

**City of Ferndale**



# **SHORELINE MASTER PROGRAM:**

**June 2009**

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ATTACHMENT 2	Floodplain Management Regulations
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ADDITIONAL INFORMATION	Process Overview Shoreline Jurisdiction Boundary Assumptions Made Data Gaps Risks To Ecological Functions Cumulative Impact Analysis Area-By-Area Shoreline Analysis

# **CHAPTER 1 GENERAL PROVISIONS**

## **Sections:**

**1.10 AUTHORITY**

**1.20 PURPOSE**

**1.30 SCOPE**

**1.40 TITLE**

**1.50 SHORT TITLE**

## **1.10 AUTHORITY**

This Program is adopted pursuant to the State Shoreline Management Act of 1971, Chapter 90.58, RCW.

## **1.20 PURPOSE**

It is the policy of the State of Washington as expressed in the Shoreline Management Act of 1971 and the City of Ferndale as expressed in this Master Program to provide for the management of the shorelines of the State by planning for and fostering all reasonable and appropriate uses, particularly uses directly dependent upon the water; to preserve to the greatest extent feasible consistent with the overall interest of the State, the City, and the people generally, the public's opportunity to enjoy the physical and aesthetic qualities of the shorelines of the City by preserving views and increasing public access to the shorelines; and, to manage the shorelines of the City to minimize, insofar as practical, damage to the shoreline area.

## **1.30 SCOPE**

No development shall be undertaken on the shorelines within the corporate limits of the City of Ferndale except those that are consistent with the policy of the Shoreline Management Act of 1971 and the goals, policies, and regulations of the Master Program. No substantial development shall be undertaken within Shoreline Jurisdiction, without first obtaining a Substantial Development Permit from the City in accordance with procedures in Chapter 5 of this Program. No such permit shall be required where the Administrator determines that a development proposed in the shoreline area is not a "substantial development" as defined in Chapter 2 of this title or is exempt under Section 3.30 of this Program. The Shoreline Administrator, Planning Commission, or City Council, as applicable, are the final authorities for the City for granting shoreline substantial development permits, subject to the right of appeal to the City Council and thereafter to the Shorelines Hearings Board in compliance with the time requirements and procedures specified in Chapter 6 of this Program.



**1.40 TITLE:**

City of Ferndale Shoreline Master Program.

**1.50 SHORT TITLE:**

This document may be referred to internally as SMP, Master Program, or Program.

## CHAPTER 2 DEFINITIONS

The terms listed in this Chapter and used throughout this Program shall be defined and interpreted as indicated below. When consistent with the context, words used in the present tense shall include the future; the singular shall include the plural, and the plural the singular.

**Accessory Development** means any development incidental to and subordinate to a primary use of a shoreline site and located adjacent thereto.

**Act** means the Shoreline Management Act of 1971 (RCW 90.58) as amended.

**Administrator** means the Shoreline Administrator.

**Agricultural Practices** are the commercial farming or raising of livestock or crops. New agricultural practices are prohibited within the City of Ferndale.

**Appurtenance** means development that is necessarily connected to the use and enjoyment of a single family residence and is located landward of the OHWM and the perimeter of a wetland. Appurtenances include a garage, deck, driveway, utilities, fences and grading which does not exceed two hundred fifty cubic yards (except to construct a conventional drain field).

**Aquacultural Activities** are the commercial culture of feed fish, shell fish, or aquatic plants and animals, including but not limited to propagation, stocking, feeding, disease treatment, waste disposal, water use, development of habitat and structures and native fisheries enhancement projects.

**Aquatic Environment Designation** is defined as the area waterward of the Ordinary High Water Mark (OHWM) of all streams and rivers, and all lakes, together with their underlying lands and their water column; including, but not limited to: streamways, bedlands, wetlands and shorelands.

**Average Grade Level** shall mean the average of the natural or existing topography of the portion of the lot, parcel, or tract of real property which will be directly under the proposed structure and shall be determined by averaging the elevations at the center of all exterior walls of the proposed structure.

**Bank full width** means the horizontal projection of bank full depth to the stream bank. Bank full depth means the elevation of the water surface of a stream flow having a return period of approximately 1.5 years measured from the line of maximum depth of the stream or thalweg. Most river channels are bordered by a relatively flat area or valley floor. When the water fills the channel completely, or is at bank full stage, this surface is level with the flood plain. The stream cuts down or builds up as climate and watershed conditions change because there is a new relation between discharge and sediment transport and storage. The channel will erode or modify its flood plain in response to changes in discharge and sediment. The former flood plain it had been constructing is thus abandoned. An abandoned flood plain is called a terrace. While a terrace is flooded on occasion, the active flood plain is frequently flooded by discharges that occur approximately every 1.5 years to 2.0 years in the annual flood series. In those valleys that narrowly confine the channel such that no flood plain can be built, this bank full stage projection still applies.

**Bedlands** means those submerged lands below the line of navigability of navigable lakes and rivers.

**Boating Facilities** are facilities for vehicular or mechanical launching of boats, including, but not limited to boat ramps, docks, and floats. Docks serving four or fewer single-family residences are not considered Boating Facilities.

**Bog** means a wetland depression or other undrained or poorly drained area containing or covered with usually more than one layer of peat and as defined in Chapter 173-22 WAC. Characteristic vegetation of bogs are sedges, reeds, rushes, or mosses. In early stages of development, vegetation is herbaceous and the peat is very wet. In middle stage, dominant vegetation is shrubs. In mature stage, trees are dominant and peat near the surface may be comparatively dry. Bogs represent the final stage of the natural process (eutrophication) by which lakes are very slowly transformed into land; bogs are sometimes mined for peat on a commercial basis; bogs are often an intake for ground water (aquifer recharge area).

**Buffer** is an undeveloped area of natural or landscaped vegetation located on site between a developed area and a road, property line, shoreline or other use or feature which serves to reduce use conflicts and other impacts.

**Building** means any structure designed for or used for the support, shelter, or enclosure of persons, animals, chattels, or personal property, and which is used for a fixed location on land or water.

**Bulkheads** are wall-like structures placed parallel to shore primarily for retaining uplands and fills prone to sliding or sheet erosion, and secondarily to protect uplands and fills from erosion by wave or current action.

**Chemicals** shall mean any synthetic substance or mixture of such substances used for a fertilizer, herbicide, pesticide, insecticide, rodenticide, or other deleterious products

**City** means City of Ferndale

**Commercial Development** means those uses that are involved in wholesale and/or retail trade or business activities.

**Community Dock** means a dock development providing moorage for pleasure craft and/or landing for water sports for use in common by shoreline residents of a certain subdivision or community within shoreline jurisdiction or for use by patrons of a public park or quasi-public recreation area, including rental of non-powered craft.

**Conditional Use** for the purposes of this Program means a particular type of use or development listed in the regulations as being permitted only as a conditional use, including specific uses shown as conditionally permitted by the chart in Chapter 9.170, the expansion or resumption of a non-conforming use under Section 3.50, and other shore-dependent uses which are unnamed in the Program or which require a specific site location on the shoreline not provided for under the Program. Conditional uses are subject to review and approval pursuant to the criteria in Chapter 6.190 of this Program, regardless of whether or not the proposal requires a substantial development permit. A prohibited use cannot be approved as a conditional use.

**Conservancy Environment Designation** is defined as a shoreline area containing natural resources which can be used/managed on a multiple use basis without extensive alteration of topography or banks; including but not limited to forest, agricultural and mineral lands, outdoor recreation sites, fish and wildlife habitat, watersheds for public supplies, and areas of outstanding scenic quality; and/or a shoreline area containing hazardous natural conditions or sensitive natural or cultural features which require more than normal restrictions on development and use of such areas; including, but not limited to: eroding shores, geologically unstable areas, steep slopes, floodways, and valuable natural wetlands or historic sites.

An area containing natural resources which can be used/managed on a multiple use basis without extensive alteration of topography or banks; including but not limited to forest, agricultural and mineral lands, outdoor recreation sites, fish and wildlife habitat, watersheds for public supplies, and areas of outstanding scenic quality; and/or; shoreline area containing hazardous natural conditions or sensitive natural or cultural features which require more than normal restrictions on development and use of such areas; including, but not limited to: eroding shores, geologically unstable areas, steep slopes, floodways (and flood plains), gravel-braided streamways, natural accretion shoreforms, and valuable natural wetlands or historic sites.

**Critical Area Ordinance (CAO)** means Ordinance #1328 dated October 18, 2004, and any revisions hereto, incorporated herein.

**Department** means the state Department of Ecology.

**Development** means a use consisting of the construction or exterior alteration of structures, dredging, drilling, dumping, filling; removal of any sand, gravel or minerals; bulkheading; driving of piling; placing of obstructions; or any project of a permanent or temporary nature which interferes with the normal public use of the surface of the waters overlying lands subject to the Act at any state of water level. This term includes both development that requires a permit and development that is exempt from the substantial development permit process.

**Dredging** is the removal, displacement, and disposal of unconsolidated earth material such as silt, sand, gravel, or other submerged material from the bottom of water bodies, ditches or wetlands; maintenance dredging and other support activities are included in this definition. Dredging is commonly done in shallow accretional environments to deepen wet moorage marinas, harbors and their entrances, and navigational lanes and to obtain bottom materials for landfill or construction.

**Ecological Functions** means the physical, chemical, and biological processes that contribute to the proper maintenance of the aquatic and terrestrial environments that constitute the shoreline ecosystem. Ecological functions relevant to specific shoreline ecological systems include, but are not limited to:

**Riverine:**

Hydrologic processes: Maintaining a natural range of flow variability, sideflow and overflow channel functions, reducing peak flows and downstream erosion, and helping to maintain base flows.

Water quality: Temperature; removing excessive nutrients and toxic compounds.

Dynamic sediment processes: Sediment removal, stabilization, transport, deposition, and providing spawning gravels.

Habitat for: Threatened, endangered, and priority species, species of local importance, aquatic and shoreline-dependent birds, invertebrates, and mammals; amphibians; and anadromous and resident native fish. Habitat functions may include, but are not limited to, shade, litter and woody debris recruitment, refugia, and food production.

Hyporheic functions: Water quality, water movement and storage, vegetation base, and sediment storage within the ground adjacent to a waterbody..

**Lacustrine:**

Water quality: Removing excessive nutrients and toxic compounds and removing and/or stabilizing sediments.

Habitat for: Threatened, endangered, and priority species, species of local importance; aquatic and shoreline-dependent birds, invertebrates, and mammals; amphibians; and anadromous and resident native fish. Habitat functions may include, but are not limited to, shade, litter and woody debris recruitment, refugia, and food production.

**Wetlands:**

Flood attenuation.

Water quality: Removing excessive sediment, nutrients, and toxic compounds.  
Ground water recharge.

Maintenance of base flows.

Nutrient filtering.

Habitat for: Threatened, endangered, and priority species, species of local importance; aquatic and shoreline-dependent birds, invertebrates, and mammals; amphibians; and anadromous and resident native fish. Habitat functions may include, but are not limited to, shade, litter and woody debris recruitment, refugia, and food production.

**Ecosystem-wide Processes** means the suite of naturally occurring physical and geologic processes of erosion, transport, and deposition and specific chemical processes (e.g., flocculation) that shape landforms within a specific shoreline ecosystem and determine both the types of habitat that are present and the associated ecological functions and their processes. Ecosystem-wide processes include, but are not limited to:

Riverine processes: Landform and channel erosion; sediment transport and load in channel and overbank; channel dynamics, including channel gradation and migration; and changes in channel form during flooding.

Lacustrine, tidal, wave, and current processes: Wave erosion (including refraction), littoral drift, vertical transport, and tidal erosion and deposition.

**Fair Market Value** of a development is the open market bid price for conducting the work, using the equipment and facilities, and purchase of the goods, services and materials necessary to accomplish the development. This would normally equate to the cost of hiring a contractor to undertake the development from start to finish, including the cost of labor, materials, equipment and facility usage, transportation and contractor overhead and profit. The fair market value of the development shall include the fair market value of any donated, contributed or found labor, equipment or materials.

**Feasible** means, for the purpose of this chapter, that an action, such as a development project, mitigation, or preservation requirement, meets all of the following conditions:

The action can be accomplished with technologies and methods that have been used in the past in similar circumstances, or studies or tests have demonstrated in similar circumstances that such approaches are currently available and likely to achieve the intended results;

The action provides a reasonable likelihood of achieving its intended purpose; and

The action does not physically preclude achieving the project's primary intended legal use.

**Fill** means the addition of soil, sand, rock, gravel, sediment, earth retaining structure, or other material to an area waterward of the OHWM, in wetlands, or on shorelands in a manner that raises the elevation or creates dry land.

**Fish and/or Wildlife Enhancement** means development or other nonstructural alteration of a shoreline to rehabilitate, maintain, or create fish and/or wildlife habitat, or to enhance the fish and/or wildlife resource available for use by all of the citizens of the state. Fish and/or wildlife enhancement may include projects described within Watershed Restoration Plans, as defined by this program.

**Flood Plain** is synonymous with one hundred-year floodplain and means that land area susceptible to inundation with a one percent chance of being equaled or exceeded in any given year.

**Floodway** means those portions of the area of a river valley lying streamward from the outer limits of a watercourse upon which flood waters are carried during periods of flooding that occur with reasonable regularity, although not necessarily annually, said floodway being identified, under normal condition, by changes in surface soil conditions or changes in types or quality of vegetative ground cover condition. The floodway shall not include those lands that can reasonably be expected to be protected from flood waters by flood control devices maintained by or maintained under license from the federal government, the state, or a political subdivision of the state.

**FMC** means the City of Ferndale Municipal Code, as amended.

**Forestry** means any activity conducted on or directly pertaining to forested land and relating to growing, harvesting, or processing of timber; including, but not limited to: (1) road and trail construction; (2) fertilization; (3) prevention and suppression of diseases and insects; or other activities which qualify as a use or development subject to the Act. Excluded from this definition is preparatory work such as tree marking, surveying and removal of incidental vegetation such as berries, greenery, or other natural products whose removal cannot normally be expected to result in damage to shoreline natural features. Log storage away from forested land is considered under Industrial Development.

**General Commercial Conservancy Zone** means a subset of the Conservancy and Urban land use designation. This zone includes a specific area near Tennant Lake within the City that has been identified as having high value wetlands. This designation is intended to alert developers to the increased ecological sensitivity of this area and the likelihood of additional development restrictions.

**Geologically Unstable** refers to the relative instability of a shoreform or land form for development purposes over the long term or the intended life of any proposed structure. Soil, slope, ground or surface water, other geologic conditions, vegetation and effects of development are common factors which contribute to instability. For purposes of setbacks, high banks or bluffs composed of unconsolidated alluvial or glacial deposits (till and drift material), severely fractured bedrock, active and substantial erosion, substantially deformed trees and shrubs, or active or inactive earth slide areas are likely to be considered geologically unstable. A determination by the City of geologically unstable shoreline areas shall be made using the best available information at the time.



**Geotechnical Report or Geotechnical Analysis** means a scientific study or evaluation conducted by a qualified expert that includes a description of the ground and surface hydrology and geology, the affected land form and its susceptibility to mass wasting, erosion, and other geologic hazards or processes, conclusions and recommendations regarding the effect of the proposed development on geologic conditions, the adequacy of the site to be developed, the impacts of the proposed development, alternative approaches to the proposed development, and measures to mitigate potential site-specific and cumulative geological and hydrological impacts of the proposed development, including the potential adverse impacts to adjacent and down-current properties.

Geotechnical reports shall conform to accepted technical standards and must be prepared by qualified professional engineers (or geologists) who have professional expertise about the regional and local shoreline geology and processes.

**Grading** means the movement or redistribution of the soil, sand, rock, gravel, sediment, or other material on a site in a manner that alters the natural contour of the land.

**Hazardous Materials** means any substance containing such elements or compounds which when discharged in any quantity in shorelines present an imminent and substantial danger to public health or welfare; including, but not limited to: fish, shellfish, wildlife, water quality, and other shoreline features and property.

**Hazardous, Sensitive or Unsuitable Areas** means any Critical Area, as defined in the City's Critical Areas Ordinance, any Flood Hazard Areas, or other any other areas requiring special precautionary measures for development in order to avoid adverse impacts to the environment or safety hazards.

**Height** is measured from average grade level to the highest point of a structure: provided, that television antennas, chimneys, and similar appurtenances shall not be used in calculating height, except where such appurtenances obstruct the view of the shoreline of a substantial number of residences on areas adjoining such shorelines: provided further, that temporary construction equipment is excluded in this calculation.

**Industrial Development** means facilities for processing, manufacturing, and storage of finished or semi-finished goods, together with necessary accessory uses such as parking, loading, and waste storage and treatment.

**In-Stream Structure** means a structure placed by humans within a stream or river waterward of the bank full width that either causes or has the potential to cause water impoundment or the diversion, obstruction, or modification of water flow. In-stream structures may include those for hydroelectric generation, irrigation, water supply, flood control, transportation, utility service transmission, fish habitat enhancement, or other purpose.

**Lacustrine** means pertaining to a lake.

**Letter of Exemption** means a letter or other official certificate issued by the City to indicate that a proposed development is exempted from the requirement to obtain a shoreline substantial development permit as provided in WAC 173-27-050. Letters of exemption may include conditions or other provisions placed on the proposal in order to ensure consistency with the Shoreline Management Act, its implementing rules, and this master program.

**Manufacturing Conservancy Zone** means a subset of the Conservancy and Urban land use designation. This zone includes a specific area near Tennant Lake within the City that has been identified as having high value wetlands. This designation is intended to alert developers to the increased ecological sensitivity of this area and the likelihood of additional development restrictions.

**May** means the action is acceptable, provided it conforms to the provisions of the Act, Program, or State Guidelines.

**Mining** is the removal of naturally occurring metallic and non-metallic minerals or other materials from the earth for economic use.

**Mitigation** or **mitigation sequencing** means the following sequence of steps listed in order of priority, with “A” of this subsection being top priority:

Avoiding the impact altogether by not taking a certain action or parts of an action;

Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts;

Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

Reducing or eliminating the impact over time by preservation and maintenance operations;

Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and monitoring the impact and the compensation projects and taking appropriate corrective measures.

**Must** means a mandate; the action is required.

**Natural or existing topography** means the topography of the lot, parcel, or tract of real property immediately prior to any site preparation or grading, including excavation or filling;

**Nonwater-oriented uses** means those uses that are not water-dependent, water-related, or water-enjoyment.

**Official Shoreline Map** means the adopted map or maps, including amendments thereto, showing Shoreline Jurisdiction, the respective Shoreline Environment Designations within, including any notes or text placed on the maps.

**Ordinary High Water Mark (OHWM)** on all lakes, streams, and tidal water is that mark that will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation as that condition exists on June 1, 1971, as it may naturally change thereafter, or as it may change thereafter in accordance with permits issued by a local government or the department: PROVIDED, That in any area where the ordinary high water mark cannot be found, the ordinary high water mark adjoining fresh water shall be the line of mean high water.

