suspension of a beaver relocation permit under this section does not preclude the department from referring a matter for potential criminal prosecution against the primary permittee, subpermittee, or both.

(41) Permittees whose beaver relocation permit is revoked may reapply for a new permit three years after the date of revocation. Upon application, the department will consider previous beaver relocation permit performance and the nature of the previous noncompliance or violations when determining whether to issue a new permit. The department will deny an application if the basis for revocation has not been or is not likely to be resolved.

(42) Any permittee whose beaver relocation permit is revoked, modified, or suspended under this section may request an administrative hearing to appeal the department's action. The department will administer such appeals in accordance with chapter 34.05 RCW.

[Statutory Authority: RCW 77.04.012, 77.04.055, 77.12.047, 77.32.585, 77.15.290, 77.15.190, 77.15.430, 77.15.750, and 77.36.160. WSR 24-21-126 (Order 24-08), s 220-450-230, filed 10/22/24, effective 11/22/24.]

RCW 77.32.585: Release of wild beavers

RCW 77.32.585 Release of wild beavers. (1) The department shall permit the release of wild beavers on public and private lands with agreement from the property owner.

(2) The department may limit the release of wild beavers to areas of the state where:

(a) There is a low probability of released beavers becoming a nuisance or causing damage;

(b) Conditions exist for released beavers to improve, maintain, or manage stream or riparian ecosystem functions; and

(c) There is evidence of historic endemic beaver populations.

(3) The department may condition the release of beaver to maximize the relocation's success and minimize risk. Factors that the department may condition include:

(a) Stream gradient;

(b) Sufficiency of the water supply;

(c) Stream geomorphology;

(d) Adequacy of a food source;

(e) Proper site elevation and valley width;

(f) Age of the beavers relocated;

(g) Times of year for capture and relocation;

(h) Requirements for the capture, handling, and transport of the live beavers;

(i) Minimum and maximum numbers of beavers that can be relocated in one area; and

(j) Requirements for the permit holder to initially provide supplemental food and lodge building materials.

(4) The department may require:

(a) Specific training for those involved with capture, handling, and release of beavers; and

(b) The notification of any potentially affected adjacent landowners before permitting the release of wild beavers.

(5) Nothing in this section creates any liability against the state or those releasing beavers nor authorizes any private right of action for any damages subsequently caused by beavers released pursuant to this section.

(6) For the purposes of this section, "beaver" means the American beaver (*Castor canadensis*).

(7) For the purposes of this section, beavers may only be released to carry out relocation: (a) Between two areas east of the crest of the Cascade mountains; or (b) between two areas west of the crest of the Cascade mountains. [2017 c 82 s 1; 2012 c 167 s 2.]

Finding—2012 c 167: "The legislature finds that beavers have historically played a significant role in maintaining the health of watersheds in the Pacific Northwest and act as key agents in riparian ecology. The live trapping and relocating of beavers has long been recognized as a beneficial wildlife management practice, and has been successfully utilized to restore and maintain stream ecosystems for over fifty years. The benefits of active beaver populations include reduced stream sedimentation, stream temperature moderation, higher dissolved oxygen levels, overall improved water quality, increased natural water storage capabilities within watersheds, and reduced stream velocities. These benefits improve and create habitat for many other species, including endangered salmon, river otters, sandhill cranes, trumpeter swans, and other riparian and aquatic species. Relocating beavers into their historic habitat provides a natural

mechanism for improving the environmental conditions in Washington's riparian ecosystems without having to resort to governmental regulation or expensive publicly funded engineering projects." [2012 c 167 s 1.]

