



PART I

INTRODUCTION



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“All organisms are greatly influenced by alterations in their environments. Change threaten some species, while survival of others is enhanced. In pursuing their own interests, humans have considerably altered the earth’s environment and have decreased the probability of survival for many other species. There is a question whether humans as environmental manipulators have increased or decreased their own chance of survival. It might prove to be that humans would have persisted longer as a species if, as all other organisms on earth, they had pursued the course of adaptation rather than manipulation.”

James O. Keith, 1991
(In Wildlife Toxicology by T.J. Peterle)

Purpose

The Bellingham Wildlife and Habitat Assessment is the first comprehensive planning document in Bellingham and Northwest Washington dedicated exclusively to wildlife. The primary purpose of this report is to fulfill the fish and wildlife conservation goals mandated by the 1990 Washington State Growth Management Act, Critical Areas Section (WAC 365-190). The secondary purpose for the report is to serve as a wildlife reference guide for city planning and administrative personnel. It is intended for application in the City’s comprehensive planning update, project review, as well as in regulatory and policy development. The Wildlife Habitat Plan included in this document, provides specific goals for fostering stewardship of the City’s living resources and further wildlife conservation through habitat protection.

Under the growth management requirements cities and counties have the responsibility to classify and inventory species and habitats of local importance and to map their associated locations for the purpose of protecting and conserving these as critical wildlife areas. Critical areas, once designated, shall then be protected under interim regulations and be included in the City’s comprehensive plan update for permanent protection.

This report includes three principle elements: 1) wildlife planning and regulatory background information with suggested planning guidelines and considerations; 2) the status of wildlife in Bellingham past and present, which includes a preliminary inventory of species and habitats city wide and; 3) recommendations for local wildlife and habitat management, enhancement, restoration and protection within the City of Bellingham.

It is the intent of this report to emphasize wildlife as a public resource of economic, cultural and ecological value. As a resource that is poorly understood by most citizens, planners, city administrators, decision makers and developers, wildlife concerns have been neglected and related issues left unaddressed through Bellingham’s growth and development, until now. The following text will expose the gaps and weaknesses in current laws and permitting procedures, provide detailed guidelines and means of correcting those voids, identify critical habitats and species within the city and recommend specific approaches to manage wildlife and its habitat effectively. By gaining a greater understanding and appreciation for wildlife and its complex needs, city staff and decision makers may use this document as a foundation on which to build the policies, regulations and programs necessary to protect and ensure the longevity of this irreplaceable resource.

Study Area

The study area is located within the City of Bellingham boundaries, situated in Whatcom County at the northwest corner of Washington State. The approximately 14,720 acre area, consists of an urban core, adjacent to Bellingham Bay, immediately surrounded by residential, commercial and light industrial land uses. The city's outer fringe area consists of the same uses to the north and a mix of residential, park and rural forest to the east and south. Bellingham is a growing community with a population of over 52,000 and a rapidly urbanizing landscape. Approximately 28% (City of Bellingham 1991) of the once vast natural landscape remains unbuilt. With the current 4% population increase forecast for the city and 7% for Whatcom County (Washington State, 1992), what remains unbuilt today is facing inevitable development pressure.

The city however growing, has maintained its unique northwest character, certain natural features and open space. These natural features provide a variety of habitat opportunities for wildlife including, the Bay's inland marine habitat and its diverse saltwater shoreline, tidal salt marsh, mudflats, sandstone cliffs and small estuaries. To the north and east of the city, four major stream courses originate from headwaters outside the city boundaries. The year-round streams are runoff from an annual average precipitation of 34 inches and large natural lakes which act a reservoirs for two of the four stream drainages. Originating from temperate forest and agricultural lands and flowing through an urbanizing landscape to the bay, these streams create natural riparian corridors. These corridors link their aquatic and riparian habitats with, wetlands, urban upland forests, fresh water lakes and a patchwork of parks, trails and open spaces. By virtue of their habitat value, natural connectivity and available data, the City's streams received the greatest attention within the study area.

Scope

The scope of this report encompasses wildlife conservation, management, biodiversity, law, conservation programs, habitat identification and function, growth management, an inventory of critical wildlife areas in the city and recommendations for local application of the technical information provided. The focus is vertebrate wildlife including fish, amphibians, reptiles, birds and mammals and their associated habitat. Invertebrates were not disregarded for lack of value or function. To the contrary invertebrates form the nutrient foundation for all vertebrate communities and are important bioindicators for aquatic environments, water quality, air quality and landscape deterioration (Jeffery & Madden 1991). The time and expertise to properly address invertebrates was beyond the resources available for this study. It is recommended however, that the city obtain expert direction on this subject and address locally significant macro invertebrates, hosts and habitats.

The background information contained in this document is the synthesis of reviewed current published literature, existing pertinent government documents, interviews and written contributions from local professional biologists specializing in wildlife, local, state and federal law enforcement officers and skilled naturalists. To the best of our knowledge, all of the vertebrate wildlife resource material pertinent to Bellingham and written in the past fifteen-

twenty years was reviewed and cited in this report. The only known exception are the Port of Bellingham documents.

The background information compiled from the numerous sources is logically arranged and reference sources are cited. The subjects include the growth management mandate and planning theory, a brief historical perspective and changes in the landscape of Bellingham overtime, the status of wildlife in Bellingham including public perception, consideration in the planning process, a "complete" vertebrate species list, local wildlife and habitat inventory, wildlife law, voluntary resource protection and recommendations for local wildlife and habitat management, protection and restoration.

Partial compliance with the Growth Management Act is met with the preliminary identification of locally critical habitats and species, habitat reserves and corridors and recommendations for their protection based on existing information. Further compliance is needed in the form of adopted policies or regulations for the permanent protection of critical wildlife and habitat areas. The Wildlife Habitat Plan serves that purpose. Finally, in order to calculate the population status and viability of the critical species or to make informed decisions regard site specific projects, scientifically credible empirical data (information based direct observation) is needed. Currently, city-wide field inventory data does not exist and was not within the scope of this preliminary study. Yet, such a baseline study is suggested as the next step in the City's wildlife assessment.

The inventory section of this report focus's primarily on the natural features of Bellingham's land scape and will touch only briefly on the built/developed areas of the city. The natural areas within the city's boundaries were analyzed by aerial photo interpretation. The analysis included the classification vegetative communities as habitats, the areas of each habitat quantified and connectivity noted. Using overlaid wetland, park and greenway information corridors and currently protected areas were identified. With the combined habitat and corridor locations mapped, a natural habitat network was identified and documented.

Supplemental information and supporting documentation is included in the *Appendix* section of this report. Key references consist of a complete annotated bibliography of references containing wildlife information specific to Bellingham, a complete species list for the City's vertebrate species, federal and state sensitive species lists, the habitat classification system and pertinent city laws.

A set of "working maps" (topographic and aerial 1:200) accompany this report and contain habitat classifications, delineations, species specific locations, wildlife notes, corridor routes, PHS information and identified barriers. The working maps are intended for planning department staff use only and require some interpretation.

This document is presented to the City of Bellingham for its adoption and application as the City's primary wildlife planning document and preliminary critical wildlife and habitat inventory. The recommendations and suggestions included in this report are provided for consideration only and in no way represent the polices or views the city or its staff.