**Person** means an individual, partnership, corporation, association, organization, cooperative, public or municipal corporation, State agency or local governmental unit, however, designated, or Indian Nation or tribe.

**Piers, Docks and Floats** shall mean all platform structures, fill, or anchored devices in or floating upon water bodies to provide moorage for pleasure craft or landing for water-dependent recreation including but not limited to mooring buoys, swim floats, float plane moorages, covered moorages, and water ski jumps. Excluded are recreational decks, storage facilities, launch ramps, or other appurtenances.

**Priority Habitat** means a habitat type with unique or significant value to one or more species. An area classified and mapped as priority habitat must have one or more of the following attributes:

- Comparatively high fish or wildlife density;
- Comparatively high fish or wildlife species diversity;
- Fish spawning habitat;
- Important wildlife habitat;
- Important fish or wildlife seasonal range;
- Important fish or wildlife movement corridor;
- Rearing and foraging habitat;
- Important marine mammal haul-out;

Refugia habitat;  
Limited availability;  
High vulnerability to habitat alteration;  
Unique or dependent species; or  
Shellfish bed.

A priority habitat may be described by a unique vegetation type or by a dominant plant species that is of primary importance to fish and wildlife (such as oak woodlands or eelgrass meadows). A priority habitat may also be described by a successional stage (such as, old growth and mature forests).

Alternatively, a priority habitat may consist of a specific habitat element (such as a consolidated marine/estuarine shoreline, talus slopes, caves, snags) of key value to fish and wildlife. A priority habitat may contain priority and/or nonpriority fish and wildlife.

**Priority Species** means species requiring protective measures and/or management guidelines to ensure their persistence at genetically viable population levels. Priority species are those that meet any of the criteria as follows:

Criterion 1. State-listed or state proposed species. State-listed species are those native fish and wildlife species legally designated as endangered (WAC 232-12-014), threatened (WAC 232-12-011), or sensitive (WAC 232-12-011). State proposed species are those fish and wildlife species that will be reviewed by the department of fish and wildlife (POL-M-6001) for possible listing as endangered, threatened, or sensitive according to the process and criteria defined in WAC 232-12-297.

Criterion 2. Vulnerable aggregations. Vulnerable aggregations include those species or groups of animals susceptible to significant population declines, within a specific area or statewide, by virtue of their inclination to congregate. Examples include heron colonies, seabird concentrations, and marine mammal congregations.

Criterion 3. Species of recreational, commercial, and/or tribal importance. Native and nonnative fish, shellfish, and wildlife species of recreational or commercial importance and recognized species used for tribal ceremonial and subsistence purposes that are vulnerable to habitat loss or degradation.

Criterion 4. Species listed under the federal Endangered Species Act as either proposed, threatened, or endangered.

**Public Access** encompasses the public's right to get to and use the State's public waters, the water/land interface and associated shoreline area. It includes physical access that is either lateral (areas paralleling the shore) or perpendicular (an easement or public corridor to the shore), and visual access facilitated by scenic roads and overlooks, viewing towers and other public sites or facilities.

**Recreational Development** is the modification of the natural or existing environment to accommodate recreation. This may include land clearing, earth modifications, structures and other facilities such as parks, camps, camping clubs, launch ramps, golf courses, viewpoints, paths, public access facilities, public parks and playfields, wildlife enhancement, and other low intensity use outdoor recreation areas. Recreational homes and related subdivisions of land are considered residential; resorts, motels, hotels, recreational vehicle parks, intensive commercial outdoor or indoor recreation and other commercial enterprises are considered commercial.

**Residential Environment Designation** is defined as an area which is planned and platted for single-family and multi-family residential uses.

**Residential Development** means buildings, earth modifications, subdivision and use of land primarily for human residence; including, but not limited to: single-family and multi-family dwellings, mobile homes and mobile home parks, together with accessory uses common to normal residential use. Camping sites or clubs, recreational vehicle parks, motels, hotels and other transient housing are not included in this definition.

**Restoration** or **Ecological Restoration** means the significant reestablishment or upgrading of ecological shoreline functions through measures such as revegetation, removal of intrusive shoreline structures and removal or treatment of toxic materials. Restoration does not necessarily imply returning the shoreline area to aboriginal or pre-European settlement conditions.

**Restore** means to significantly reestablish or upgrade shoreline ecological functions through measures such as revegetation, removal of intrusive shoreline structures, and removal or treatment of toxic sediments. To restore does not necessarily imply returning the shoreline area to aboriginal or pre-European settlement conditions.

**Riverine** means pertaining to a river or stream system, including associated lakes and wetlands.

**Roads and Railways** include related bridges and culverts, fills, embankments, causeways, parking areas, truck terminals and rail switchyards, sidings, spurs, and air fields; not included are recreational trails, highway rest areas, ship terminals, seaplane moorages, nor logging roads. A road is a linear passageway for motor vehicles, and a railway is a linear passageway with track for train traffic.

**Rural Environment Designation** is defined as an area developed at a low overall density or used at a low to moderate intensity; including, but not limited to: residences, agriculture and outdoor recreation developments.

**Shall** means a mandate; the action is required.

**Shoreline Administrator** means the Planning Director, who is to carry out the administrative duties enumerated in this Program, or his designated representative.

**Shoreline Areas** mean those areas described and mapped on the official City of Ferndale shorelines map..

**Shoreline Environment Designations** are distinct environment designations, based on existing use patterns, the biological and physical character of the shoreline, and the goals and aspirations of the community as expressed through the Comprehensive Plan. The City of Ferndale's shoreline environment designations are as follows:

- A. Urban
- B. Residential
- C. Rural
- D. Conservancy
- E. Aquatic

Also note that there are two subsets of the Urban and Conservancy designations – General Commercial Conservancy and Manufacturing Conservancy which apply to only two specific areas within the City.

**Shoreline Functions** are defined as Ecological Functions.

**Shoreline Modifications** means those actions that modify the physical configuration or qualities of the shoreline area, usually through the construction of a physical element such as a dike, breakwater, pier, weir, dredged basin, fill, bulkhead, or other shoreline structure. They can include other actions, such as clearing, grading, or application of chemicals. Shoreline Modifications usually accompany a proposed primary use but may occur independently.

**Shoreline Jurisdiction, or Shorelands** means those lands as designated on the official City of Ferndale shoreline map.

**Shoreline Permit** means a shoreline substantial development permit, a shoreline conditional use, or a shoreline variance, or any combination thereof issued by the City pursuant to Chapter 90.58 RCW.

**Shorelines** means all of the water areas of the State, including reservoirs and their associated shorelands, together with lands underlying them; except Shorelines of State-wide Significance, Shorelines on segments of streams upstream of a point where the mean annual flow is 20 cubic feet per second or less and the wetlands associated with such upstream segments, and Shorelines on lakes less than 20 acres in size and wetlands associated with such small lakes.

**Shorelines of the State** are the total of all shorelines and shorelines of State-Wide Significance within the State of Washington.

**Shorelines of State-Wide Significance** means the following shorelines in the City of Ferndale, pursuant to RCW 90.58.030(2)(e):

That portion of the Nooksack River, including associated shorelands, lying within the boundaries of the City of Ferndale. Wetlands within the 100-year floodplain of the Nooksack River include those within Tennant Lake and Ten Mile Creek.

**Should** means that the particular action is required unless there is a demonstrated, compelling reason, based on policy of the Shoreline Management Act and this chapter, against taking the action.

**Significant Ecological Impact** means an effect or consequence of a human-caused action if any of the following apply:

The action degrades or changes an ecological function or ecosystem-wide process to such a degree that the ecosystem can no longer perform the function at levels within its natural range of variability or that the performance of the function falls outside the range needed to maintain the integrity of other ecological processes in shoreline areas. As used in this definition, the normal range of variability does not include alterations caused by catastrophic events.

Scientific evidence or objective analysis indicates that the action could cause degradation or change to those ecological functions or ecosystem-wide processes described in (a) of this subsection under foreseeable conditions.

Scientific evidence indicates that the action could contribute to degradation or change to ecological functions or ecosystem-wide processes described in (a) of this subsection as part of cumulative impacts, due to similar actions that are occurring or are likely to occur.

Significant ecological impacts do not include impacts that are inconsequential to attaining the objectives of the act or to the protection and restoration of shoreline ecological functions or ecosystem-wide processes.

**Significant Vegetation Removal** means the removal or alteration of trees, shrubs, and/or ground cover by clearing, grading, cutting, burning, chemical means, or other activity that causes significant ecological impacts to functions provided by such vegetation. The removal of invasive or noxious weeds does not constitute significant vegetation removal. Tree pruning, not including tree topping, where it does not affect ecological functions, does not constitute significant vegetation removal.

**Signs** are any placard, billboard, display, message, design, letters, symbol, light, figure, illustration, set of pennants, or other devices intended to identify, inform, advertise, or attract attention to any private or public premises, and placed mainly outdoors so as to be seen from any public or quasi-public place.

Double-faced signs are counted as two signs. Excluded from this definition are official traffic, directional or warning devices, other official public notices, signs required by law, or flag of a government or other noncommercial institution.

**Solid Waste** is all putrescible and non-putrescible solid and semi-solid waste including garbage, rubbish, ashes, industrial wastes, swill, demolition and construction wastes, abandoned vehicles and parts, thereof, and any other discarded commodities.

**Statement of Exemption** means a written statement by the Administrator that a particular development proposal is exempt from the process of obtaining a substantial development permit and is generally consistent with this Program including the policy of the act (RCW 90.58.020).

**Storm water** means that portion of precipitation that does not normally percolate into the ground or evaporate but flows via overland flow, interflow, channels, or pipes, generally into a defined surface water channel or constructed infiltration facility.

**Streamway** means a river or stream's central runoff corridor including all wet and dry channels, together with adjacent point-bars, channel-bars, and islands which are wetted or surrounded by stream flow at bank full stage; all the floodway fringe and those portions of the floodway in the flood plain are excluded. Also, the streamway is a unique linear, physical, and biologic resource corridor in which various aquatic and land plants and animals are dependent on and affected by physical features characteristic to the particular zone, including water level fluctuations.

**Structure** means a permanent or temporary edifice or building, or any piece of work artificially built or composed of parts joined together in some definite manner, whether installed on, above, or below the surface of the ground or water, except for vessels.



**Substantial Development** shall mean any development of which the total cost or fair market value exceeds five thousand dollars, or any development which materially interferes with the normal public use of the water or shorelines of the State; except that development determined to be exempt under Chapter 3.30 of this Program.

**Upland** shall mean those shoreline areas landward of the OHWM except berms, natural wetlands, and flood plains.

**Urban Environment Designation** is defined as an area of intensive development including but not limited to urban density residential, commercial and industrial uses.

**Utilities** includes but are not limited to facilities for distributing, processing, or storage of water, sewage, solid waste, storm drainage, electrical energy including electronic communications, and their administrative structures, as well as pipelines for oil and gas, and fire fighting facilities. Power plants are considered to be industrial development.

**Variance** means an adjustment in the application of this Program's regulations to a particular site pursuant to Chapter 5.180 of this Program.

**Water-Dependent Use** means a use or portion of a use which cannot exist in a location that is not adjacent to the water but is dependent on the water by reason of the intrinsic nature of its operations. Examples of water-dependent uses include ship cargo terminal loading areas, fishing, ferry and passenger terminals, barge loading facilities, ship building and dry docking, marinas, aquaculture, float plane facilities, hydroelectric dams, surface water intake, and sewer outfalls.

**Water-Enjoyment Use** means a recreational use or other use that facilitates public access to the shoreline as a primary characteristic of the use; or a use that provides for recreational use or aesthetic enjoyment of the shoreline for a substantial number of people as a general characteristic of the use and which through location, design, and operation ensures the public's ability to enjoy the physical and aesthetic qualities of the shoreline. In order to qualify as a water-enjoyment use, the use must be open to the general public and the shoreline-oriented space within the project must be devoted to the specific aspects of the use that fosters shoreline enjoyment. Primary water-enjoyment uses may include, but are not limited to:

- A. Parks with activities enhanced by proximity to the water;
- B. and other improvements that facilitate public access to shorelines of the state;
- C. Restaurants with water views and public access improvements;
- D. Museums with an orientation to shoreline topics;
- E. Aquariums;

- F. Scientific/ecological reserves;
- G. Resorts with uses open to the public and public access to the shoreline; and any combination of those uses listed above.

**Water-Oriented Use** means a use that is water-dependent, water-related, or water-enjoyment, or a combination of such uses. Non-Water-Oriented Uses do not contain a water-oriented use and have no practical relation to the shoreline e.g. mini-storage, gas station, etc.

**Water-Related Use** means a use or portion of a use which is not intrinsically dependent on a waterfront location but whose economic viability is dependent upon a waterfront location because:

The use has a functional requirement for a waterfront location such as the arrival or shipment of materials by water or the need for large quantities of water; or

The use provides a necessary service supportive of the water-dependent uses and the proximity of the use to its customers makes its services less expensive and/or more convenient.

**Watershed Restoration Plan** means a plan, developed or sponsored by the Department of Fish and Wildlife, the Department of Ecology, the Department of Transportation, a federally recognized Indian tribe acting within and pursuant to its authority, a city, a county or a conservation district that provides a general program and implementation measures or actions for the preservation, restoration, re-creation, or enhancement of the natural resources character, and ecology of a stream, stream segment, drainage area or watershed for which agency and public review has been conducted pursuant to chapter 43.21C RCW, the State Environmental Policy Act.

**Wetlands** means areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from nonwetland areas to mitigate the conversion of wetlands.

**In addition, the definitions and concepts set forth in RCW 90.58.030, as amended, and implementing rules shall also apply as used herein.**

# **CHAPTER 3 APPLICABILITY, EXEMPTIONS AND NONCONFORMING USES**

## **Sections**

### **3.10 GEOGRAPHIC JURISDICTION**

### **3.20 APPLICATION TO PERSONS AND DEVELOPMENT**

### **3.30 EXEMPTIONS**

### **3.40 RELATIONSHIP TO OTHER LAWS**

### **3.50 NON-CONFORMING DEVELOPMENT**

### **3.60 LAWFUL PERMIT APPLICATIONS PRIOR TO SHORELINE REGULATION CHANGES**

#### **3.10 GEOGRAPHIC JURISDICTION**

The provisions of this Program shall apply to all shorelines, all Shorelines of State-wide Significance and shorelands within the City of Ferndale, as defined in Chapter 2 of this Program. The location and extent of such shorelines are shown on the Official Shoreline Map appended to this document as an integral part of this Program.

#### **3.20 APPLICATION TO PERSONS AND DEVELOPMENT**

**3.21** This Program shall apply to any person as defined in Chapter 2.

**3.22** This Program shall apply to any development or use as defined in Chapter 2. All development and use of shorelines of the state shall be carried out so as to be consistent with this Program and the policy of the Act as required by RCW 90.58.140(1), whether or not a shoreline permit is required for such development.

**3.23** No substantial development as defined in Chapter 2 shall be undertaken by any person on shorelines without first obtaining a substantial development permit from the City of Ferndale; PROVIDED that, such a permit shall not be required for the activities listed in Section 3.30.

**3.24** A shoreline permit is not required for substantial development activities located outside of the shoreline jurisdiction line even though a portion of the property may be located within shoreline jurisdiction.

### **3.30 EXEMPTIONS (WAC 173-27-040)**

#### **3.31 Application and interpretation of exemptions**

Exemptions shall be construed narrowly. Only those developments that meet the precise terms of one or more of the listed exemptions may be granted exemptions from the substantial development permit process.

An exemption from the substantial development permit process is not an exemption from compliance with the State Shoreline Management Act or this Master Program, nor from any other regulatory requirements. To be authorized, all uses and developments must be consistent with the policies and provisions of this Master Program and the Shoreline Management Act. A development or use that is listed as a conditional use pursuant to this Master Program or is an unlisted use, must obtain a shoreline conditional use permit even though the development or use does not require a substantial development permit. When a development or use is proposed that does not comply with the bulk, dimensional and performance standards of the Master Program, such development or use can only be authorized by approval of a shoreline variance permit.

The burden of proof that a development or use is exempt is on the applicant. If any part of a proposed development is not eligible for exemption, then a substantial development permit is required for the entire proposed development project. The Administrator may attach conditions to the approval of exempted developments and/or uses as necessary to assure consistency of the project with the Act and the local Master Program.

#### **3.32 Exemptions Listed**

The following activities shall be considered exempt from the requirement to obtain a shoreline substantial development permit. A statement of exemption, as provided for in Chapter 3.34 of this Program may be sought by a proponent for any of the listed categories below, however, such statement shall be required only for those activities listed in Chapter 3.34 (B) and (C).

**3.32.1** Any development of which the total cost or fair market value, whichever is higher, does not exceed five thousand dollars (\$5,000), if such development does not materially interfere with the normal public use of the water or shorelines of the state. For the purpose of determining whether or not a permit is required, the total cost or fair market value shall be based on the value of development that is occurring on shorelines of the state as defined in RCW 90.58.030(2)(c).

The total cost or fair market value of the development shall include the fair market value of any donated, contributed or found labor, equipment or materials.

**3.32.2** Normal maintenance or repair of existing structures or developments, including damage by accident, fire or elements. "Normal maintenance" includes those usual acts to prevent a decline, lapse or cessation from a lawfully established condition. "Normal repair" means to restore a development to a state comparable to its original condition within a reasonable period after decay or partial destruction except where repair causes substantial adverse effects to the shoreline resource or environment. Replacement of a structure or development may be authorized as repair where such replacement is the common method of repair for the type of structure or development and the replacement structure or development is comparable to the original structure or development including but not limited to its size, shape, configuration, location and external appearance and the replacement does not cause substantial adverse effects to shoreline resources or environment.

**3.32.3** Construction of the normal protective bulkhead common to single-family residences. A "normal protective" bulkhead includes those structural and nonstructural developments installed at or near and parallel to, the ordinary high water mark for the sole purpose of protecting an existing single family residence and appurtenant structures from loss or damage by erosion. A normal protective bulkhead is not exempt if constructed for the purpose of creating dry land. When a vertical or near vertical wall is being constructed or reconstructed, not more than one cubic yard of fill per one foot of wall may be used for backfill. When an existing bulkhead is being repaired by construction of a vertical wall fronting the existing wall, it shall be constructed no further waterward of the existing bulkhead than is necessary for construction of new footings. When a bulkhead has deteriorated such that an ordinary high water mark has been established by the presence and action of water landward of the bulkhead then the replacement bulkhead must be located at or near the actual ordinary high water mark. Beach nourishment and bioengineering erosion control projects may be considered a normal protective bulkhead when any structural elements are consistent with the above requirements and when the project has been approved by the Department of Fish and Wildlife.