Landowner Attestation Form [41]

WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
Wildlife Program | P.O. Box 43141
Olympia, WA 98504-3141
Phone: (360) 902-2200

BEAVER RELOCATION PILOT

Landowner Attestation Form

Name of landowner, land manager or their designee:			
Email:		Phone:	

Property Name (if applicable):					
Property Address:					
	City:		State:	Zip:	

I, _____ , attest to the following:

1. I have requested that beaver be relocated to my property
2. I acknowledge the risks associated with beaver relocation. These include the potential for beaver mortality, beaver dispersal, property damage, and transfer of invasive species. I will not hold WDFW liable for any damage or other negative wildlife interactions caused by relocated beaver.
3. I have notified potentially affected neighboring property owners, land managers, and/or their designees that I am requesting to have beaver released on my property and have reported their feedback to this Beaver Relocator: _____
4. I agree to allow WDFW and the above-named Beaver Relocator access to my property for post-relocation monitoring of beaver activity.

_____ _____
Signature Date

Return this form to the permitted Beaver Relocator you are working with.

To be completed by the permitted Beaver Relocator:			
Permit Number:		Site ID:	
Date Form Received:			

Release Site Suitability Assessment for Landowners [40]

WASHINGTON DEPARTMENT OF FISH AND WILDLIFE
BeaverRelocationPermit@dfw.wa.gov

BEAVER RELOCATION PILOT 2019

Release Site Suitability Assessment for Landowner

1. Survey 2000 feet upstream and 2000 feet downstream for current beaver activity.

	Enter count					*Mark if present*			
	Observed individuals	Active dam	Active den	Active lodge	Forage cache	Tracks	Fresh chewings / cuttings	Scent mounds / droppings	Other (specify)
2000 ft upstream									
2000 ft downstream									

If site is active or less than one stream mile from a known active colony, this site is unsuitable for beaver relocation.

Suitable ☐ Unsuitable ☐

2. Briefly describe the level of social tolerance for beaver by potentially affected neighboring landowners.

If a negative wildlife interaction with neighboring landowners is likely, this site is unsuitable for beaver relocation.

Suitable ☐ Unsuitable ☐

3. Is there potential for damage to roads, culverts, or structures (i.e., flooding or blocking)?

If damage is likely, this site is unsuitable for beaver relocation.

Suitable ☐ Unsuitable ☐

BEAVER RELOCATION PILOT | SITE SUITABILITY 2

If the site is suitable based on all three responses above then continue site assessment by circling answers below (choosing only one from each row) then filling in the points on the line to the left.

4. Average stream gradient

_____ **5**. ≤3% **3**. 4-6% **0.** ≥7%

5. Average stream flow

_____ **5**. Fire hose (fast flow) **3**. Garden hose (slow flow) **0.** Unwadeable (too fast)

6. Average stream depth

_____ **5**. Over knee-high boots **1**. Over sneaker **0**. Over waist

7. Are there multiple pools or a large body of water (pond/lake) greater than 3 feet in depth present?

_____ **5.** Yes. **0.** No

8. Dominant stream substrate

_____ **5.** Silt/Clay/Mud **2.**Sand **1.** Gravel **0**. Cobble/ boulders

9. Habitat unit size

_____ **5.** large pond or lake **5.** ≥2000 ft of stream length in each direction **0.** ≤2000 ft of stream length in each direction

10. Hardwood food (aspen, willow, alder, etc.)

a. **5**. Within 30 feet **3**. Within 100 feet **1**. Within 300 feet

b. **5**. Large amount (thousands of stems) **3.** Some (hundreds of stems) **1.** Few (dozens of stems)

_____ **Woody food score = multiply a x b**

11. Herbaceous food (aquatic vegetation, grass, forbs, and/or shrubs)

_____ **5**. Abundant herbaceous food **0.** Minimal herbaceous food

12. Floodplain Width

_____ **5.** Adjacent floodplain **0.** Narrow V channel

13. Lodge and dam-building materials

_____ **5**. Variety of 1-6" diameter woody vegetation available **0.** Insufficient building material present

14. Bonus: (5 points each)

a. Historic beaver use.
b. Large woody debris or channel-spanning logs present.
c. No impact or obvious presence of browsers/grazers.

_____

_____ **Total Score** **'Good' Release Site: 45-90pts** **'Poor' Release Site: 0-44pts**

Other notes (best place to access, added advantages/disadvantages, land ownership/access/permission):

Final determination: **ACCEPTABLE ☐** **UNACCEPTABLE ☐**

Appendix C: Scotland

Translocation Project Form from *The Scottish Code for Translocations – Best Practice Guidelines for Conservation Translocations in Scotland Version 1.1*[10]

Appendix 1: Translocation project form

Purpose of the form

- To provide a checklist of the issues to consider and address when planning conservation translocations in Scotland
- To summarise the key information needed to underpin consultation with other people or organisations that may be affected by a translocation
- To serve as a formal Project Proposal Form where translocations require permissions from Scottish Natural Heritage (including the granting of species licences)
- To provide a mechanism to document and record translocations to help inform future projects

What is in the form?

The form is structured as follows:

Sections 1-4	Contact details, the species involved and the purpose of the translocation
Section 5	Details of the donor and release sites
Section 6	Translocation methodology
Section 7	Summary of the benefits
Section 8	Permits and legal issues
Section 9	Assessment of biological risks
Section 10	Assessment of socio-economic risks
Section 11	Details of monitoring and ongoing management plans
Section 12	Summary of communication plan
Sections 13-14	Data confidentiality statement and declaration

Do I have to fill it in?

- Completion of this Translocation Project Form is recommended for all conservation translocations in Scotland as part of 'best-practice' planning
- Completion is mandatory for all conservation translocations which require licences from SNH

How to fill it in

This *Translocation Project Form* is based on the *Scottish Code for Conservation Translocations* and associated *Best Practice Guidelines for Conservation Translocations in Scotland*, and the Code/Guidelines should be consulted when completing the form. If further assistance is needed, contact Scottish Natural Heritage.

For low risk and uncontentious translocations, filling in the form should be straightforward. For instance, in sections 8-10, where your responses fall into the 'green light' category, just a few words are needed explaining that there are no appreciable risks or legislative issues.

Where risks or legislative constraints are identified, additional information should be provided. There is no set word-limit to this. The guidance is to succinctly express sufficient detail to enable the issues to be evaluated and understood in a clear and transparent fashion. Text boxes in the form can be expanded as required. Where translocations require a licence, but the translocation itself is intrinsically 'low risk', then the licence application process can be very straightforward. In the case of unusually complex and/or controversial translocations additional supporting information can be appended to the form.

A 'WORD' version of the form can be downloaded at www.snh.gov.uk/translocation-code. An example of a completed copy of the form for a relatively 'straightforward' translocation is available in Appendix 2 of the Best Practice Guidelines for Conservation Translocations in Scotland.

What to do with this form

For projects requiring a licence from SNH, send the completed form to:

Licensing Team
Scottish Natural Heritage
Great Glen House
Leachkin Road
Inverness
Email: licensing@snh.gov.uk

The licensing team will then respond to the application.

All other completed forms should be sent to: translocations@snh.gov.uk

What happens next?

The form will be added to the Scottish Conservation Translocation database which will be accessible from 2015 (environmentally sensitive information and personal data will not be made public).

1. **Lead applicant details**

Name
Address
Telephone number
Email
Organisation
Position

2. **Project partners** (add more boxes as required)

Name
Organisation
Email
Role in project

3. **Project details**

Project title
Focal species
Desired outcome(s)
Expected timescale for outcome(s) to be achieved
Goals
Proposed start date (capture/collection date(s))
Proposed release date(s)
Type of translocation (reinforcement, reintroduction, assisted colonisation, ecological replacement)
Donor source type (wild or *ex situ* or both)

4. **Rationale**

Overview of the project
Why is a translocation necessary?
What other options have been considered, and why have they been discounted (see Chapter 3)?