**3.32.4** Emergency construction necessary to protect property from damage by the elements. An "emergency" is an unanticipated and imminent threat to public health, safety or the environment which requires immediate action within a time too short to allow full compliance with this Program. Emergency construction does not include development of new permanent protective structures where none previously existed. Where new protective structures are deemed by the Administrator to be the appropriate means to address the emergency situation, upon abatement of the emergency situation the new structure shall be removed or any permit which would have been required, absent an emergency, pursuant to chapter 90.58 RCW, WAC 173-27 or this Program, obtained. All emergency construction shall be consistent with the policies of 90.58 RCW and this Program. As a general matter, flooding or other seasonal events that can be anticipated and may occur but that are not imminent are not an emergency;

**3.32.5** Construction and practices normal or necessary for farming, irrigation, and ranching activities, including agricultural service roads and utilities, on shorelands, construction of a barn or similar agricultural structure, and the construction and maintenance of irrigation structures including but not limited to head gates, pumping facilities, and irrigation channels: PROVIDED, that, a feedlot of any size, all processing plants, other activities of a commercial nature, alteration of the contour of the shorelands by leveling or filling other than that which results from normal cultivation, shall not be considered normal or necessary farming or ranching activities. A feedlot shall be an enclosure or facility used or capable of being used for feeding livestock hay, grain, silage, or other livestock feed, but shall not include land for growing crops or vegetation for livestock feeding and/or grazing, nor shall it include normal livestock wintering operations;

**3.32.6** Construction or modification, by or under the authority of the Coast Guard or a designated port management authority, of navigational aids such as channel markers and anchor buoys;

**3.32.7** Construction on shorelands by an owner, lessee, or contract purchaser of a single-family residence for their own use or for the use of their family, which residence does not exceed a height of 35 feet above average grade level and which meets all requirements of the State agency or local government having jurisdiction thereof. "Single family residence" means a detached dwelling designed for and occupied by one family including those structures and developments within a contiguous ownership which are a normal appurtenance as defined in Chapter 2 of this Program;

**3.32.8** Construction of a dock, including a community dock, designed for pleasure craft only, for the private non-commercial use of the owner, lessee, or contract purchaser of a single-family and multi-family residences. A dock is a landing and moorage facility for watercraft and does not include recreational decks, storage facilities or other appurtenances. The private dock exemption applies if either:

**3.32.9** In fresh waters the fair market value of the dock does not exceed ten thousand dollars (\$10,000), but if subsequent construction having a fair market value exceeding two thousand five hundred dollars (\$2,500) occurs within five years of the completion of the prior construction, the subsequent construction shall be considered a substantial development for the purpose of this chapter.

**3.32.10** Operation, maintenance, or construction of canals, waterways, drains, reservoirs, or other facilities that now exist or are hereafter created or developed as a part of an irrigation system for the primary purpose of making use of system waters, including return flow and artificially stored ground water for the irrigation of lands;

**3.32.11** The marking of property lines or corners on state owned lands, when such marking does not significantly interfere with normal public use of the surface of the water;

**3.32.12** Operation and maintenance of any system of dikes, ditches, drains, or other facilities existing on June 4, 1975 which were created, developed or utilized, primarily as a part of an agricultural drainage or diking system; and

**3.32.13** Any project with a certification from the governor pursuant to chapter 80.50 RCW.

**3.32.14** Site exploration and investigation activities that are prerequisite to preparation of an application for development authorization under this Program, if:  
The activity does not interfere with the normal public use of surface waters;

**3.32.15** The activity will have no significant adverse impact on the environment including but not limited to fish, wildlife, fish or wildlife habitat, water quality and aesthetic values;

**3.32.16** The activity does not involve the installation of any structure, and upon completion of the activity the vegetation and land configuration of the site are restored to conditions existing before the activity;

**3.32.17** A private entity seeking development authorization under this section first posts a performance bond or provides other evidence of financial responsibility to the Administrator to ensure that the site is restored to preexisting conditions,

**3.32.18** The activity is not subject to the permit requirements of RCW 90.58.550;

**3.32.19** The process of removing or controlling aquatic noxious weeds, as defined in RCW 17.26.020, through the use of an herbicide or other treatment methods applicable to weed control that are recommended by a final environmental impact statement published by the Department of Agriculture or the Department of Ecology jointly with other state agencies under chapter 43.21C RCW.

**3.32.20** Watershed restoration projects, including Watershed restoration plans, as defined in Chapter 2 of this Program. The Administrator shall review the projects for consistency with the Shoreline Master Program in an expeditious manner and shall issue its decision along with any conditions within forty-five days of receiving a complete application form from the applicant. No fee may be charged for accepting and processing applications for watershed restoration projects as used in this section.

“Watershed restoration project” means a public or private project authorized by the sponsor of a watershed restoration plan, as defined in Section 2 of this Chapter, that implements the plan or part of the plan and consists of one or more of the following activities:

**3.32.21** A project that involves less than ten miles of stream reach, in which less than twenty-five cubic yards of sand, gravel, or soil is removed, imported, disturbed or discharged, and in which no existing vegetation is removed except as minimally necessary to facilitate additional plantings;

**3.32.22** A project for the restoration of an eroded or unstable stream bank that employs the principles of bioengineering, including limited use of rock as a stabilization only at the toe of the bank, and with primary emphasis on using native vegetation to control erosive forces of flowing water; or

**3.32.23** A project primarily designated to improve fish and wildlife habitat, remove or reduce impediments to migration of fish, or enhance the fishery resource available for use by all of the citizens of the state, provided that any structures, other than a bridge or culvert or in-stream habitat enhancement structure associated with the project, is less than two hundred square feet in floor area and is located above the ordinary high water mark.

“Watershed restoration plan” means a plan, developed or sponsored by the Department of Fish and Wildlife, the Department of Ecology, the Department of Transportation, a federally recognized Indian tribe acting within and pursuant to its authority, a city, a county or a conservation district that provides a general program and implementation measures or actions for the preservation, restoration, re-creation, or enhancement of the natural resources character, and ecology of a stream, stream segment, drainage area or watershed for which agency and public review has been conducted pursuant to chapter 43.21C RCW, the State Environmental Policy Act.

**3.32.24** A public or private project, the primary purpose of which is to improve fish or wildlife habitat or fish passage, when all of the following apply:

1. The project has been approved in writing by the Department of Fish and Wildlife as necessary for the improvement of the habitat or passage and appropriately designed and sited to accomplish the intended purpose;
2. The project received hydraulic project approval by the Department of Fish and Wildlife pursuant to chapter 75.20 RCW, and
3. The Administrator has determined that the project is consistent with this Program. The Administrator shall make such determination in a timely manner and provide it by letter to the project proponent.



### **3.33 Hazardous Substance Remedial Actions**

The procedural requirements of chapter 90.58 RCW shall not apply to a project for which a consent decree, order or agreed order has been issued pursuant to Chapter 70.105D RCW or to the Department of Ecology when it conducts a remedial action under Chapter 70.105D RCW. The Department of Ecology shall, in consultation with the Administrator, assure that such projects comply with the substantive requirements of Chapter 90.58 RCW, Chapter 173.26 WAC and this Program.

### **3.34 Statement of Exemption**

In accordance with WAC 173-27-040(1), and Chapter 3.31 of this Program, all exemptions shall be construed narrowly. Whenever the exempt activity also requires a U.S. Corps of Engineers Section 10 permit under the Rivers and Harbors Act of 1899 or a Section 404 permit under the Federal Water Pollution Control Act of 1972, a statement of exemption shall be sent to the applicant and Ecology pursuant to WAC 173-27-050.

**3.34.1** The Administrator is hereby authorized to grant or deny requests for statements of exemption from the shoreline substantial development permit requirement for activities within shorelines which are specifically listed in Chapter 3.32. Such statements shall be applied for on forms provided by the Administrator. The statement shall be in writing and shall indicate the specific exemption from Chapter 3.32 of this Program that is being applied to the development and provide a summary of the Administrator's analysis of the consistency of the project with this Master Program and the Shoreline Management Act. A denial of an exemption shall be in writing and shall identify the reason(s) for the denial. The Administrator's actions on the issuance of a statement of exemption or a denial are subject to appeal pursuant to Chapter 5.200 of this Program.

**3.34.2** In the case of certain types of shoreline development normally exempt from the shoreline permit requirement pursuant to Chapter 3.32, no dredging, stream control works, historic site alteration, landfill or excavation, dock, shore defense works, free standing signs, or any development within an Aquatic, or Conservancy shoreline designation may commence until a statement of exemption has been obtained from the Administrator; PROVIDED that, no statement of exemption is required for emergency development pursuant to WAC 173-27-040(2)(d).

**3.34.3** No statement of exemption may be required for other uses or developments nominally exempt pursuant to Chapter 3.31 unless the Administrator has cause to believe a substantial question exists as to qualifications of the specific use or development for the exemption.

### **3.35 Exemptions shall expire as set forth in section 5.160.**

### **3.40 RELATIONSHIP TO OTHER LAWS**

**3.41** Obtaining a shoreline permit or statement of exemption for a development or use does not excuse the applicant from complying with any other Federal, State, or Local laws and regulations applicable to such development or use

### **3.50 NON-CONFORMING USE AND DEVELOPMENT (WAC 173-27-080)**

#### **3.51**

"Nonconforming use or development" means a shoreline use or development which was lawfully constructed or established prior to the effective date of the Act or the applicable Master Program, or amendments thereto, but which does not conform to present regulations or standards of the Program.

**3.51.1** Structures that were legally established and are used for a conforming use but which are nonconforming with regard to setbacks, buffers or yards; area; bulk; height or density may be maintained and repaired and may be enlarged or expanded provided that said enlargement does not increase the extent of nonconformity by further encroaching upon or extending into areas where construction or use would not be allowed for new development or uses.

**3.51.2** Uses and developments that were legally established and are nonconforming with regard to the use regulations of the Master Program may continue as legal nonconforming uses. Such uses shall not be enlarged or expanded, except that nonconforming single-family residences that are located landward of the ordinary high water mark may be enlarged or expanded in conformance with applicable bulk and dimensional standards by the addition of space to the main structure or by the addition of normal appurtenances as defined in WAC 173-27-040 (2)(g) upon approval of a conditional use permit. Such single-family residences may not be expanded toward the shoreline but may be expanded landward of the existing structure, on either side of the existing structure provided such expansion is secondary to the existing structure, or vertically expanded.

**3.51.3** A use which is listed as a conditional use but which existed prior to adoption of the Master Program or any relevant amendment and for which a conditional use permit has not been obtained shall be considered a nonconforming use. A use which is listed as a conditional use but which existed prior to the applicability of the Master Program to the site and for which a conditional use permit has not been obtained shall be considered a nonconforming use.

**3.51.4** A structure for which a variance has been issued shall be considered a legal nonconforming structure and the requirements of this section shall apply as they apply to preexisting nonconformities.

**3.51.5** A structure which is being or has been used for a nonconforming use may be used for a different nonconforming use only upon the approval of a conditional use permit. A conditional use permit may be approved only upon a finding that:

1. No reasonable alternative conforming use is practical; and
2. The proposed use will be at least as consistent with the policies and provisions of the Act and the Master Program and as compatible with the uses in the area as the preexisting use.

**3.51.6** In addition such conditions may be attached to the permit as are deemed necessary to assure compliance with the above findings, the requirements of the Master Program and the Shoreline Management Act and to assure that the use will not become a nuisance or a hazard.

**3.51.7** A nonconforming structure which is moved any distance must be brought into conformance with the applicable Master Program and the Act.

**3.51.8** If a nonconforming development is damaged to an extent not exceeding seventy-five percent of the replacement cost of the original development, it may be reconstructed to those configurations existing immediately prior to the time the development was damaged, provided that application is made for the permits necessary to restore the development within six months of the date the damage occurred, all permits are obtained and the restoration is completed within two years of permit issuance.

**3.51.9** If a nonconforming use is discontinued for twelve consecutive months or for twelve months during any two-year period, the nonconforming rights shall expire and any subsequent use shall be conforming.

**3.51.10** An undeveloped lot, tract, parcel, site, or division of land located landward of the ordinary high water mark which was established in accordance with local and state subdivision requirements prior to the effective date of the Act or the applicable Master Program but which does not conform to the present lot size standards may be developed if permitted by other land use regulations of the local government and so long as such development conforms to all other requirements of the applicable Master Program and the Act.

**3.51.11** The non-conforming use provisions are not intended to preclude redevelopment and improvement of the Riverside Golf Course (see 4.54.5).

### **3.60 LAWFUL PERMIT APPLICATIONS PRIOR TO SHORELINE REGULATION CHANGES**

**3.60.1** To avoid undue hardship and to give effect to vested rights, no shoreline regulation change adopted by this title or by future amendments thereto shall require a change in the plans, construction or designated use of a building or land for which either a, shoreline substantial development, shoreline variance permit or shoreline conditional use permit application has been made prior to the regulation changes if:

**3.60.2** The application, together with any minor supplemental information requested, is consistent with the zoning regulations, building code regulations, subdivision regulations, shoreline policies and regulations and other applicable regulations in force at the time of application for the permit; and

**3.60.3** The permit thereafter granted is issued in accordance with zoning regulations, building code regulations, subdivision regulations, shoreline policies and regulations and all other applicable laws in force at the time of application for the permit; and

**3.60.4** The permit issued does not thereafter become null and void through expiration, cancellation or otherwise under the provisions applicable thereto in force at the time of application for the permit.

**3.60.5** This section shall not prevent such building and/or use from being a non-conforming building and/or use subject to the provisions of this title.

# **CHAPTER 4 SHORELINE AREA DESIGNATIONS, MAPS AND BOUNDARIES**

**Sections: 4.10 ESTABLISHMENT OF SHORELINE ENVIRONMENT DESIGNATIONS**  
**4.20 URBAN**  
**4.30 RESIDENTIAL**  
**4.40 RURAL**  
**4.50 CONSERVANCY**  
**4.60 AQUATIC**  
**4.70 SHORELINE AREA DESIGNATION MAPS**  
**4.80 RULES OF CONSTRUCTION**  
**4.90 DESIGNATION BOUNDARIES**  
**4.100 SCOPE OF REGULATIONS**

## **4.10 ESTABLISHMENT OF SHORELINE ENVIRONMENT DESIGNATIONS**

**4.11.** In order to classify, segregate and regulate the uses of land, buildings and structures, the shoreline area of the City of Ferndale is divided into five distinct environment designations, based on existing use patterns, the biological and physical character of the shoreline, and the goals and aspirations of the community as expressed through the Comprehensive Plan. The City of Ferndale's shoreline environment designations are as follows:

- A. URBAN
- B. RESIDENTIAL
- C. RURAL
- D. CONSERVANCY
- E. AQUATIC

Also note that there are two subsets of the Urban and Conservancy designations – General Commercial Conservancy and Manufacturing Conservancy which apply to only two specific areas within the City. See sections 4.20 through 4.60, below, for the purpose, classification criteria, management policies, and regulations for each environment designation.

**4.12 A** Natural designation is not included since no shoreline area in Ferndale conforms to state guideline definitions for the Natural designation.

**4.13** These designations are superimposed as an overlay upon existing zoning within shoreline jurisdiction. Regulations of the Master Program shall be in addition to the zoning regulations and requirements. In cases of conflict between the regulations of the City zoning ordinance and the Master Program, the most restrictive shall apply.

**4.14** Undesignated shorelands shall automatically be assigned a CONSERVANCY environment designation.

**4.15** New development shall not cause net loss of ecological functions. Environmental cleanup and restoration of the shoreline shall comply with relevant state and federal laws.

#### **4.20 URBAN ENVIRONMENT DESIGNATION**

**4.21 Definition:** The Urban environment designation is defined as an area of intensive development including but not limited to urban density residential, commercial and industrial uses.

**4.22 Purpose:** The purpose of the Urban environment designation is to ensure optimum regional benefits through intensive development which is appropriate and enhances the area.

**4.23 Classification Criteria:** The following are classification criteria for Urban environment designations:

1. Areas with potential for a type of urban development which would be consistent with this Program and other public plans; or
2. Areas which do not contain natural limitations to urban use, and which have adequate utilities and access; or
3. Areas where present urban development is scattered and where in-filling with new development would be consistent with this Program as well as preferable to further scattering of development.

**4.24 Management Policies:** The following policies are adopted for Urban environment designation areas:

1. New urban development should be directed toward already developed or developing areas where compatible.
2. Physical and visual access to shorelines for the public should be strongly encouraged and planned for.

3. Multiple use of shorelines should be sought and encouraged.
4. Planned Unit Developments should be encouraged to preserve open space and public access to shorelines, while allowing development to be concentrated.

### **4.30 RESIDENTIAL ENVIRONMENT DESIGNATION**

**4.31 Definition:** The Residential environment designation is defined as an area which is planned and platted for single-family and multi-family residential uses.

**4.32 Purpose:** The purpose of the Residential environment designation is to accommodate residential development and appurtenant structures that are consistent with this Program, while providing appropriate public access and recreational uses.

**4.33 Classification Criteria:** The following is the classification criteria for the Residential environment designation:

Areas consisting of predominantly single-family or multifamily residential development or are planned and platted for residential development.

**4.34 Management Policies:** The following policies are adopted for Residential environment designation areas:

1. Development should be permitted only in those shoreline areas where adequate setbacks or buffers are possible to protect ecological functions, there are adequate access, water, sewage disposal, and utilities systems, and public services available and the environment can be adequately protected.
2. Densities or minimum lot width standards in the Residential environment should be designed to protect the shoreline ecological functions.
3. Setbacks or buffers, shoreline stabilization, vegetation conservation, critical area protection, and water quality measures should be designed to protect ecological functions.
4. Multifamily residential and recreational developments should provide public access and joint use for community recreational facilities, where feasible.
5. Access, utilities, and public services should be available and adequate to serve existing needs and/or planned future development.

#### **4.40 RURAL ENVIRONMENT DESIGNATION**

**4.41 Definition:** The Rural environment designation is defined as an area developed at a low overall density or used at a low to moderate intensity; including, but not limited to: residences, agriculture and outdoor recreation developments.

**4.42 Purpose:** The purpose of the Rural environment designation is to ensure that uses are compatible with area physical capabilities and limitations, natural resources and other appropriate low density development.

**4.43 Classification Criteria:** The following are classification criteria for the Rural environment designation:

1. Areas of low density development where natural vegetative cover and topography have been altered; or
2. Areas now used or potentially usable for agriculture including lowland tree farms; or
3. Areas where residential development is or should be of low density in order to be compatible with other uses, or, because of limitations by physical features, utility capabilities or access; or
4. Areas where a low intensity of outdoor recreation use or development would be appropriate and compatible with other uses and the physical environment; or
5. Areas which would be of high benefit to the region as a low density buffer between other designations for the purpose of minimizing conflicts among uses.