The level of detail provided should be proportionate to the potential impacts of the translocation

Please expand text boxes or provide additional information as required, to enable a thorough and balanced evaluation of the translocation

5. Population information

5.1. *Donor population details* (add additional pages for each donor population)

Donor Population 1
Population name
Population location (region, country)
Grid reference / coordinates (including details of coordinate system, datum etc)
Date(s) of removal

If sampled from the wild
Land owner name
Land owner contact details
Land manager name (if different to above)
Land manager contact details
Land owner / manager permission granted? (including date permission granted)
Conservation protection afforded to the site (if yes, what type)
Population size of focal species
How population size was estimated (survey method, date(s) of estimate)

If sampled from an* ex situ *collection
Name of collection owner
Collection owner contact details
Name of collection
Population size of *original* donor population
How *original* population size was estimated (survey method, date(s) of estimate)
Population size of *ex situ* population
How *ex situ* population size was estimated (survey method, time of estimate)
Ex situ population consists of captive bred/reared individuals or is the original wild-collected stock?

Number of donor individuals to be removed /sampled
Nature of donor material (e.g. eggs, seeds, larvae, adults etc)
Donor selection method (e.g. random sampling vs selection for specific traits; number of mothers when progeny sampled; collection area etc)
Habitat type of donor population (e.g. Phase 1 habitat category, NVC or HIS)
Intra-specific classification of donor population (e.g. sub-species / variety / ecotype / race)

Additional information about donor population relevant to the translocation

5.2. *Release site details* (add additional pages for each release site)

Release site 1
Population name
Population location (region, country)
Grid reference / coordinates (including details of coordinate system, datum etc)
Inside or outside of native range of translocated species or type?
Inside or outside of natural range of translocated species or type?
Date(s) of release

Land owner name
Land owner contact details
Land manager name (if different to above)
Land manager contact details
Land owner / manager permission granted? (including date permission granted)
Conservation protection afforded to the site (if yes, what type)

Habitat type (e.g. Phase 1 habitat category, NVC or HIS, or general description)
Proximity and context to other populations of the focal species

Which donor populations are being released at this site?
Distance of donor population(s) to release site
Is the donor population in the same country as release site?
Number of individuals to be released
Nature of released material (e.g. eggs, seeds, larvae, adults, sex ratios etc)
If multiple donor sources are used, what are the proportions of the mix?

If an existing population is present at the release site (reinforcement)
Population size of resident population
How population size was estimated (survey method, date(s) of estimate)
Reason for reinforcement
Intra-specific classification of *resident* population (e.g. sub-species / variety / ecotype / race)
Intra-specific classification of *donor* population(s) (e.g. sub-species / variety / ecotype / race)

Release strategy summary (including details of *what* is released *where*)

Additional information about the release site relevant to the translocation

6. Methodological summary

Outline the approaches that will be used in undertaking the translocation, including key relevant aspects of the species' biology and any specialist advice received. This should provide sufficient information to demonstrate that achieving the desired conservation outcome is feasible (see Chapter 6 for more details of relevant issues)

How to fill in the benefits, legislation and risk sections

The following sections of the Translocation Project Form include tables summarising benefits, legislative considerations, biological risks and socioeconomic risks.

For the benefits table, indicate the types and levels of benefit.

For the tables of legislation/biological risk/socio-economic risk, delete and edit the pre-entered text to capture the relevant issues for your translocation. Use the Best Practice Guidelines to assist in this process.

Add additional rows as required if important issues for your translocation are not captured in the templates.

Where there is an appreciable benefit, legislative issue or risk (e.g. a response in the 'medium' or 'high' columns for any row in any table), use the text box below each table to expand on each individual issue:

- Benefits: explain the nature of the benefits
- Legislation
    - Where a species licence or a non-native species licence is required complete the additional *Species* or *Non-native species Licence Application Information*
    - List other permits/permissions required and obtained and the steps taken to ensure the translocation is legal
- Biological risks: outline the steps taken to mitigate against risks
- Socioeconomic risks: outline the steps taken to mitigate against problems