**4.44 Management Policies:** The following policies are adopted for Rural environment designation areas:

1. Intensive, urban character development should be sharply limited and permitted only if substantial open space and/or public access to shorelines is provided.
2. Public or private outdoor recreation facilities should be encouraged if compatible with agriculture or other appropriate uses.
3. New large scale industrial or commercial development should be discouraged except in areas so designated in the City Comprehensive Plan.



## **4.50 CONSERVANCY ENVIRONMENT DESIGNATION**

**4.51 Definition:** The Conservancy environment designation is defined as a shoreline area containing natural resources which can be used/managed on a multiple use basis without extensive alteration of topography or banks; including but not limited to forest, agricultural and mineral lands, outdoor recreation sites, fish and wildlife habitat, watersheds for public supplies, and areas of outstanding scenic quality; and/or a shoreline area containing hazardous natural conditions or sensitive natural or cultural features which require more than normal restrictions on development and use of such areas; including, but not limited to: eroding shores, geologically unstable areas, steep slopes, floodways, critical flood storage areas, and valuable natural wetlands or historic sites.

**4.52 Purpose:** The purpose of the Conservancy designation is to prevent forms of development which would be unsafe or incompatible with more appropriate uses. This policy should be furthered by keeping overall intensity of development or use low, and by maintaining most of the area's natural character.

**4.53 Classification Criteria:** The following are classification criteria for the Conservancy environment designation:

1. The area contains valuable or sensitive natural or cultural features whose optimum use precludes more than a low overall density of residents, recreationists, structures, or livestock, as well as extensive alterations to topography or banks; or
2. The area is inherently hazardous for moderate to high density development or use in terms of public health, safety and property damage potential; or
3. The area has recreational or esthetic qualities of high value to the region which would likely be diminished by moderate to intense development.

**4.54 Management Policies:** The following policies are adopted for Conservancy Areas:

1. Multiple uses of the shoreline should be strongly encouraged and maintained if such uses are compatible with each other and conservation of shoreline resources.
2. Area resources and natural shorelines should be protected whenever necessary from harmful concentrations of people or building structures. Uses which require substantial alterations to the area's natural character, especially its topography and land-water edge, should be directed to Urban or Rural Areas.
3. Development of hazardous areas should be designed and/or located so as to reduce potential danger to people and property.

4. Outstanding recreational or scenic values should be preserved and protected from incompatible development.
5. The Riverside golf course is recognized as an area of special interest, with significant potential for improvement of this recreational facility. Such improvement would probably involve redesign of the golf course, and reconstruction and expansion of the existing clubhouse complex. The city believes that such redevelopment would result in economic benefit to the city, as well as provide an opportunity for enhancement of the shorelines natural features, and improvement of public access. The non-conforming provisions of this Master Program are not intended to preclude redevelopment of this area of special interest, provided such development is accomplished in a manner that recognizes and provides for flood protection, protects water quality, enhances the shoreline environment, and improves public access.
6. Public access and recreation should be required where feasible and ecological impacts are mitigated.

#### **4.60 AQUATIC ENVIRONMENT DESIGNATION**

**4.61 Definition:** The Aquatic environment designation is defined as the area waterward of the Ordinary High Water Mark (OHWM) of all streams and rivers, and all lakes, together with their underlying lands and their water column; including, but not limited to: streamways, bedlands, wetlands and shorelands.

**4.62 Purpose:** The purpose of the Aquatic designation is to protect, restore, and manage the unique characteristics and resources of the areas waterward of the ordinary high water mark (OHWM).

**4.63 Classification Criteria:** The following is the classification criteria for the Aquatic designation:

Lakes and streamways of rivers and streams within jurisdiction of this Program waterward of the OHWM.

**4.64 Management Policies:** The following policies are adopted for Aquatic Areas:

1. Development should be sharply limited to those uses which are compatible with conservation of area resources including water, fish and wildlife, and recreation areas, as well as with other appropriate uses and the area's unique natural character. Development in conflict with these objectives should be directed to an on shore location.
2. Almost all lake, and river surfaces, water column and bedlands are public property and as such their openness and extent must be protected from unnecessary obstruction or encroachment. Offshore development should be limited to those uses which are truly

water-surface dependent, or which provide broad and substantial compensating benefits to the community or region.

3. Multiple use of water surfaces and structures in the Aquatic environment designation must be protected and encouraged whenever compatible with resource conservation and other appropriate uses. The need for a specific shoreline development to be multiple-purpose increases as its impact on the shoreline increases.

4. As with Conservancy, multiple use and sustained yield are the two overriding policies for management of Aquatic environment designations. Development in substantial conflict with these policies should not be permitted due to the public property nature of this area and its natural features.

#### **4.70 SHORELINE ENVIRONMENT DESIGNATION MAPS**

1. The boundaries of the shoreline environment designations referred to in Section 4.10 shall be determined and defined or redefined from time to time by the adoption of the area designation maps covering the city, showing the geographical area and location of said designations, which map or maps shall be filed with the City Clerk, and be permanently displayed in that office or such other office as the Mayor shall designate. Each said map or maps shall be, upon its final adoption by the Department, a part of this Master Program and said map, and all notations, references and other information shown thereon, thereafter shall be as much a part of this ordinance as though all matters and information set forth on said map were fully described herein.

2. The Official Shoreline Map shall be the final authority as to the current designation of shorelines in the City. Areas that are not mapped and/or designated are hereby assigned a preliminary "Conservancy" shoreline designation. As these areas are discovered, the City will work to formally designate appropriate shoreline designation for these parcels with assistance from the Department of Ecology.

3. This Program and each and all of its terms is to be read and interpreted in the light of the contents of said map or maps and the text of this ordinance. When conflict is deemed to arise between the map or maps and the text, the text of the Program shall prevail.

4. If changes are made to the Official Shoreline Map, such changes shall be made at the direction of the Mayor promptly after the amendment has been approved by the City Council and adopted by the Department.

5. If lands under shoreline jurisdiction are annexed to the City of Ferndale after the effective date of this Master Program, they shall retain their pre-existing Whatcom County Shoreline Management Program designation until a City of Ferndale Master Program amendment is approved in accordance with Chapter 11.10 of this Program after the annexation and the Master Program amendment are final.

#### **4.80 RULES OF CONSTRUCTION**

1. When uncertainty exists as to boundaries of any designation shown on the Official Shoreline Map, the following rules of construction shall apply:

2. Where designation boundaries are indicated as approximately following the center line of streets, alleys or highways and are not otherwise described herein, the actual center line shall be construed to be the boundary.

3. Where designation boundaries are indicated as running approximately parallel to the center line of the street, the boundary line shall be construed to be parallel to the center line of the street.

4. Where designation boundaries are indicated on such map as approximately following the lot or tract lines, the actual lot or tract lines shall be construed to be the boundaries of such designation.

5. Where a designation boundary on such map or maps divides a tract in unsubdivided property, the location of such designation boundary, unless the same is indicated by dimensions thereon, shall be determined by use of the scale appearing on such shoreline area designation map or maps.

6. Designation boundaries following shorelines shall be construed to follow shorelines, and in the event of change in the shorelines shall be construed as moving with the actual shorelines.

7. Boundaries indicated as following railroad lines shall be construed to be the center line of said railroad rights of way.

8. Where a public street or alley is officially vacated or abandoned, the regulations applicable to the abutting property to which the vacated portion shall revert shall apply to such vacated or abandoned street or alley.

9. In case uncertainty exists which cannot be determined by application of the foregoing rules, the Planning Commission shall recommend and the City Council determine, the location of such designation boundaries.

#### **4.90 DESIGNATION OF BOUNDARIES**

The boundaries of such designations shown upon any map adopted by this ordinance, or amendments thereto, are hereby adopted and approved and the regulations of this Program governing uses of land, buildings and structures are hereby established and declared to be in effect upon all land included within the boundaries of each designation shown upon the Official Shoreline Map.

#### **4.100 SCOPE OF REGULATIONS**

Except as otherwise provided in this title, no building or structure shall be erected, moved, altered, added to or enlarged, nor shall any land, building or structure or premises be used for any purpose other than a use listed in this Program.

## **CHAPTER 5 ADMINISTRATION**

### **Sections**

- 5. 10 CAVEAT**
- 5. 20 AUTHORITY**
- 5. 30 APPLICATION AND PUBLIC HEARING REQUIREMENT**
- 5. 40 SHORELINE FEES**
- 5. 50 SEPA COMPLIANCE**
- 5. 60 NOTICE OF RECEIPT OF APPLICATION**
- 5. 70 NOTICE OF OPEN RECORD HEARING**
- 5. 80 PUBLIC HEARING RULES**
- 5. 90 REVIEW AND BURDEN OF PROOF**
- 5.100 DECISIONS**
- 5.110 PERMIT CONDITIONS**
- 5.120 APPEAL AND RECONSIDERATION**
- 5.130 NOTIFICATION OF FINAL ACTION**
- 5.140 PERMIT REVISIONS**
- 5.150 RECISSION AND MODIFICATION**
- 5.160 EXPIRATION**
- 5.170 SUBSTANTIAL DEVELOPMENT PERMIT CRITERIA**
- 5.180 VARIANCE PERMIT CRITERIA**
- 5.190 CONDITIONAL USE PERMIT CRITERIA**
- 5.200 ADMINISTRATIVE DECISION APPEALS**
- 5.210 OTHER LOCAL REGULATIONS**

### **5.10 CAVEAT**

**5.11** Whenever an application for a permit under the zoning ordinance or for approval under the subdivision ordinance accompanies a shoreline permit application, time requirements and notice provisions for processing those applications shall be preempted by the Shoreline Master Program procedural rules.

**5.12** Whenever a shoreline permit application is accompanied by any other permit request that requires only a recommendation to the City Council by the Planning Commission, the shoreline permit decision shall also be in the form of a recommendation and the Council shall have final decision authority.

## **5.20 AUTHORITY**

### **5.21 Administrator**

**The Administrator, as defined in Chapter 2 of this Program, is hereby vested with:**

1. Overall administrative responsibility for this Program, and;
2. Authority to determine if a public hearing by the Planning Commission should be held on a shoreline permit application.
3. Authority to grant, condition or deny statements of exemption; and
4. Authority to grant, condition or deny substantial development permits not requiring a public hearing; and
5. Authority to serve a cease and desist order pursuant to WAC 173-17-040 upon a person undertaking an activity on shorelines of the state in violation of Chapter 90.58 RCW or this Program; and,
6. Authority to decide whether or not a major development permit is required for a proposed action.
7. Authority to make field inspections as required, and to prepare reports on all proper and complete shoreline permit applications; and
8. Authority to make written recommendations to the Planning Commission or City Council as appropriate and insofar as possible, assure that all relevant information, testimony, and questions regarding a specific matter are made available during their respective reviews of such matter; and
9. Authority to keep written summaries of all Planning Commission public hearings; assure that proper notice is given to interested persons and the public through news media, posting or mailing of notice of such hearings; and transmit findings and recommendations of the Commission on shoreline permit applications to the City Council for consideration and final action.

## **5.22 The Administrator shall:**

1. Establish procedures deemed essential for administration of this Program; and
2. Advise interested persons and prospective applicants as to the administrative procedures and related components of this Program; and
3. Make written interpretations of principles and terms in this Program as required for administration; and
4. Insofar as possible, assure that applications are in proper form and complete prior to acceptance; and
5. Collect fees as set in the City's officially adopted fee schedule; and
6. Seek remedies for alleged violations of this Program's regulations, or of the provisions of the Act, or of conditions attached to a shoreline permit or exemption issued by the City of Ferndale; and
7. Propose amendments to the Commission deemed necessary to more effectively or equitably achieve the purposes and goals of this Program.
8. Maintain separate files for all shoreline actions, include a GIS layer of shoreline permit applications, and assess cumulative impacts to the shoreline as a prerequisite to periodic updates of this Program.

## **5.23 Planning Commission and/or Hearings Examiner**

**The City of Ferndale Planning Commission and/or Hearings Examiner, hereinafter called the Planning Commission or Hearings Examiner is hereby vested with authority to:**

1. Grant, condition or deny shoreline substantial development permits not in conjunction with a development that requires final council action.
2. Grant, condition or deny variances from this Program, subject to final action by the Department of Ecology.



3. Grant, condition or deny conditional uses under this Program, subject to final action by the Department of Ecology.
4. Decide on appeals from administrative decisions and shoreline permits issued by the Administrator of this Program.
5. Hold public hearings and make recommendations to the City Council on shoreline permits accompanied by an application for a planned unit development or major development permit.

#### **5.24 The Planning Commission and/or Hearings Examiner shall:**

1. Be responsible for reviewing this Program from time to time as a major element of the City's planning and regulatory program, and may make recommendations for amendments thereof to the City Council at any time.
2. Have responsibility for reviewing and making recommendations to the City Council on all proposed amendments to this Program; in addition it may propose its own such amendments.
3. Have authority to conduct public hearings on all requests for shoreline permits which require major development and/or preliminary plat approval, if the City Council refers such a project to the Planning Commission or Hearings Examiner. The Planning Commission or Hearings Examiner shall file with the City Council a written recommendation for approval or denial.

#### **5.25 City Council**

**The City of Ferndale City Council, hereinafter called the City Council, is hereby vested with authority to:**

1. Make final decisions with regard to shoreline permit, shoreline variance or shoreline conditional use applications that require a planned unit development or major development permit.
2. Decide appeals from the Planning Commission's or Hearings Examiner action on:
  - a. Substantial Development permits not accompanied by major development permit.
  - b. Variances from this Program's regulations.
  - c. Conditional use permits under this Program.
- d. Decide appeals from the Administrators action on Substantial Development permits.

### **5.26 The City Council shall:**

1. Base all decisions on shoreline permits on the criteria established in Chapter 5 of this Program.
2. Upon receipt of a recommendation for action on any proposed amendment to this Program from the Planning Commission or Hearings Examiner, the City Council shall review and act on the matter, provided that amendments shall become effective immediately upon adoption by the Department of Ecology.
3. Review and decide appeals to Planning Commission or Hearings Examiner decisions.

### **5.30 APPLICATION**

**5.31** Shoreline permits shall be applied for on application forms provided by the Administrator.

### **5.35 Vested Rights**

All shoreline permit applications, exemptions or other approvals shall be subject to the provisions of this Program that are in effect at the time of application.

### **5.50 SEPA COMPLIANCE**

**5.51** Shoreline permit applications which are not categorically exempt shall be subject to environmental review by the SEPA responsible official of the City of Ferndale pursuant to WAC 197-11.

**5.52** As part of the SEPA checklist review, the SEPA responsible official may require additional information regarding the proposed development to make an equitable and reasonable determination of the development's potential impact on the shoreline environment.

**5.53** Failure of the applicant to submit sufficient information for a threshold determination to be made shall be grounds for refusal of the application by the SEPA responsible official.

**5.54** Variances not resulting in change in land use or density are categorically exempt per WAC 197-11-800(6)(b).

## **5.90 REVIEW AND BURDEN OF PROOF**

**5.92** As required by RCW 90.58.140(7) the burden of providing that the proposed development is generally consistent with the criteria set forth in Chapters 5.170, .180 and .190 of this Program, as applicable, shall be on the applicant.

### **5.110 PERMIT CONDITIONS**

**5.111** In granting, revising, or extending a shoreline permit, the Administrator, Planning Commission Hearings Examiner or City Council, as appropriate, may attach such conditions, modifications, or restrictions thereto regarding the location, character, and other features of the proposed development deemed necessary to assure that the development will be consistent with criteria set forth in Chapters 5.170, .180 and .190 of this Program, and with the policy of RCW 43.21C as applicable. In cases involving unusual circumstances or uncertain effects, a condition may be imposed to allow for future review or reevaluation to assure conformance with the Act and this Program.

**5.112** Development pursuant to a shoreline variance or conditional use permit shall not begin and shall not be authorized until 30 days after the "date of filing" or until all review proceedings initiated within 30 days from the date of such filing have terminated.

1. The "date of filing" for a shoreline variance or conditional use permit shall mean the date a decision of the Department of Ecology rendered on the permit is transmitted by the department to the City and the applicant.

2. "Date of filing" of a substantial development permit is the date of actual receipt of the decision by the Department of Ecology.

### **5.140 PERMIT REVISIONS**

**5.141** A permit revision is required whenever the applicant proposes substantive changes to the design, terms or conditions of a project from that which is approved in the permit. Changes are substantive if they materially alter the project in a manner that relates to its conformance to the terms and conditions of the permit, this Program or the Shoreline Management Act. Changes that are not substantive in effect do not require approval of a revision.

**5.142** An application for a revision to a shoreline permit shall be submitted to the Administrator, including detailed plans and text describing the proposed changes. The City agency that approved the original permit may approve the revision request upon a finding that the proposed changes are within the scope and intent of the original permit, and are consistent with this Program and the Shoreline Management Act.

**5.143** "Within the scope and intent of the original permit" means all of the following:

1. No additional over water construction is involved.
2. Ground area coverage and height may be increased a maximum of ten percent over that approved under the original permit.
3. The revised permit does not authorize development to exceed the setback or any other requirements of this Program except as authorized under a variance granted for the original development.
4. Additional or revised landscaping is consistent with any conditions attached to the original permit and with this Program;
5. The use authorized pursuant to the original permit is not changed; and
6. No adverse environmental impact will be caused by the project revision.

**5.144** Revisions to shoreline permits may be authorized after the original permit authorization has expired. Revisions made after the expiration of the original permit shall be limited to the authorization of changes that are consistent with this section and that would not require a permit for the development or change proposed under this Program or the Shoreline Management Act. If the proposed change is a substantial development as defined by this Program then a new permit is required. The provisions of this paragraph shall not be used to extend the time requirements or to authorize substantial development beyond the time limits or scope of the original permit.

**5.145** A new permit shall be required if the proposed revision and any previously approved revisions in combination would constitute development beyond the scope and intent of the original permit.

**5.146** Upon approval of a permit revision, the Planning Commission, Hearings Examiner, or Administrator as appropriate, shall file with the Department of Ecology, a copy of the revised site plan and a detailed description of the authorized changes to the original permit together with a final ruling and findings supporting the decision based on the requirements of this section. In addition, the Administrator shall notify parties of record of the action.

**5.147** If the proposed revision is to a development for which a shoreline conditional use or variance was issued, the City shall submit the revision to the Department of Ecology for the department's approval, approval with conditions or denial, and shall indicate that the revision is being submitted under the requirements of this paragraph. Under the requirements of WAC 173-27-100(6) the department shall render and transmit to the City and the applicant its final decision within fifteen days of the date of the department's receipt of the submittals from the City. The Administrator shall notify parties of record of the department's final decision. Appeals from a decision of the department shall be filed in accordance with the provisions of WAC 173-27-100(8).

### **5.150 RECISSION AND MODIFICATION**

**5.151** Any shoreline permit granted pursuant to this Program may be rescinded or modified upon a finding by the City that the applicant or his/her successors in interest have not complied with conditions attached thereto.

**5.152** The Administrator shall initiate rescission or modification proceedings by serving written notice of noncompliance on the applicant or his/her successors.