7. Benefits

7.1. Benefits Table (tick as appropriate)*

Beneficiary	Benefit type	Level of benefit* Low	Med.	High
Focal Species	***Reducing extinction risk and/or improving the conservation status of a species by:***			
	Increasing the number of individuals, improving population structure, and/or increasing the number of locations at which a species occurs	☐	☐	☐
	Improving the genetic health and resilience of a population by directly introducing genetic diversity	☐	☐	☐
	Establishing 'bridging populations', to facilitate migration and /or gene flow	☐	☐	☐
	Establishing populations in areas where the species will experience reduced levels of threat (e.g. by moving organisms into more suitable 'climate space', disease-free areas, or localities with suitable management)	☐	☐	☐
Habitat / Ecosystem	***Improving the conservation status of an ecosystem, habitat and/or other species by:***			
	Increasing the overall species richness of a habitat to enhance its biodiversity value	☐	☐	☐
	Increasing habitat quality (e.g. translocating species to change grazing regimes)	☐	☐	☐
	Improving ecosystem services and functions (e.g. translocating species to provide pollinator services)	☐	☐	☐
People	***<u>Additional</u> socio-economic benefits that may arise as a result of conservation translocations through:***			
	Enriched human experiences and environmental awareness due to increased contact with biodiversity	☐	☐	☐
	Increased benefits to humans from ecosystem services (e.g. pollination)	☐	☐	☐
	Increased income (e.g. revenue from ecotourism where the translocated species leads to increased visits or spend)	☐	☐	☐

- Low value benefits are those which make little appreciable difference to people or the conservation status of the species/habitats/ecosystems concerned. Medium value benefits are those which bring some gains, such as improving the local or regional conservation status of a species or habitat, or socioeconomic benefit to a small number of individuals. High value benefits are those which improve the national/international conservation status of a species or habitat, or bring appreciable socioeconomic benefits to communities or wider groups of society.

7.2. Details of benefits (expand on the 'medium' and 'high' benefits identified above)

8. Legislation

8.1. Legislation table (delete/edit as applicable to present the legislation relevant to your translocation – see Chapter 5 for further details on legislative issues)

Degree of constraints (statutory and non-statutory) on:	Low	Medium (should involve consultation with SNH or other relevant body)	High (covered by formal legislation)
Translocated species	No formal species protection	Scottish Biodiversity List	EPS, protection under the Wildlife & Countryside Act 1981 or equivalent All freshwater fish species
Release site (current)	No formal conservation protection – landowner permission should be sought	Release site is (or is in proximity to) a National Park, Important Plant Area, Local Nature Reserve, National Scenic Areas or similar	Release site is (or is in proximity to) a SSSI, SAC, SPA, NNR, Ramsar site Release site is outwith the native range of focal species Release site contains protected species which may be affected by the translocation
Release site (post-release)	No change likely	Establishment of the translocated species may result in legal protection being applied to some specific places (e.g. its breeding sites/resting places) that may impact on its management (e.g. may add hurdles to planning applications)	Establishment of the translocated species may result in site designation
Source population site	No formal conservation protection - landowner permission should be sought	Source population is located in a National Park, Important Plant Area, Local Nature Reserve, National Scenic Areas or similar	Source population is located in a SSSI, SAC, SPA, NNR, or Ramsar site Source population is from another country
Animal welfare	No legislative welfare protection (e.g. invertebrates)	Handling and movement of vertebrates	Actions that may cause harm to vertebrates
Quarantine/biosecurity	Local movements of species not covered by biosecurity legislation and not known to pose a biosecurity risk	Any long distance translocations Any cases where there is the possibility (or uncertainty as to the possibility) of pest and pathogen transmission	Species carries serious disease/biosecurity risks (e.g. on list of notifiable diseases/restricted movement) and/or any translocation across international borders
Dangerous species	Benign organisms	Organisms that could potentially harm humans during the translocation process	Animals listed by the Dangerous Wild Animals Act 1976

8.2. Species or Non-native Species Licences - Additional Information (see Chapter 5)

Only complete section 8.2. if a Species or Non-native Species licence is required