**5.153** A public hearing shall be held by the Planning Commission or Hearings Examiner no sooner than 15 days following such service of notice. Upon considering written and oral testimony taken at the hearing, the Planning Commission or Hearings Examiner shall make a decision in accordance with the above procedure for shoreline permits.

### **5.160 EXPIRATION**

**5.161** The following time requirements shall apply to all substantial development permits and to any development authorized pursuant to a variance, conditional use permit or exemption.

1. Construction shall be commenced or, where no construction is involved, the use or activity shall be commenced within two years of the effective date of a shoreline permit or exemption or the permit shall expire. PROVIDED that the Planning Commission, Hearings Examiner or Administrator as appropriate may authorize a single extension for a period of not more than one year based on a showing of good cause. If a request for extension has been filed with the Administrator before the expiration date of the shoreline permit or exemption and notice of the proposed extension is given to parties of record and the Department of Ecology.

2. Authorization to conduct development activities shall terminate five years after the effective date of a shoreline permit or exemption, PROVIDED that the Administrator may authorize a single extension for a period of not more than one year based on a showing of good cause, if a request for extension has been filed with the Administrator before the expiration date of the shoreline permit or exemption and notice of the proposed extension is given to parties of record and the Department of Ecology.

3. The effective date of a shoreline permit or exemption shall be the date of last action required on the shoreline permit or exemption and all other government permits and approvals that authorize the development to proceed, including administrative and legal actions on any such permit or approval. The applicant shall be responsible for informing the City of the pendency of other permit applications filed with agencies other than the City and of any related administrative and legal actions on any permit or approval. If no notice of the pendency of other permits or approvals is given to the City prior to the date of the last action by the City to grant City permits and approvals necessary to authorize the development to proceed, including administrative and legal actions of the City, and actions under other City development regulations, the date of the last action by the City shall be the effective date.

**5.162** Notwithstanding the time limits established in Chapters 5.161(A) and (B), upon a finding of good cause, based on the requirements and circumstances of the proposed project and consistent with the policies and provisions of this Program and the Shoreline Management Act, the Planning Commission, Hearings Examiner or Administrator as appropriate may set different time limits for a particular substantial development permit or exemption as part of the action to approve the permit or exemption. The Planning Commission or Hearings Examiner may also set different time limits on specific shoreline conditional use permits or variances subject to approval of the Department of Ecology. The different time limits may be longer or shorter than those established in Chapters 5.161(A) and (B) but shall be appropriate to the shoreline development or use under review. "Good cause based on the requirements and circumstances of the project" shall mean that the time limits established for the project are reasonably related to the time actually necessary to perform the development on the ground and complete the project that is being permitted, and/or are necessary for the protection of shoreline resources.

**5.163** When permit approval is based on conditions, such conditions shall be satisfied prior to occupancy or use of a structure or prior to the commencement of a nonstructural activity, provided that different time limits for compliance may be specified in the conditions of approval as appropriate.

**5.164** Revisions to permits under Chapter 5.140 of this Program may be authorized after the original permit authorization has expired, PROVIDED that permit revisions authorized after expiration of the original permit shall not be used to extend the time requirements of the original permit or to authorize substantial development after the time limits of the original permit.

**5.165** The Administrator shall notify the Department of Ecology in writing of any change to the effective date of a permit, authorized by Chapters 5.160 through .164 of this Program, with an explanation of the basis for approval of the change. Any change to the time limits of a permit other than those authorized by the sections of this Program previously listed shall require a new permit application.

### **5.170 SUBSTANTIAL DEVELOPMENT PERMIT CRITERIA**

**5.171** A substantial development permit shall be obtained for all proposed use and development of shorelines unless the proposal is specifically exempt pursuant to Chapter 3.30 of this Program.

**5.172** In order for a substantial development permit to be approved, the Administrator or Planning Commission, as appropriate, must find that the proposal is consistent with the following criteria:

1. All policies and regulations of this Program appropriate to the shoreline environment designation and the type of shoreline use or shoreline modification activity proposed shall be complied with, except those bulk and dimensional standards that have been modified by approval of a shoreline variance under Chapter 5.180 of this Program.
2. All policies of this Program appropriate to the shoreline environment designation and the type of shoreline use or shoreline modification activity proposed shall be considered and substantial compliance demonstrated.
3. For projects located on Shorelines of Statewide Significance, the policies of Chapter 7.0 of this Program shall be also be adhered to.

## **5.180 VARIANCE PERMIT CRITERIA**

**5.181** The purpose of a variance is to grant relief to specific bulk or dimensional requirements set forth in this Program where there are extraordinary or unique circumstances relating to the property such that the strict implementation of this Program would impose unnecessary hardships on the applicant or thwart the policies set forth in RCW 90.58.020. Use restrictions may not be varied from.

**5.182** Variances may be granted in circumstances where denial would result in a thwarting of the policy enumerated in RCW 90.58.020. In all instances extraordinary circumstances shall be shown, and the public interest shall suffer no substantial detrimental effect.

**5.183** Variances for development that will be located landward of the OHWM and wetlands may be authorized, provided the applicant can demonstrate all of the following:

1. That the strict application of the bulk or dimensional criteria set forth in this Program precludes or significantly interferes with a reasonable permitted use of the property;

2. That the hardship described in Chapter 5.181 of this Program, above is specifically related to the property, and is the result of unique conditions such as irregular lot shape, size, or natural features and the application of this Program, and not, for example, from deed restrictions or the applicant's own actions.

3. That the design of the project will be compatible with other permitted activities in the area and will not cause adverse effects to adjacent properties or the shoreline environment.

4. That the variance authorized does not constitute a grant of special privilege not enjoyed by the other properties in the area, and will be the minimum necessary to afford relief.

5. That the public interest will suffer no substantial detrimental effect.

**5.184** Variances for development that will be located waterward of the OHWM or within wetlands may be authorized provided the applicant can demonstrate all of the following:

1. That the strict application of any bulk or dimensional criteria in this Program precludes all reasonable permitted use of the property; and



2. That the proposed variance will satisfy the criteria listed in Chapters 5.183 (2) through (5) above; and

3. That the public rights of navigation and use of the shorelines will not be materially interfered with by the granting of the variance.

4. Mitigate for Environmental Impacts, utilizing mitigation sequencing, as defined in Chapter 2 of this Program.

**5.185** In the granting of all variances, consideration shall be given to the cumulative environmental impact of additional requests for like actions in the area. For example, if variances were granted to other developments in the area where similar circumstances exist, the total of the variances should also remain consistent with the policies of RCW 90.58.020 and should not produce significant adverse effects to the shoreline environment or other users.

**5.186** Other factors, that may be considered in the review of variance requests, include the conservation of valuable natural features and the protection of views from nearby roads, surrounding properties and public areas; PROVIDED, the criteria of Chapter 5.180 of this Program are first met. In addition, variance requests based on the applicant's desire to enhance the view from the subject development may be granted where there are no likely detrimental effects to existing or future users, other features or shore processes in the vicinity, and where reasonable alternatives of equal or greater consistency with this Program are not available. In platted residential areas, variances shall not be granted which allow a greater height or lesser shore setback than what is typical for the immediate block or area.

#### **5.190 CONDITIONAL USE PERMIT CRITERIA**

**5.191** The purpose of a conditional use permit is to allow greater flexibility in administering the use regulations of this Program in a manner consistent with the policies of RCW 90.50.020. In authorizing a conditional use, special conditions may be attached to the permit by the City or the Department of Ecology to control any undesirable effects of the proposed use.

**5.192** Uses specifically classified or set forth in this Program as conditional uses may be authorized provided the applicant can demonstrate all of the following:

1. That the proposed use will be consistent with the policies of RCW 90.58.020 and this Program.

2. That the proposed use will not interfere with normal public use of public shorelines.
3. That the proposed use of the site and design of the project will be compatible with other permitted uses within the area.
4. That the proposed use will cause no significant adverse effects to the shoreline environment in which it is to be located.
5. That the public interest suffers no substantial detrimental effect.

**5.193** Other uses not specifically classified or set forth in this Program, including the expansion of a single-family non-conforming use pursuant to Chapter 3.50 of this Program, may be authorized as conditional uses provided the applicant can demonstrate that the proposal will satisfy the criteria set forth in Chapter 5.192 of this Program above, and that the use clearly requires a specific site location on the shoreline not provided for under the Program, and extraordinary circumstances preclude reasonable use of the property in a manner consistent with the use regulations of this Program. Conditional Use Permits shall not authorize uses that are prohibited by the provisions of this Program; Provided, existing non-conforming uses may be authorized pursuant to Section 3.50.

**5.194** In the granting of all conditional use permits, consideration shall be given to the cumulative environmental impact of additional requests for like actions in the area. For example, if conditional use permits were granted for other developments in the area where similar circumstances exist, the sum of the conditional uses and their impacts should also remain consistent with the policies of RCW 90.58.020 and should not produce a significant adverse effect to the shoreline environment.

## **5.200 ADMINISTRATIVE DECISION APPEALS**

### **5.205 Time Limit for Issuance of Decision**

A decision by the City Council shall be issued within 10 working days of the public hearing (unless otherwise mutually agreed to by parties).

## **5.210 OTHER LOCAL REGULATIONS**

Conditional use permits or variances applied for or approved under City zoning or subdivision code requirements shall not be construed as shoreline permits or variances under this Program.

## **CHAPTER 6 GOALS AND OBJECTIVES**

### **Sections:**

- 6.10 GENERALLY**
- 6.20 ECONOMIC DEVELOPMENT**
- 6.30 PUBLIC ACCESS**
- 6.40 RECREATION**
- 6.50 CIRCULATION**
- 6.60 SHORELINE USE**
- 6.70 CONSERVATION**
- 6.80 HISTORIC, CULTURAL, SCIENTIFIC, AND EDUCATIONAL**
- 6.90 VEGETATION CONSERVATION**
- 6.100 FLOOD HAZARD REDUCTION**

### **6.10 GENERALLY**

The citizens of the City of Ferndale, realizing that their shorelines are a unique and finite State resource, set forth the following goals and objectives as a general guide for the development of use regulations. These goals and objectives serve as guideposts to the proper and orderly use of the Shorelines of the State within the City of Ferndale. Seven general categories (elements) have been developed within which the various use activities can be applied. These general goals and objectives provide a basis for consistent development and application of policies and regulations for the various shoreline uses, shoreline modifications, and general policies and regulations.

### **6.20 ECONOMIC DEVELOPMENT**

The economic development element provides for the locations and design of industries, transportation facilities, port facilities, tourist facilities, commerce and other developments that are particularly dependent on their location on, or use of, the shorelines of the state.

#### **6.21 Goal:**

Assure full utilization of all economic resources to increase the standard of living of the residents of the City of Ferndale, while also utilizing economic resources in a manner compatible with the natural and human environment.

#### **6.22 Objectives:**

1. Allow only those activities with low flood damage potential to locate within shoreline areas.

2. Promote economic development that enhances the quality of life for the residents of Ferndale and minimizes adverse effects upon existing economic and social activities of value to the community.
3. Encourage economic development that minimizes adverse effects upon the physical environment.
4. Encourage new economic development that is either water-dependent or water-related.
5. Encourage new economic development to locate in areas that have already been developed.
6. Discourage the expansion of existing development if it is clearly incompatible with this Program and the local area.

### **6.30 PUBLIC ACCESS**

The public access element makes provisions for public access to publicly owned areas, such as the Nooksack River.

#### **6.31 Goal:**

Assure an adequate supply of visual and physical access to Ferndale's shorelines.

#### **6.32 Objectives:**

1. Retain existing public access and encourage the development of additional access.
2. Encourage the private sector to provide public access in developments where such access will not create hazards or security problems.
3. Locate, design, and maintain access development so as to protect the natural environment and natural processes.
4. Public entities are required to incorporate public access measures as part of each development project, unless access is incompatible with safety, security, or environmental protection.

## **6.40 RECREATION**

The recreational element is provided for the preservation and expansion of recreational opportunities, including but not limited to parks, shorelines, recreational areas, viewpoints, and other recreational amenities.

### **6.41 Goal:**

Provide ample recreational opportunities for the residents of the City of Ferndale and visitors.

### **6.42 Objectives:**

1. Encourage recreational activities that are compatible with the shoreline environment.
2. Encourage the development and management of recreational areas to include provisions for adequate conservation of affected natural resources.
3. Provide a balanced choice of recreational opportunities.
4. Encourage innovative and cooperative techniques among public agencies and private persons to increase and diversify recreational opportunities.
5. Locate, design, and operate recreational development to minimize adverse effects on other social, recreational, or economic activities.
6. Encourage improvement and redevelopment of the Riverside Golf Course (see Section 4.54.5).

## **6.50 CIRCULATION**

The Circulation element consists of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other public utilities and facilities.

### **6.51 Goal:**

Develop a convenient and diversified transportation and utilities system to efficiently move people and products with minimal disruption to the shoreline environment.

### **6.52 Objectives:**

1. Encourage shoreline circulation development that provides for alternate modes of travel and multiple-use corridors where compatible.
2. Encourage circulation systems that are located and designed in harmony with other economic and social activities, both present and future.
3. Locate and design circulation systems so that the shoreline environment is minimally impacted.
4. Locate circulation systems that are not shoreline dependent away from the land water interface unless no alternatives exist.
5. Protect and enhance physical and visual public access through public transportation development in shoreline areas.

### **6.60 SHORELINE USE**

The shoreline element considers the proposed general distribution and general location and extent of the use on shorelines, and adjacent land areas for housing, business, industry, transportation, agriculture, natural resources, recreation, education, public buildings and grounds and other categories of public and private uses of land.

#### **6.61 Goal:**

Assure that shoreline development is limited to those activities that have minimal disruption to the shoreline environment.

#### **6.62 Objectives:**

1. Insure that shoreline uses do not unnecessarily decrease public access to the shoreline. Incorporate public access provisions into proposals, when appropriate.
2. Locate all uses so that they do not cause adverse effects to other appropriate shoreline uses and the physical environment.
3. Encourage and protect multiple use of shorelines where appropriate.

## **6.70 CONSERVATION**

The conservation element provides for the preservation of natural resources, including but not limited to scenic vistas, aesthetics, and vital areas for fisheries and wildlife protection.

### **6.71 Goal:**

Assure protection of fragile non-renewable resources within the City of Ferndale and make provisions for the proper use of renewable resources.

### **6.72 Objectives:**

1. Where feasible, restore damaged features or ecosystems to provide a higher function than may currently exist.
2. Protect and preserve the integrity of significant ecological and natural resources and processes from unnecessary degradation or interference.
3. Promote the design and operation of all types of shoreline uses to incorporate appropriate conservation measures for significantly affected resources.

## **6.80 HISTORIC, CULTURAL, SCIENTIFIC, AND EDUCATIONAL**

The historical/cultural element provides for the protection and restoration of buildings, sites, and areas having historic, cultural, scientific, or educational values.

### **6.81 Goal:**

Protect and restore areas having historic, cultural, educational or scientific values within the shorelines of the City of Ferndale.

### **6.82 Objectives:**

1. Give historical/cultural sites the same concern for protection as fragile ecosystems.
2. Design and manage access to such sites so as to protect the resource.
3. Recognize the need to provide clear interpretation of historical and cultural features and natural areas, where appropriate.

# CHAPTER 7 SHORELINES OF STATE-WIDE SIGNIFICANCE

## Sections

### 7.10 ADOPTION OF POLICY

### 7.20 DESIGNATION OF SHORELINES OF STATE-WIDE SIGNIFICANCE

#### 7.10 ADOPTION OF POLICY

In accordance with RCW 90.58.020, the following management and administrative policies are hereby adopted for all Shorelines of State-wide Significance in the City of Ferndale, as defined in RCW 90.58.030(2)(e) and identified in this Section. The Act requires that the City's Shoreline Master Program give preference to uses that generally are consistent with the state-wide public interest in such shorelines. Uses shall be given preference which are consistent with the policies contained in RCW 90.58.020 as follows:

1. Recognize and protect the state-wide interest over local interest;
2. Preserve the natural character of the shoreline;
3. Result in long term over short term benefit;
4. Protect the ecology and resources of the shoreline;
5. Increase public access to publicly owned areas of the shoreline;
6. Increase recreational opportunities for the public in the shoreline;
7. Provide for any other element as defined in RCW 90.58.100 deemed appropriate or necessary.

Uses which are not generally consistent with these policies should not be permitted on such shorelines.



## **7.20 DESIGNATION OF SHORELINES OF STATE-WIDE SIGNIFICANCE**

In accordance with the criteria of RCW 90.58.030(2)(e), the legislature designated the following shorelines of the City of Ferndale, including the associated shorelands, as having state-wide significance:

**Nooksack River:** That portion of the Nooksack River, including associated shorelands, lying within the boundaries of the City of Ferndale. This area includes those wetland portions of Tennant Lake and Ten Mile Creek within the 100-year floodplain of the Nooksack River.

## **CHAPTER 8 GENERAL AND SPECIAL POLICIES AND REGULATIONS**

### **Sections:**

- 8.10 USE CONFLICTS**
- 8.20 HAZARDOUS, SENSITIVE OR UNSUITABLE AREAS**
- 8.30 GEO-HYDRAULICS**
- 8.40 WATER QUALITY**
- 8.50 HAZARDOUS/TOXIC MATERIALS**
- 8.60 FISH AND WILDLIFE**
- 8.70 VIEWS AND AESTHETICS**
- 8.80 MAINTENANCE**
- 8.90 PATHS AND STAIRS**
- 8.100 ARCHEOLOGICAL AREAS AND HISTORIC SITES**
- 8.110 WATER DEPENDENT/WATER RELATED USES**
- 8.120 PARKING AND CIRCULATION**
- 8.130 SHORELINE HABITAT AND NATURAL SYSTEMS ENHANCEMENT PROJECTS**
- 8.140 WETLANDS**
- 8.150 PUBLIC ACCESS**

### **GENERAL POLICIES AND REGULATIONS**

All use and development activities on shorelines shall be subject to the following general policies and regulations in addition to those applicable under the appropriate Shoreline Use and Shoreline Modification Chapters (Chapters 9 and 10 of this Program.)

#### **8.10 USE CONFLICTS**

##### **Policies**

1. Developments should be located, designed, constructed and managed to minimize adverse effects on other appropriate shoreline uses, whether existing or planned, and to provide safe, healthy conditions.
  
2. Unavoidable impacts or use conflicts should be minimized through the use of appropriate mitigation measures.

## **Regulations**

1. Necessary buffer areas shall be planted with native or locally compatible species or maintained in a natural condition except where foot or bicycle traffic may require surfacing. Such areas may not be used for vehicle parking, exposed stormwater facilities, nor open storage. Width and physical nature of such buffers shall be determined by the Administrator with the proposed intensity of use and character of the local area and adjacent uses.
2. Allowed development shall not result in a net loss of shoreline ecological functions nor have non-mitigatable significant adverse impact to other shoreline uses.