When do you need a licence/licences for (start & end dates)?
Provide names, addresses and organisations (if applicable) of any additional persons you want to include on the licences (either as Agent or Assistant)
Provide your previous experience in carrying out species translocations or related activities (including details of any previous licences held in Scotland or the wider UK for similar work)
Please provide the contact details of a referee (Name, address, telephone number, email, plus licence numbers held by the referee if applicable) - only complete this if the applicant has not held a licence for similar work in the last five years

8.2.1. Species licences

List the species for which a 'species licence' is required (e.g. focal species, and/or any other species that may be affected - see Chapter 5 for more details)
What activities require a species licence? (Capture, injure, kill, pick, uproot, take, disturb, possess, transport, etc.?)
What other solutions have been considered and why have these been discounted (i.e. why can't you undertake the work in a way which does not require a licence)?
What will the impact of the proposed translocation be on the conservation status of the population/ species concerned?

8.2.2. Non-native species licences

Do you need a 'non-native species licence' for the species you wish to translocate (see Chapter 5 for more details)?
What alternative options have been considered and why have these been discounted (e.g. promoting natural recolonisation)? (give further details in Section 4)
Summarise any threats the translocated species poses to the release site and wider environment? (give further details in Section 8 and 9)
Summarise actions that will be taken to reduce the risk of the translocated species causing negative impacts, how any risks will be monitored and how remedial action will be implemented if any risk is realised? (give further details in Section 8, 9 and 11)

8.3. Legislation other than Species or Non-native Species Licences

Provide a summary of permits/permissions obtained, consultation undertaken, and the steps taken to ensure the translocation is legal. This should include details of any consents needed for protected places (see Chapter 5).

9. Biological risks

9.1. Biological risk table (delete/edit as applicable – see Chapter 7 for further details)

Risk attribute	No/Low risk: Self-certification	Medium risk: Advisory (should involve consultation with SNH or other relevant body)	High risk: Detailed evaluation (and specialist advice)
Distance of the translocation	Local movement (e.g. within local authority area), typically covering distances that are within dispersal potential for the species under 'ideal' habitat conditions	Regional movement (e.g. between major regions within Scotland)	(Inter)national movement. This applies to 'outwith Scotland' but particular attention will be given to translocations from outwith Great Britain
Threat to the source population	Source population is one of many that is large in size and removal of individuals/propagules for the translocation will have no discernible effect	Individuals are sourced from moderately sized populations of species of conservation importance, or from one of only very few remaining large populations	All potential source populations are small in size, and removal of individuals may have a direct and measurable impact on the remaining population
Establishment following the translocation may cause loss/reduction of important habitat	Very unlikely (e.g. most bryophytes)	May result in moderate changes in species composition (e.g. some small generalist herbivores)	May lead to clearly recognisable impacts and major habitat change (e.g. some large herbivores)
Establishment may cause loss/reduction of important species	Very unlikely (e.g. most bryophytes)	May lead to impacts on vulnerable species (e.g. scrub restoration may negatively impact on an existing ground flora)	May lead to clearly recognisable impacts and/or loss of other species (e.g. predators)
Translocation may spread pests and diseases	No known significant problems (e.g. small cow-wheat)	Known to suffer significantly from native pathogens and pests (e.g. montane willows)	Known to suffer from major problems (e.g. amphibians/chytrid fungi) Translocations of aquatic species
Hybridisation threat (intra-specific races or inter-specific)	No known problems (e.g. translocating individuals of a self-pollinating plant species which does not hybridise with other species of conservation concern)	Potential for significantly increased hybridisation with uncommon species or translocation involves mixing populations that have been separated for long periods of time and hence may lead to genetic incompatibilities	Known to hybridise with economically important species, or species of conservation concern, that occur at (or close) to the release site (e.g. salmonids)
Species is likely to spread beyond the confines of the release site	Poorly dispersed and likely to be contained within the confines of the release site	Species has potential for effective spread beyond the release sites	Species has the potential to be invasive (e.g. is known to be invasive in other places)
Potential for animal welfare concerns to released animals or those they interact with	No concerns due to perceived lack of sentience (e.g. plants)	Moderate concern (e.g. invertebrates) and/or general concerns associated with handling and movement	Significant (vetebrates), especially where actions may cause harm (e.g. improper/ inappropriate transit cases for vertebrates)

9.2. Details of steps taken to mitigate any biological risks and an appraisal of whether it is ‘safe to proceed’. Also detail any consultation undertaken and specialist advice received.