## **8.20 HAZARDOUS, SENSITIVE OR UNSUITABLE AREAS**

### **Policies**

1. Natural features or conditions associated with shorelines are often environmentally sensitive or potentially hazardous to development and may be unsuitable for intensive use or development. Such areas may be maintained in a natural condition, or where that is not feasible, appropriate mitigation shall be achieved.

### **Regulations**

1. Development shall be located, designed, constructed and maintained to prevent hazardous conditions and to substantially conserve hazardous, sensitive, or unsuitable areas.
2. Structures located within the jurisdiction of the flood hazard ordinance shall comply with the provisions of that ordinance.
3. Special design of development may be required by the Administrator in order to protect shore features and other users and to ensure such development is not subject to nor creates hazardous conditions unsuitable to development.

## **8.30 GEO-HYDRAULICS**

### **Policies**

1. Development should be located, designed, constructed and maintained so that natural erosion, sediment transport, and water circulation and accretion processes are not significantly disrupted.

## **Regulations**

1. The physical integrity of the shore process corridor shall be maintained in its natural state to the greatest extent feasible.
2. When not feasible, disturbances from construction, heavy equipment use or other such activity shall be kept to a minimum, consistent with this Program.

## **8.40 WATER QUALITY**

### **Policies**

1. Location, construction, operation, and maintenance of all shoreline use and development activities should maintain or enhance the quality of surface and ground water.

### **Regulations**

2. All applicable water quality standards and Best Management Practices shall be adhered to.

## **8.50 HAZARDOUS/TOXIC MATERIALS**

### **Policies**

1. When chemical fertilizers, pesticides or other toxic materials are used in shoreline areas, extreme caution should be observed to prevent contamination of water and soils and adverse effects on valuable plant, fish and animal life.

### **Regulations**

1. There shall be no spraying over water bodies or application on land where direct runoff of chemical-laden water to water bodies or aquifer recharge areas will occur.
2. A chemical free buffer strip of appropriate width shall be maintained along the OHWM of all wetlands, streams and water bodies.
3. Facilities and procedures utilizing advanced available systems and technology for handling, disposal or prompt spill clean-up of oil, fuel and/or hazardous materials shall be required wherever such materials are to be handled in any significant quantity. All private, public and commercial boat fueling facilities shall be designed and operated to prevent spillage or contamination of ground and surface waters and soils in shoreline areas.

4. Regulations and guidelines on chemical use adopted by other agencies shall be adhered to in all shoreline areas including, but not limited to, the State Department of Agriculture and Ecology.

5. Wood or pilings treated with creosote, pentachlorophenol or other similarly toxic substances shall not be used below the OHWM of streams, lakes or wetlands.

## **8.60 FISH AND WILDLIFE**

### **Policies**

1. All shoreline use and development activities should be located and operated so as to provide long term protection of fish and wildlife resources, and their various habitats.

### **Regulations**

1. Alternative locations or designs for development shall be utilized if potential adverse impacts to fish and wildlife resources are identified.

2. Shorelines having banks, beaches and beds critical to fish and wildlife resources shall be maintained or restored to a productive natural condition where feasible.

3. Development in critical wildlife habitat areas identified by the Department of Wildlife or Fisheries shall not be permitted unless adequate mitigation of impacts can be provided.

4. Development shall be subject to the provisions of the City's Critical Areas Ordinance, as adopted via Ordinance #1328 dated October 18, 2004 – as amended and incorporated herein. Variances from the CAO shall follow the provisions of Chapter 5.180.

## **8.70 VIEWS AND AESTHETICS**

### **Policies**

1. Development should not detract from shoreline scenic and aesthetic qualities which are derived from natural or cultural features.

### **Regulations**

1. Natural or cultural features shall be conserved or enhanced by development and utilized for open space, fish and wildlife habitat, public access or recreation purposes.

2. Over water construction shall be minimized.
3. Site restoration shall be required to the extent feasible after construction.
4. Obstruction of scenic views shall be minimized.
5. Where impacts to scenic views are unavoidable, development may be approved where significant public access areas, facilities, or other means of enhancing the area are provided.

## **8.80 MAINTENANCE**

### **Policies**

1. All structures and development should be kept in good repair and hazard free condition or should be removed from shorelines.

### **Regulations**

1. The Administrator may require the repair or removal of structures or development that is found to be hazardous, damaging to shore resources or other properties, abandoned or otherwise creating a public nuisance.
2. Repair, removal or replacement of damaged, derelict or abandoned structures or those which are a hazard to navigation or other users should be accomplished as soon as possible.

## **8.90 PATHS AND STAIRS**

### **Policies**

1. Construction of paths and stairs for private or public access to shorelines should not be allowed to create hazards or cause adverse effects to shore features, aesthetic quality or other users, especially in hazardous or sensitive areas.

### **Regulations**

1. Stairs and walkways not attached to a permanent structure or serving essentially as an independent facility from the primary structure and located within the shoreline setback area shall not exceed four feet in width nor shall any portion of the structure project more than eight feet out from the existing slope.

2. In hazardous or sensitive areas, the Administrator may deny construction of paths and stairs or require special design to ensure compliance with the above.

## **8.100 ARCHEOLOGICAL AREAS AND HISTORIC SITES**

### **Policies**

1. Archaeological, cultural and historic sites should be assessed by a qualified cultural resource specialist and, based on recommendations from the specialist should be preserved, studied, or otherwise mitigated as a condition of development.

### **Regulations**

1. Developers shall notify local governments if any cultural resources are uncovered during excavations. In the event such resources are uncovered, construction shall cease until an appropriate cultural resource management plan has been prepared.

2. All developments shall comply with the National Historic Preservation Act of 1966 and other applicable state and local regulations.

## **8.110 WATER DEPENDENT/WATER RELATED USES**

### **Policies**

1. Preference should first be given to development activities in the following order: water-dependent, water-related, water-enjoyment, other activities which do not adversely affect the shoreline environment.

### **Regulations**

1. Proposals for shoreline development shall demonstrate that they are constant with one of the above priority uses.

2. Non-water-orientated uses shall be prohibited unless the following criteria are met:

\* The use is part of a mixed-use project that includes a water-orientated use and provides a significant public benefit such as public access and ecological restoration or

\* Navigability is severely limited at the proposed site and the use provides a significant public benefit such as public access and ecological restoration.

3. Non-water-orientated uses may be allowed if the site is physically separated from the shoreline by another property in separate ownership or public right-of-way

4. Nonwater-dependent uses shall not be allowed over water except in existing structures or in the limited instances where they are auxiliary to and necessary in support of water-dependent uses.

## **8.120 PARKING AND CIRCULATION**

### **Policies**

1. Parking areas shall be located so as to minimize impacts to the shoreline environment.

### **Regulations**

1. Parking areas shall be designed so as to minimize erosion and impacts caused from stormwater runoff.
2. Structures such as catch basins, oil separators, and bioswales shall be used whenever feasible.
3. Unpaved or permeable all-weather surfaces may be approved if it can be demonstrated that there will be no adverse impact to surface or groundwater resources.
4. Standards for parking shall be consistent with the City's zoning ordinance, design standards, and may be modified by the Administrator to ensure adequate parking capacity or function.

## **8.130 SHORLELINE HABITAT AND NATURAL SYSTEMS ENHANCEMENT PROJECTS**

### **Policies**

1. Shoreline habitat and natural systems enhancement projects should be encouraged.

### **Regulations**

1. Any shoreline habitat or natural systems enhancement project shall clearly demonstrate through Best Available Science that the project will enhance or restore critical shoreline habitat or natural systems.
2. Shoreline Modifications elsewhere restricted may be approved when enhancement or restoration of habitat or natural systems can be demonstrated.



## **8.140 WETLANDS AND FISH AND WILDLIFE HABITAT**

All wetlands and Fish and Wildlife Habitat areas within shoreline jurisdiction are protected. See ATTACHMENT A (CAO) for requirements. Variances from the requirements of the CAO shall follow the provisions of Chapter 5.180.

## **8.150 PUBLIC ACCESS**

In the review of all shoreline substantial development or conditional use permits, consideration of public access shall be considered. Provisions for adequate public access shall be incorporated into a shoreline development proposal for each shoreline substantial development or conditional use permit (including land division) unless the applicant demonstrates one or more of the following provisions apply:

1. Unavoidable health or safety hazards to the public exist which cannot be prevented by any practical means;
2. Inherent security requirements of the use cannot be satisfied through the application of alternative design features or other solutions;
3. The cost of providing the access, easement, or an alternative amenity is unreasonably disproportionate to the total long-term cost of the proposed development;
4. Unacceptable environmental harm will result from the public access which cannot be mitigated;
5. Significant undue and unavoidable conflict between any access provisions and the proposed use and/or adjacent uses would occur and cannot be mitigated.
6. Public access shall generally not be required for the following except as determined on a case-by-case basis in conjunction with the provisions of this Section:
  - a. Dredging
  - b. Forest Practices
  - c. Landfill and Excavation
  - d. Mining
  - e. Private Docks
  - f. Stream Control Works
  - g. Residential Development containing four or less dwellings
7. Prior to deciding public access is not required pursuant to (1) through (5) above, the City must determine that all reasonable alternatives have been exhausted; including, but not limited to:

- a. Regulating access by such means as maintaining a gate and/or limiting hours of use;
- b. Designing separation of uses and activities (e.g. fences, terracing, use of one-way glazings, hedges, landscaping, etc.); and
- c. Provisions for access at a site geographically separated from the proposal such as a street end, vista, tideland or trail system.
- d. Public access areas and/or facilities shall be of the kind, quality and scope so as to reasonably offset any specific adverse impacts to existing public access of the proposed shoreline use or development activity.

8. Alternate off-site improvements in public access to shorelines may be used upon agreement, as a means of offsetting identifiable on-site impacts.

9. Incentives for public access improvements such as density or bulk and dimensional bonuses, shall also be considered through applicable provisions of this program and other zoning and subdivision regulations.

10. Development uses and activities shall be designed and operated to avoid blocking, reducing, or adversely interfering with the public's physical access to the water and shorelines.

11. Public access provided by shoreline street ends, public utilities and rights-of-way shall not be diminished (RCW 35.797.035 and RCW 36.87.130).

12. Where reasonably feasible, public access sites shall (1) be connected directly to the nearest public street; and (2) include provisions for handicapped and physically impaired persons.

13. Required public access sites shall be fully developed and available for public use at the time of occupancy of the use or activity.

14. Public access easements and permit conditions shall be recorded on the deed of title and on the face of a plat or short plat as a condition running contemporaneous with the authorized land use, as a minimum. Said recording with the County Auditor's Office shall occur at the time of building permit approval (RCW 58.17.110) or plat recordation, whichever comes first.

15. Minimum width of public access easements shall be ten feet, unless the administrator determines that undue hardship would result. In such cases, easement width may be reduced only to the minimum extent necessary to relieve the hardship.

16. The standard State approved logo or other approved signs that indicate the public's right of access and hours of access shall be constructed and installed by the applicant, and maintained by the City in conspicuous locations at public access sites. In accordance with regulation (c)(1), signs may control or restrict public access as a condition of permit approval.

17. Future actions by the applicant successors in interest or other parties shall not diminish the usefulness or value of the public access provided.

### **8.160 BUILDING AND STRUCTURE HEIGHTS, AND BULK LIMITS**

8.160.1 Height, Setback and Lot Coverage Requirements. Except as otherwise provided in this SMP and in the provisions of the Restoration Plan and Public Access Plan (see “note” on following page), the maximum building height, minimum setback and maximum lot coverage for all uses in the shoreline area, even those exempt from Shoreline Substantial Development Permit requirements, shall be as specified in the following “Height, Setback and Lot Coverage Requirements” table.

## HEIGHT, SETBACK and LOT COVERAGE REQUIREMENTS

AREA	MAXIMUM BUILDING HEIGHT (in feet)	MINIMUM SETBACK (in feet) from Line of OHWM for Structures, Surfacing, Parking, or Fill*	MAXIMUM LOT COVERAGE % (including accessory buildings)_
URBAN	45	25	70
RESIDENTIAL	45	50	50
RURAL	45**	50	30
CONSERVANCY	45**	75	20

No overwater uses or activities are allowed except for boat ramps, marinas, docks, piers, floats, roads, railroads, and utilities and except under those circumstances and conditions specified in this SMP.

In the event that required buffers are larger than the required setbacks, the structural setbacks shall be located ten (10) feet from, and in addition to, the required buffer. This setback in addition to the buffer is required so as to ensure construction/maintenance/repair/emergency access from encroaching into the buffer in the future. In circumstances where a conflict arises between the provisions of this Program and other city ordinances, the provisions that are most protective of the shoreline resources shall apply.

\* Setback does not apply to activities related improvement or maintenance dikes.

\*\* Nonhabitable structures for agricultural use may exceed this limitation.

NOTE: See Appendix (Restoration Plan and Public Access Plan) which includes some flexibility from the above bulk standards provided restoration and/or public access, together with no net loss of ecological functions.

# **CHAPTER 9 SHORELINE USE POLICIES AND REGULATIONS**

## **Sections:**

- 9.10 GENERALLY**
- 9.20 AGRICULTURAL PRACTICES**
- 9.30 AQUACULTURE**
- 9.40 BOATING FACILITIES**
- 9.50 COMMERCIAL DEVELOPMENT**
- 9.60 FORESTRY**
- 9.70 INDUSTRIAL DEVELOPMENT**
- 9.80 IN-STREAM STRUCTURES**
- 9.90 MINING**
- 9.100 PIERS, DOCKS, AND FLOATS**
- 9.110 RECREATIONAL DEVELOPMENT**
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## **9.10 GENERALLY**

The following policies and regulations apply to the categories of use activities listed by the state in the Shoreline Management Act Guidelines (WAC 173-26-240). These policies and regulations are intended to guide or regulate the uses which are allowed within the Shoreline Use Areas. An applicant for a shoreline permit should first determine:

1. In which shoreline Environment Designation the property is located by reference to the Official Shoreline Map;
2. Whether or under what circumstances the use is permitted by reference to the "Table of Uses by Shoreline Environment Designation" in Chapter 9.170 of this Program;
3. If the proposed method of constructing or achieving the use is consistent with the stated policies and regulations of this and other applicable Chapters of this Program.

## **9.20 AGRICULTURAL PRACTICES**

### **9.21 Definition:**

Agricultural Practices are the commercial farming or raising of livestock or crops. New agricultural practices are prohibited within the City of Ferndale.

### **9.22 Policies:**

Agricultural Practices shall ensure shoreline protection through means of adequate buffers, pollution prevention measures, and proper location of structures and activities.

### **9.23 Regulations:**

1. A 25-foot wide buffer zone of natural occurring vegetation shall be maintained between all new cultivated and pasture areas and adjacent water bodies.
2. Livestock feeding operations must, through the use of retention tanks, holding ponds or other acceptable methods prevent runoff containing manure, feed, wastage, or other possible water pollutants from entering the adjacent water body.
3. Pesticides, herbicides, and other chemical products which would contaminate the water are not to be used where they would leach into the water body.
4. No new agricultural practices are allowed within the Shorelines of Ferndale.

## **9.30 AQUACULTURAL ACTIVITIES**

### **9.31 Definition:**

Aquacultural Activities are the commercial culture of feed fish, shell fish, or aquatic plants and animals, including but not limited to propagation, stocking, feeding, disease treatment, waste disposal, water use, development of habitat and structures.

### **9.32 Policies:**

Aquacultural activities should be placed in locations compatible with the surrounding shoreline environment and which allow both visual and physical access to the shoreline.

### **9.33 Regulations:**

1. Public access to the shoreline shall be incorporated into the design of aquacultural facilities.

2. Structures associated with aquacultural activity shall be visually compatible with the surrounding environment.
3. Overwater structures associated with aquacultural activity shall be designed to minimize interference with fish habitat.

## **9.40 BOATING FACILITIES**

### **9.41 Definition:**

Boating Facilities are for vehicular or mechanical launching of boats, including, but not limited to boat ramps, docks, and floats. Docks serving four or fewer single-family residences are not considered Boating Facilities.

### **9.42 Policy:**

Boating Facilities should be designed and constructed to have minimal adverse effects to the shoreline.

### **9.43 Regulations:**

1. Boating Facilities shall not obstruct public use of the waterway, degrade habitat, or create hydrologic conditions that could lead to bank erosion.
2. Boating Facilities shall not degrade habitat
3. Boating Facilities shall not create hydrologic conditions that could lead to bank erosion.

## **9.50 COMMERCIAL DEVELOPMENT**

### **9.51 Definition:**

Commercial Development means those uses that are involved in wholesale and retail trade or business activities.

### **9.52 Policies:**

1. Except for water-dependent uses, no commercial development should occur waterward of the floodway line.
2. Commercial Development should be designed and constructed so as to minimize the impact to the shoreline environment.

## **9.53 Regulations:**

1. Preference shall be given first to water-dependent over non water-dependent uses; then preference shall be given to water-related or water-enjoyment over non-water-orientated uses.
2. Non-water-orientated uses shall be prohibited unless the following criteria are met:
  - \* The use is part of a mixed-use project that includes a water-orientated use and provides a significant public benefit such as public access and ecological restoration or
  - \* Navigability is severely limited at the proposed site and the use provides a significant public benefit such as public access and ecological restoration.
3. Non-water-orientated uses may be allowed if the site is physically separated from the shoreline by another property in separate ownership or public right-of-way
4. Nonwater-dependent uses shall not be allowed over water except in existing structures or in the limited instances where they are auxiliary to and necessary in support of water-dependent uses.
5. Activities such as restaurants, which increase public enjoyment of the shoreline should be given consideration for shoreline location. Where feasible, shoreline commercial developments will be encouraged to locate in areas where commercial developments already exists.

## **9.60 FORESTRY**

### **9.61 Definition:**

Forestry means any activity conducted on or directly pertaining to forested land and relating to growing, harvesting, or processing of timber; including, but not limited to: (1) road and trail construction; (2) fertilization; (3) prevention and suppression of diseases and insects; or other activities which qualify as a use or development subject to the Act. Excluded from this definition is preparatory work such as tree marking, surveying and removal of incidental vegetation such as berries, greenery, or other natural products whose removal cannot normally be expected to result in damage to shoreline natural features. Log storage away from forested land is considered under Industrial Development.



### **9.62 Policies**

Areas suitable for commercial forestry do not exist within the City of Ferndale and should be discouraged.

### **9.63 Regulations**

1. If in the future commercial forestry should become feasible, applicants for this activity shall follow the conditional use procedures in the allowable shoreline environment designations.
2. Small and essentially isolated tree removal operations shall be allowed only when necessary and upon showing that any impacts to the shoreline can be mitigated.

## **9.70 INDUSTRIAL DEVELOPMENT**

### **9.71 Definition:**

Industrial Development means facilities for processing, manufacturing, and storage of finished or semi-finished goods, together with necessary accessory uses such as parking, loading, and waste storage and treatment.