10. Socioeconomic risks

10.1. Socioeconomic risk table (delete/edit as applicable – see Chapter 8 for further details)

Risk attribute	No/Low risk: Self-certification	Medium risk: Advisory (should involve consultation with SNH)	High risk: Detailed evaluation (and specialist advice)
Likelihood of strong social resistance by some to translocation	Unlikely	Some minor concerns (e.g. bats - concerns that roosts would impact on building permits)	Likely to cause major opposition from some groups (e.g. predators being released near commercially important species)
Harm to human health and well-being	No known risks to human health	Presents a minor risk to human health (e.g. stings, irritation) or rare occurrence of serious impact (e.g. bats and rabies)	Presents a potential risk to human health i.e. serious illness or injury (e.g. large carnivore or vector for harmful pathogen)
Harm to human livelihoods	Unlikely	Small scale impacts on pets and livestock	Significant concern (e.g. killing livestock, harming populations of commercially important species, restricting access to commercially important sites)
Insufficient resources may prevent successful implementation of the translocation plan	Translocation is low cost	Translocation is expensive but well resourced	The translocation may run over multiple years making it difficult to guarantee fundingand a shortfall may lead to animal welfare issues, or inadequate management (resulting in negative conservation outcomes or socioeconomic problems)
Major financial costs once the translocation has been completed (e.g. control measures if the population has greater impacts than envisaged)	Unlikely	There is a concern that the translocation may have impacts which require ongoing management	There is a possibility of a very expensive and large scale 'reversal' programme should the translocation have adverse outcomes

10.2. Details of steps taken to mitigate socioeconomic problems and an appraisal of whether it is 'safe to proceed' (including information on stakeholder consultation, specialist advice received, and how any concerns have been addressed)

11. Monitoring and adaptive management (see Chapter 9)

Outline the type, frequency, and duration of planned monitoring

Outline the arrangements for ongoing management, including an appraisal of the feasibility of reversing the translocation should unacceptable outcomes occur

Will biological specimens (e.g. DNA samples, museum specimens) be collected during the translocation and monitoring?
If so, describe the nature of the specimens
Where will they be housed? (institution and contact person)

12. Communication plan (see Chapter 9)

Outline the plan for communicating the process and outcomes of the translocation (including steps to inform future translocations, stakeholder communication, and public engagement)

13. Data confidentiality (delete/edit as applicable)

I give my permission for the information in this form to be included in the Scottish Translocation Database ☐ I give my permission for the information in this form to be included in the Scottish Translocation Database with the following exceptions: specify ☐ *Note that personal information and geographically sensitive information will not be made public*

14. Declaration

- I declare that this translocation will be undertaken in accord with the *Scottish Code for Conservation Translocations* and associated Best Practice Guidelines.

- For translocations which require SNH to grant a Species and/or Non-native species licence, I agree to the terms of the licence application:

    - *Applicants should note that it is an offence under Section 17 of the Wildlife and Countryside Act 1981 and under Regulation 46 of the Conservation (Natural Habitats &c) Regulations 1994 to knowingly or recklessly provide false information in order to obtain a licence.*

    - *I understand that failure to comply with any conditions included on any licence granted in respect of this application may constitute an offence.*

    - *I declare that the particulars given in this application and any accompanying documents are true and accurate to the best of my knowledge and belief, and I apply for a licence in accordance with these particulars.*

    - *If a licence is granted, I agree to send to SNH a written report of the licensed activities within one month of the expiry of the licence.*

Signed

Date