### **9.72 Policies:**

1. Preference should first be given to development activities in the following order: water-dependent, water-related, water-enjoyment, other activities which do not adversely affect the shoreline environment.
2. Industrial Development should be designed and constructed so as to minimize the impact to the shoreline environment and to ensure that there is no net loss of shoreline ecological function.

### **9.73 Regulations:**

1. Where feasible, shoreline industrial developments will be encouraged to locate in areas where industrial developments already exists.
2. Industrial development shall not be allowed in shoreline areas with severe environmental limitations; such as critical areas.

3. Non-water-orientated uses shall be prohibited unless the following criteria are met:
  - \* The use is part of a mixed-use project that includes a water-orientated use and provides a significant public benefit such as public access and ecological restoration or
  - \* Navigability is severely limited at the proposed site and the use provides a significant public benefit such as public access and ecological restoration.
4. Non-water-orientated uses may be allowed if the site is physically separated from the shoreline by another property in separate ownership or public right-of-way

## **9.80 IN-STREAM STRUCTURES**

### **9.81 Definition:**

In-Stream Structure means a structure placed by humans within a stream or river waterward of the bank full width that either causes or has the potential to cause water impoundment or the diversion, obstruction, or modification of water flow. In-stream structures may include those for hydroelectric generation, irrigation, water supply, flood control, transportation, utility service transmission, fish habitat enhancement, or other purpose.

### **9.82 Policies:**

Assure that in-stream structures provide for the protection of ecological functions and give consideration to the full range of public interests.

### **9.83 Regulations:**

1. In-stream structures shall be located as to prevent hazardous conditions.
2. In-stream structures shall be located as to minimize impacts to the natural environment.
3. Agencies having special expertise in the aquatic shoreline environment shall be notified of proposed in-stream structures to assure compliance with all applicable laws and regulations governing such.

## **9.90 MINING**

### **9.91 Definition:**

Mining is the removal of naturally occurring metallic and non-metallic minerals or other materials from the earth for economic use.

### **9.92 Policies:**

1. Mining activities should be operated so as to cause no significant impacts to the shoreline environment.

### **9.93 Regulations:**

1. Ground water must be protected from contamination.
2. The runoff of silt and other wastes from the operation into the adjacent water body is prohibited.
3. The operation shall not destroy fish habitat.
4. Plans for restoration of the site must be provided prior to issuance of a shoreline permit.

## **9.100 PIERS, DOCKS AND FLOATS**

### **9.101 Definition:**

Piers, Docks and Floats shall mean all platform structures, fill, or anchored devices in or floating upon water bodies to provide moorage for pleasure craft or landing for water-dependent recreation including but not limited to mooring buoys, swim floats, float plane moorages, covered moorages, and water ski jumps. Excluded are recreational decks, storage facilities, launch ramps, or other appurtenances.

### **9.102 Policies:**

1. Piers, Docks and Floats should be restricted to those areas where they do not interfere with physical or visual shoreline access.

### **9.103 Regulations:**

1. Where feasible, community or cooperative piers, docks or floats shall be encouraged.
2. Such structures shall not obstruct navigable waters or reduce public use of the water surface.

3. No such structure shall be allowed where it is shown that a significant degradation to waterway or habitat could occur.

4. Piers, docks, and floats shall be limited to the minimum size necessary to meet the needs of the proposed use.

## **9.110 RECREATIONAL DEVELOPMENT**

### **9.111 Definition:**

Recreational Development is the modification of the natural or existing environment to accommodate recreation. This may include land clearing, earth modifications, structures and other facilities such as parks, camps, camping clubs, launch ramps, golf courses, viewpoints, paths, public access facilities, public parks and playfields, wildlife enhancement, and other low intensity use outdoor recreation areas. Recreational homes and related subdivisions of land are considered residential; resorts, motels, hotels, recreational vehicle parks, intensive commercial outdoor or indoor recreation and other commercial enterprises are considered commercial.

### **9.112 Policies:**

1. Encourage those recreational development activities that are compatible with the shoreline environment, and that benefit from shoreline location.

2. Provide adequate shoreline access and space for public viewing, walking, and general shoreline enjoyment for all citizens.

3. Encourage redevelopment and improvements to the Riverside Golf Course (see Section 4.54.5).

### **9.113 Regulations:**

1. Recreational developments, public and private, shall be located, constructed and operated so as not to be a hazard to public health and safety.

2. Recreational developments shall not interfere with normal public use of the shorelines by all citizens.

3. Recreational developments shall not adversely impact the natural environment.

## **9.120 RESIDENTIAL DEVELOPMENT**

### **9.121 Definition:**

Residential Development means buildings, earth modifications, subdivision and use of land primarily for human residence; including, but not limited to: single-family and multi-family dwellings, mobile homes and mobile home parks, together with accessory uses common to normal residential use. Camping sites or clubs, recreational vehicle parks, motels, hotels and other transient housing are not included in this definition.

### **9.122 Policies:**

1. Higher intensity (greater than 10 units per acre) residential development is preferred over lower intensity (at least 4 units per acre) where appropriate
2. Use of environmentally sensitive designs should be encouraged.
3. Residential development should preserve and create public access and views to the shoreline.

### **9.123 Regulations:**

1. Developers shall make provisions for regulated visual and physical public access to and along the shoreline within subdivisions.
2. No density bonuses shall be allowed within shoreline areas.
3. Open space shall be located along the water's edge whenever feasible and provide for some access by members of the general public.
4. Where feasible, Planned Unit Developments shall be utilized rather than standard subdivisions to provide more areas of contiguous open space.
5. New over water residences and floating homes are prohibited.

## **9.130 ROADS AND RAILWAYS**

### **9.131 Definition:**

Roads and Railways include related bridges and culverts, fills, embankments, causeways, parking areas, truck terminals and rail switchyards, sidings, spurs, and air fields; not included are recreational trails, highway rest areas, ship terminals, seaplane moorages, nor logging roads. A road is a linear passageway for motor vehicles, and a railway is a linear passageway with track for train traffic.

### **9.132 Policies:**

1. Major new construction of highways and railways should be located away from the shoreline area to the greatest extent possible.
2. Obstructions to physical and visual access should be minimized.

### **9.133 Regulations:**

1. Roads in wetland areas shall be designed and maintained to prevent erosion and to permit a natural movement of ground water.
  2. Highway and road designs shall make provisions in their rights-of-way for pedestrian traffic and visual access to the waterfront.
  3. All bridges and other water-crossing structures shall be designed not to impede the normal annual high water. Bridge approaches and side slopes shall be planted with a suitable ground cover.
3. Multi-use corridors shall be used whenever feasible.

## **9.140 SIGNS**

### **9.141 Definition:**

Signs are any placard, billboard, display, message, design, letters, symbol, light, figure, illustration, set of pennants, or other devices intended to identify, inform, advertise, or attract attention to any private or public premises, and placed mainly outdoors so as to be seen from any public or quasi-public place. Double-faced signs are counted as two signs. Excluded from this definition are official traffic, directional or warning devices, other official public notices, signs required by law, or flag of a government or other noncommercial institution.

### **9.142 Policies:**

Signs should be regulated and displayed in a manner compatible with the preservation of shoreline views and public access.

### **9.143 Regulations:**

1. Off premise signs and billboards are prohibited in the shoreline area.
2. Advertising signs must be constructed flush against the structure that they are advertising.
3. In order to protect open space and views, free-standing signs are prohibited between buildings and OHWM, and waterward of a line drawn from the nearest point of the building parallel to the shoreline; PROVIDED that, if a road or path used by the public separates said building from OHWM, then free-standing signs are permitted between the road or path and said building. Multi-tenant development shall be required to develop a comprehensive sign program.

## **9.150 UTILITIES AND SOLID WASTE**

### **9.151 Definition:**

1. Utilities includes but are not limited to facilities for distributing, processing, or storage of water, sewage, solid waste, storm drainage, electrical energy including electronic communications, and their administrative structures, as well as pipelines for oil and gas, and fire fighting facilities. Power plants are considered to be industrial development.
2. Solid Waste is all putrescible and non-putrescible solid and semi-solid waste including garbage, rubbish, ashes, industrial wastes, swill, demolition and construction wastes, abandoned vehicles and parts, thereof, and any other discarded commodities.

### **9.152 Policies:**

Utilities and solid waste should be located so as to minimize environmental and visual impacts.

### **9.153 Regulations:**

1. Multiple use corridors shall be used as much as possible when locating utilities.
2. After installation/maintenance projects on shorelines, disturbed areas shall be replanted with native vegetation.

3. Where practicable, utilities shall be placed underground so as to not degrade the aesthetic qualities of the shoreline.

4. Solid Waste facilities are prohibited within the City's shoreline jurisdiction except for local recycling and solid waste collection containers.

### **9.160 PERMITTED USES, CONDITIONAL USES AND PROHIBITED USES**

1. Chapter 9.170 contains a chart that identifies certain Use Activities as either "Prohibited", "Permitted", or allowed by the approval of a "Shoreline Conditional Use". This chart may be used by the Administrator to determine how to proceed with an application, but other sections of this Program may be more restrictive and override what is found in this chart. Uses not identified by the Administrator to fall easily within the described uses in the chart, or otherwise referenced within this Program as to which process shall be followed, shall be treated as Shoreline Conditional Uses.

2. Shoreline Modifications, as identified in Chapter 11 of this Program, will likely take place in conjunction with the principal use activities found in the chart contained in Chapter 9.170 of this Program, but may not take place without meeting the provisions of this Program though either the approval of a shoreline permit or statement of exemption.

#### **"Permitted" Uses**

"Permitted" Uses, as identified in the chart contained in Chapter 9.170 of this Program, are those uses, not determined to be exempt from the substantial development permit process under the provisions in Chapter 3.32 of this Program, that require a Substantial Development Permit in order to be allowed within Shoreline Jurisdiction.

#### **"Shoreline Conditional Uses"**

"Shoreline Conditional Uses", as identified in the chart contained in Chapter 9.170 of this Program, are those uses that must be processed as Shoreline Conditional Uses, under the provisions in Chapter 5 of this Program.

#### **"Prohibited" Uses**

"Prohibited" Uses, as identified in the chart contained in Chapter 9.170 of this Program, are those uses that are not allowed within Shoreline Jurisdiction, unless continuing to occur as a Nonconforming Use, governed by the provisions in Chapter 3.50 of this Program or as provided for through the restoration incentives pursuant to the Restoration Plan (Appendix).



### 9.170 Table of Uses By Environmental Designation

Table of uses by shoreline environment designation	URBAN	RESIDENTIAL		CONSERVANCY	AQUATIC
Aquaculture	C	C	C	C	C
Boating Facilities	C	C	C	C	C
Commercial Development	P	C	C	X see "Note" below	X
Forestry	X	X	C	C	X
Industrial Development	P	X	X	X see "Note" below	X
In-Stream Structures	C	C	C	C	C
Mining	C	C	C	X	C
Piers, Docks, and Floats	C	C	C	C	C
Recreational Development	P	P	P	C	X
Residential Development	P	P	P	X see "Note" below	X
Roads and Railways	P	P	C	C	C
Signs	P	P	P	C	C
Solid Waste	X	X	X	X	X
Utilities	P	P	P	C	C
<b>Shoreline Modifications</b>					
Dredging	C	C	C	C	C
Grading	P	P	P	C	C
Shoreline Stabilization	C	C	C	C	C

P = Permitted Use

C = Conditional Use

X = Prohibited Use

“NOTE:” See Appendix for conditional allowance of “prohibited” uses tied to incentives for Restoration and Public Access.

# **CHAPTER 10 SHORELINE MODIFICATIONS**

## **Sections:**

### **10.10 APPLICABILITY**

### **10.20 GENERAL SHORELINE MODIFICATION PRINCIPLES**

### **10.30 SHORELINE STABILIZATION**

### **10.40 GRADING**

### **10.50 DREDGING AND DREDGE MATERIAL DISPOSAL**

### **10.60 VEGETATION CONSERVATION**

### **10.70 FLOOD HAZARD REDUCTION**

## **10.10 APPLICABILITY**

1. Shoreline Modifications should be clearly distinguished from shoreline uses, in that they are not usually Shoreline Use activities in themselves, rather activities that are undertaken in support of or preparation for a Shoreline Use Activity, as found in the chart in Chapter 9.170 of this Program. Shoreline Modifications include activities such as the construction of a dike, dredging, grading, or filling.

2. The following Policies and Regulations apply to the categories of Shoreline Modifications defined by the state in the Shoreline Management Act Guidelines (WAC 173-26-230), and are intended to guide or regulate Shoreline Modification activities that are allowed within shoreline jurisdiction.

3. An applicant for a shoreline permit should first determine which principal shoreline use type the proposed Shoreline Modification activity pertains to.. Unless clearly and convincingly demonstrated to the contrary by the proponent, a Substantial Development Permit or Shoreline Conditional Use Permit must be approved for the principal Shoreline Use Activity before any Shoreline Modification activities can take place. The Policies and Regulations for the principal Shoreline Use activity, in addition to the policies and regulations contained in Chapter 10 of this Program, further regulating all such shoreline modification activities, shall apply to the proposal.

4. In the infrequent event that a Shoreline Modification is proposed to be independent of a primary Shoreline Use Activity, such Shoreline Modification shall require a Shoreline Conditional Use Permit.

## **10.20 GENERAL SHORELINE MODIFICATION PRINCIPLES**

1. Allow structural shoreline modifications only where they are demonstrated to be necessary to support or protect an allowed principal structure or an existing shoreline use that is in danger of loss or substantial damage.

2. Reduce the adverse effects of shoreline modifications and, as much as possible, limit shoreline modifications in number and extent.
3. Allow only shoreline modifications that are appropriate to the specific type of shoreline and environmental conditions for which they are proposed.
4. Give preference to those types of shoreline modifications that have a lesser impact on ecological functions. For example, in normal circumstances, preference should be given to pile-supported piers, which allow normal water flow, rather than to piers constructed with fill, which alter the normal flow of water.
5. Base provisions on scientific and technical information and a comprehensive analysis of reach conditions for riverine systems.
6. Enhance ecological functions while accommodating existing legally permitted uses. As shoreline modifications occur, incorporate all feasible measures to protect and restore ecological shoreline functions and ecosystem-wide processes. Apply conditions to development authorizations so that structural shoreline modifications for nonwater-dependent uses on degraded sites contribute to the restoration of ecological functions.
7. Avoid and reduce significant ecological impacts according to the mitigation sequence, as defined in Chapter 2 of this Program.
8. Shoreline habitat and natural systems enhancement projects should be encouraged and be reviewed for their long term benefit.

## **10.30 SHORELINE STABILIZATION**

### **10.31 Description**

1. Shoreline Stabilization includes actions taken to address erosion impacts to property and dwellings, businesses, or essential structures caused by natural processes, such as current, flood, tides, wind, or wave action. These actions include structural and nonstructural methods.

2. A range of shoreline stabilization techniques ranging from soft to hard include: Vegetation enhancement, Upland drainage control, Biotechnical measures, Beach enhancement, Anchor trees, Gravel placement, Rock revetments, Concrete groins, Retaining walls and, Bulkheads

### **10.32 Policies:**

1. Protect, retain, and restore vegetation needed to sustain the ecological functions and ecosystem-wide process of the shoreline.
2. Avoid or mitigate adverse impacts to shoreline functions where shoreline alterations are necessary to protect an allowed principal structure from active shoreline erosion.

### **10.33 Regulations:**

1. New structural stabilization measures shall not be allowed except to protect or support an existing or approved use or an existing or approved development or for the restoration of ecological functions or for hazardous substance remediation.
2. New structural stabilization measures shall not adversely impact the natural or human shoreline environment, including property values.
3. New development shall be located and designed to eliminate the need for future shoreline stabilization.
4. New nonwater-dependent development, including single-family residences, that includes structural shoreline stabilization shall be prohibited.
5. Do not allow the subdivision of land into parcels, or the creation of new lots, that will require shoreline stabilization for development to occur.
6. New development on steep slopes or bluffs shall be set back sufficiently to ensure that hard shoreline stabilization measures will not be needed during the life of the structure, as demonstrated by a geotechnical analysis.
7. New or enlarged structural shoreline stabilization measures for an existing principal structure or use, including residences, should not be allowed unless there is conclusive evidence, documented by a geotechnical analysis, that the structure is in danger from shoreline erosion

8. An existing shoreline stabilization structure may be replaced with a similar structure if there is a demonstrated need to protect principal uses or structures from erosion caused by currents, tidal action, or waves. In this case, demonstration of need does not necessarily require a geotechnical report.

9. Replacement walls or bulkheads shall not encroach waterward of the ordinary high-water mark or existing structure unless the residence was occupied prior to January 1, 1992.

10. Soft shoreline stabilization that restores ecological functions may be permitted waterward of the ordinary high-water mark.

11. Where structural shoreline stabilization measures are necessary, limit the size of stabilization measures to the minimum necessary and use measures designed to minimize harm to ecological functions.

12. New development that would require shoreline stabilization which causes significant impacts to adjacent or down-current properties and shoreline areas is prohibited.

13. Public access is required as part of publicly financed shoreline erosion control measures.

14. Impacts to sediment transport is required to be avoided or minimized.

## **10.40 GRADING**

### **10.41 Definition:**

Grading means the movement or redistribution of the soil, sand, rock, gravel, sediment, or other material on a site in a manner that alters the natural contour of the land.

### **10.42 Policies**

1. Grading should be located and developed so that water quality, normal hydrologic functions, fish and wildlife habitat, and other environmentally sensitive areas are protected.

2. Grading should be designed to blend physically and visually with existing topography whenever possible, so as not to interfere with long term appropriate use including lawful access and enjoyment of scenery.

### **10.43 Regulations**

1. Disturbed areas shall be immediately re-vegetated with native plant species where applicable.

2. As an alternative to irreversible fills in the shore process corridor, open pile or pier supports are preferred whenever the shore area to be filled is of significant value to the region in a natural state.

3. Retaining walls or revetments near the shoreline which do not qualify as shore defense or stream control works should be kept to a minimum and constructed of flexible natural materials.

#### **4. Shore Protection**

a. Shore-side perimeters of grading sites should be sloped and protected to minimize upland erosion.

b. Vegetative stabilization, protective berms, or other flexible, natural character means are preferred over rigid, artificial character works.

c. Material for proposed fills should be selected and placed so as to prevent water quality problems and degradation of other shore resources including scenic values.

d. Erosion control and stormwater BMPs shall be utilized in Grading activities.

e. Landfill shall not be permitted for development of sewage disposal drain fields in floodways or within 100 feet of OHWM, whichever is farther landward.

f. Necessary retaining walls or revetments which are at least ten feet landward of OHWM and not more than two feet in height are permitted by exemption or permit as appropriate, if otherwise consistent with this Program. Higher walls or revetments are subject to permit requirements and to all other policies and regulations in this Program. Walls or revetment closer than ten feet to OHWM shall be considered bulkheads, as defined in Chapter 2 of this Program.

5. Fill waterward of the OHWM is allowed only by shoreline conditional use permit, for:
  - a. water-dependent use,
  - b. public access,
  - c. cleanup and disposal of contaminated sediments as part of an interagency environmental cleanup plan,
  - d. disposal of dredged material in accordance with DNR Dredge Material Management Program,
  - e. expansion or alteration of transportation facilities of statewide significance currently located on the shoreline (if alternatives to fill are shown not feasible),
  - f. mitigation action, environmental restoration, beach nourishment or enhancement project.

## **10.50 DREDGING AND DREDGE MATERIAL DISPOSAL**

### **10.51 Definition:**

Dredging is the removal of unconsolidated material (gravel, sand, silt) from the bottom of a stream, lake, bay or other water body for purposes of deepening a navigational channel, deepening or removing sediments from a stream or other drainageway for drainage improvement, or to obtain bottom materials for landfill.

### **10.52 Policies:**

1. Dredging and dredge material disposal should be done in a manner which avoids or minimizes significant ecological impacts.

### **10.53 Use Regulations:**

1. Dredging, except for navigational and flood control purposes or restoration of ecological functions, is prohibited.
2. Dredging shall be scheduled so as not to interfere with migratory movements of anadromous fish.
3. Polluted spoils shall be deposited at approved upland sites and measures taken to contain runoff from the site.
4. Deposition of dredge material waterward of the OHWM shall only be allowed where it benefits the shoreline ecology.

5. New development siting and design shall avoid the need for new and maintenance dredging.

## **10.60 VEGETATION CONSERVATION**

### **10.61 Definition:**

The retention of (preferably) native vegetation that serves to maintain shoreline ecological functions and serves to mitigate the direct, indirect, and cumulative impacts of shoreline development. The goal is to protect and restore the ecological functions and ecosystem-wide processes performed by vegetation along the shorelines.

### **10.62 Policies:**

1. To increase the stability of river banks and to protect animal species and their habitats. Vegetation clearing should be limited to the minimum necessary to accommodate approved shoreline development.
2. To provide for vegetation conservation along the shoreline that would assure no net loss of ecological function. Removal of noxious weeds, invasive species and non-native vegetation should be allowed to facilitate the establishment of a stable community of native plants. Clearing, thinning, and or limbing for limited view corridors should be allowed where it does not compromise ecological function.

### **10.63 Regulations:**

1. Shoreline developments shall comply with the vegetation conservation policies contained in the City's Critical Areas Ordinance.
2. Vegetation clearing should be limited to the minimum necessary to accommodate approved shoreline development.
3. Removal of noxious weeds and/or invasive non-native species shall be conducted to facilitate the establishment of a stable community of native plants.

## **10.70 FLOOD HAZARD REDUCTION**

### **10.71 Definition:**

To reasonably and appropriately prevent or remove development in flood-prone areas, to manage storm water within the flood plain, and to maintain or restore river and stream system's natural hydrological and geomorphological processes.



### **10.72 Policies:**

1. Where feasible, give preference to nonstructural flood hazard reduction measures over structural measures. Structural flood control works should be allowed in the shoreline when it can be demonstrated by engineering evaluations that they are necessary to protect proposed and existing development, and that non-structural flood hazard reduction measures are infeasible or cost prohibitive.
2. Assure that flood hazard protection measures do not result in a net loss of ecological functions associated with rivers and streams. In Ferndale, with the primary ecological function of the Nooksack being flood attenuation, flood hazard reduction measures (structural and non-structural) should be allowed if flood modeling reflects “no net rise” and the control measures will not cause significant damage to other properties.
3. Flood control works should be designed whenever possible to incorporate native vegetation. Such features may include vegetated berms, vegetative stabilization including brush matting and buffer strips, and retention of existing vegetation. Flood control works that serve to remove existing vegetation should include steps to replace the vegetation with native species.
4. Design of flood control works should provide access to public shorelines whenever practical, unless it is demonstrated that public access would cause public health and safety hazards, security problems, significant ecological impacts, conflicts with proposed uses, or unreasonable cost.

### **10.73 Regulations:**

1. Flood control works shall be permitted when it is demonstrated that they are necessary to protect existing and proposed development and when non-structural flood hazard reduction measures are infeasible or cost prohibitive.
2. Flood control works shall be located and operated so that no net loss of ecological function is demonstrated.
3. Dikes and levies will be allowed within the floodway through a conditional use permit when substantial need to the community is demonstrated.
4. Cut-and-fill slopes shall be stabilized with brush matting and buffer strips so that there is no net loss of shoreline ecological function.

5. Natural features such as snags, uprooted trees, or stumps may be removed if they are causing bank erosion or higher flood stages.

## **CHAPTER 11 LEGAL PROVISIONS**

### **Sections:**

**11.10 VIOLATIONS AND PENALTIES**

**11.20 REMEDIES**

**11.30 ABATEMENT**

**11.40 SEVERABILITY**

**11.50 EFFECTIVE DATE**

**11.60 REVISED PROGRAM**

**11.70 REFERENCES TO PLANS, REGULATIONS OR INFORMATION SOURCES**

### **11.10 VIOLATIONS AND PENALTIES**

**11.11** Any permit may be the subject of a cease and desist order by the City in accordance with the procedure specified in Chapter 5 of this Program.

**11.22** Any permit may be rescinded by the City in accordance with the procedure specified in Chapter 5.150 of this Program.

**11.23** The City of Ferndale shall bring such injunctive, declaratory, or other actions as are necessary to insure that no uses are made of the shorelines of the state in conflict with the provisions of this Program and of the Shoreline Management Act, and to otherwise enforce their provisions.

**11.24** In addition to incurring civil liability under Chapter 11.25 of this Program, any person found to have willfully engaged in activities on the shorelines in violation of the provision of the Shoreline Management Act or Master Program shall be guilty of a gross misdemeanor and shall be punished in accordance with RCW 90.58.220.

**11.25** Any person subject to the regulatory program of the Shoreline Management Act or this Master Program who violates any provision of the Act or this Master Program or permit issued pursuant thereto shall be liable for all damage to public or private property arising from such violation, including the cost of restoring the affected area to its condition prior to violation. The State Attorney General or City Attorney shall bring suit for damages under this section on their behalf and on behalf of all persons similarly situated. Private persons shall have the right to bring suit for damages under this section on their behalf and on the behalf of all persons similarly situated. If liability has been established for the cost of restoring an area affected by a violation, the court shall make provisions to assure that restoration will be accomplished within a reasonable time at the expense of the violator. In addition to such relief, including money damages, the court in its discretion may award attorney's fees and costs of the suit to the prevailing party.

### **11.30 REMEDIES**

**11.31** The City Attorney, or Administrator, where authorized, shall bring such injunctive, declaratory, or other actions as are necessary to insure that no uses are made of the shorelines of the state located within the City of Ferndale in conflict with the provisions of this Program, the Act, or other regulations adopted pursuant thereto, and to otherwise enforce the provisions of this Program.

**11.33** The Administrator shall have the authority to serve upon a person a cease and desist order if an activity being undertaken on shorelines of the state is in violation of Chapter 90.58 RCW or this Program, or of any permit issued pursuant thereto. The Administrator shall follow the procedure set forth in WAC 173-27-270 in issuing a cease and desist order.

**11.34** A person who fails to conform to the terms of a substantial development permit, conditional use permit or variance issued under 90.58.140, who undertakes a development or use on shorelines of the state without first obtaining a permit, or who fails to comply with a cease and desist order may be subject to a civil penalty. The penalty shall be imposed pursuant to the procedure set forth in WAC 173-27-280 and become due and recovered as set forth in WAC 173-27-290(3) and (4). Persons incurring a penalty may appeal the same to the City Council pursuant to WAC 173-27-290(1) and (2).

### **11.40 ABATEMENT**

Structures or development on shorelines considered by the Administrator to present a hazard or other public nuisance to persons, properties or natural features may be abated by the City under the provisions of the Uniform Code for the Abatement of Dangerous Buildings or by other appropriate means.

### **11.50 SEVERABILITY**

If any section, subsection, or provision of this Program, or its application to any person or circumstances is held invalid, the remainder of this Program, or the application of the provision to other persons or circumstances shall not be affected.

### **11.60 EFFECTIVE DATE**

This Program and all amendments thereto shall become effective immediately upon final approval by the Department of Ecology.

### **11.70 AMENDED PROGRAM**

The amendment and renumbering of this Program into the Ferndale Municipal Code shall not release any person from full compliance with the terms and conditions of any permit or approval previously granted by the City. Where pre-existing permit conditions specify compliance with certain provisions of the Program, the equivalent provisions of the revised Program shall apply. The Administrator shall determine which sections apply where interpretation is necessary.

### **11.80 REFERENCES TO PLANS, REGULATIONS, INFORMATION SOURCES**

Where this Program makes reference to any RCW, WAC, or other state, local, or federal law or regulation, or to any source of information, the most recent amendment or current edition shall apply.

### **11.90 PROPERTY RIGHTS**

The City of Ferndale adopts the recommended process for evaluating constitutional principles when undertaking landuse planning and permitting activities as outlined in the State of Washington "December 2003, Advisory Memorandum: Avoiding Unconstitutional Takings of Private Property".

# ATTACHMENT 1

## Relevant Sections of the City's Critical Areas Ordinance

### Chapter 16.08 CRITICAL AREAS

#### SECTION 1 - INTRODUCTION

##### 16.08.010 Purpose and Intent.

A. The intent of this chapter is to identify and define the types and qualities of various critical areas within the Ferndale community that contribute to or affect public health, safety and general welfare; and, to protect those critical areas deemed important by the citizens of Ferndale, the State of Washington, and/or the federal government.

Critical areas addressed in this Chapter include:

1. Wetlands;
2. Geologically hazardous areas;
3. Fish and wildlife habitat conservation areas;
4. Aquifer recharge areas; and
5. Frequently flooded areas.

B. The purpose of this chapter is to provide understandable and reasonable requirements for the use and development of land within or in proximity to critical areas. The requirements set forth herein are adopted in order to:

1. Minimize development impacts and protect the beneficial uses, natural functions and values of critical areas;
2. Protect the quality and quantity of all natural water resources and the native species inhabiting local waterways, wetlands, and habitats;
3. Prevent erosion and loss of slope and soil stability caused by removal of trees, shrubs, root systems of vegetative cover, or alteration of ground and surface movement;
4. Protect the public against potentially avoidable losses from landslide, subsidence, erosion and flooding; and
5. Meet the requirements of the Washington Growth Management Act (RCW 36.70A) with respect to the protection of critical areas.

##### 16.08.020 Authority.

This Chapter is adopted under the authority of Chapters 36.70 and 36.70A RCW and Article 11 of the Washington State Constitution.

##### 16.08.030 Interpretation.

In the interpretation and application of this chapter, all provisions shall be considered to be the minimum necessary and shall be liberally construed to serve the purposes of this Chapter.

#### **16.08.040 Relationship to Other Regulations.**

- A. The regulations contained in this chapter shall apply as an overlay to other regulations established by the City. In the event of any conflict between these regulations and any other regulations, the more restrictive shall apply
- B. Regulation of frequently flooded areas as required by RCW 36.70A and WAC 365-190 is provided through the Floodplain Management Ordinance of the City of Ferndale, Chapter 15.24 of the Ferndale Municipal Code.
- C. Compliance with the provisions of this Chapter shall not be construed as constituting compliance with any other applicable regulation.
- D. These regulations are in addition to, and coordinate with, the Ferndale Comprehensive Plan, the Ferndale Shoreline Master Program, and other applicable regulations adopted by the City of Ferndale.

### **SECTION 2 – GENERAL PROVISIONS**

#### **16.08.050 Applicability and Jurisdiction.**

This Chapter shall apply to all land, all land uses and development, and all structures and facilities within the City of Ferndale, except as specifically exempted under Section 16.08.090 of this Chapter.

#### **16.08.060 Critical Area Maps.**

- A. In conjunction with adoption of this Chapter, the City Council shall adopt maps indicating the locations of known or potential critical areas within the City of Ferndale. These maps shall be based on the best available scientific information and shall include natural resource information gathered through field inventory, as well as information prepared by applicable state and federal natural resource agencies. These maps shall be hereafter referred to as the “Critical Area Maps” of the City of Ferndale.
- B. The Critical Areas Administrator or designee shall update the Critical Area Maps periodically to reflect new information and shall make the maps available to the public upon request.
- C. The Critical Area Maps shall be utilized as a source of generalized information and shall not be a substitute for site specific assessments. The actual type, extent and boundaries of critical areas (with the exception of frequently flooded areas) shall be determined by a qualified consultant on a site-specific basis according to the provisions established in this Chapter.

#### **16.08.070 Authorizations Required.**

- A. No development activity or alteration of land, water or vegetation within a critical area or its standard buffer, except as specifically allowed under Section 16.08.090, shall be allowed without prior authorization from the Critical Areas Administrator or designee.
- B. The City of Ferndale shall insure that the provisions of this Chapter are met in conjunction with review of applications for the following permits and approvals:
  - 1. Building permit;

2. Conditional Use Permit;
3. Land Disturbance Permit (Clearing or Grading);
4. SEPA Determination;
5. Shoreline Conditional Use Permit;
6. Shoreline Substantial Development Permit;
7. Shoreline Variance;
8. Short Plat;
9. Long Plat;
10. Zoning Variance;
11. Planned Unit Development; or
12. Any other permit or approval required by the Ferndale Municipal Code, as amended, not expressly exempted by this Chapter.

**16.08.080 Administrative Procedures.**

The appeals process is within the City of Ferndale Municipal Code under Administrative Decisions and Administrative Interpretations. The administrative procedures followed during the critical area review process shall conform to the standards and requirements of the City of Ferndale development regulations. This shall include, but not be limited to, timing, appeals, and fees associated with applications covered by this Chapter.

**16.08.090 Exemption from Critical Area Review Requirements.**

The Critical Areas Administrator has the authority to determine whether any development activity listed below is exempt from the provisions of this title.

A. Subject to the limitations established in subsections (B), (C), (D) and (E) of this Section, the following developments, associated uses and activities shall be exempt from the critical area review procedures established in this Chapter:

1. Emergency activities necessary to reduce or prevent an immediate threat to public health, safety and welfare. An emergency is an unanticipated and imminent threat to the public health or safety or to the environment that requires immediate action within a period of time too short to allow full compliance with this Chapter. The person or agency undertaking such emergency action shall notify the Critical Areas Administrator within one (1) working day or as soon as practical following commencement of the emergency activity. Following such notification, the Critical Areas Administrator shall determine if the action taken was within the scope of the emergency actions allowed in this subsection. If the Critical Areas Administrator determines that the action taken or any part of the action taken was beyond the scope of allowed emergency actions, then the enforcement provisions of Section 16.08.140 shall apply.
2. Ongoing agriculture activities, including related development and activities that do not result in expansion into a critical area or its standard buffer.

3. Normal and routine maintenance or repair of existing structures, utilities, sewage disposal systems, potable water systems, drainage facilities, ponds, or public and private roads and driveways associated with existing residential or commercial development; normal maintenance, repair, or operation of existing structures, facilities, and improved areas accessory to a single-family residential use; and, maintenance activities such as mowing and normal pruning, provided that such maintenance activities are limited to existing landscaping improvements and do not expand into critical areas or associated buffers, do not expose soils, do not alter topography, do not destroy or clear native vegetation, and do not diminish water quality or quantity.
4. Modification of any existing residence that does not add to or alter the existing use and does not expand the building footprint or increase septic effluent.
5. Activities involving artificially created wetlands or artificial watercourses intentionally created from non-wetland sites, including, but not limited to, grass-lined swales, irrigation and drainage ditches, road side ditches, stormwater detention facilities, and landscape features, except those features that provide critical habitat for anadromous fish and those features which were created as mitigation pursuant to the provisions of this Chapter.
6. Passive outdoor recreational activities that do not adversely impact critical areas or their buffers.
7. The harvesting of wild crops in a manner that is not injurious to natural reproduction of such crops and provided the harvesting does not require tilling soil, planting crops, or changing existing topography, water conditions or water sources.
8. The lawful operation and maintenance of public and private diking and drainage systems that protect life and property.
9. Education and scientific research activities that do not adversely impact critical areas or their buffers.
10. Site investigation work necessary for land use applications such as surveys, soil logs, percolation tests and other related activities that do not adversely impact critical areas or their buffers. In every case, critical area impacts shall be minimized and disturbed areas shall be immediately restored to the pre-disturbance condition.



11. Fish, wildlife, wetland and/or riparian enhancement activities not required as mitigation provided that the project is approved by the U.S. Department of Fish and Wildlife (USFWS), the National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries), the U.S. Army Corps of Engineers (USCOE), the Washington State Department of Fish and Wildlife (WDFW), the Washington State Department of Ecology (DOE), or any other state or federal regulatory agency.

A. Exemption from critical areas review shall not constitute exemption from any other applicable provision of the Ferndale Municipal Code or those described in 16.08.040 of this chapter.

B. Exempt activities shall use reasonable methods or accepted best management practices to reduce potential impacts to critical areas and/or to restore impacted critical areas to the extent feasible following completion of exempt activities as determined by the Critical Areas Administrator. Exemption does not give permission to destroy a critical area or buffer or to ignore risk from a natural hazard.

C. If a non-development activity (not otherwise requiring a development permit or approval) is determined to be exempt under subsection (A) and adheres to the requirements established under subsection (C), then critical area review shall not be required and the activity may proceed.

**16.08.100 Waiver for Subsequent Approvals.**

A. Critical area review requirements may be waived by the Critical Areas Administrator in conjunction with review of a building permit application when all of the following conditions are met:

1. The provisions of this Chapter have been addressed fully through previous critical areas review of a development approval (such as a subdivision, conditional use or other permit identified under Section 16.08.070 (B)).

2. The subsequent construction activity complies fully with the conditions established as part of the initial land use approval; and,

3. No substantial changes in the nature or extent of the approved activity have been made.

**16.08.120 Fees.**

The City Council by resolution shall establish fees for processing of Critical Areas Review and other services provided pursuant to this Chapter. These fees shall be established based on the anticipated direct costs to the City for review of any given development and shall include any cost to the City for services provided by a qualified

consultant retained by the City to perform Critical Areas Review. The Critical Areas Review fees may be assessed separately or during other city review processes such as SEPA or Site Plan Review.

**16.08.130 Site Inspections.**

The Critical Areas Administrator or designee is authorized to make site inspections and take such actions as necessary to administer and enforce this Chapter. City representatives shall make a reasonable effort to contact the property owner before entering onto private property.

**SECTION 3 – CRITICAL AREA REVIEW**

**16.08.160 Critical Area Review Requirements.**

A. Unless otherwise provided in this Chapter, the City of Ferndale shall complete a Critical Areas review prior to granting any permit or approval for a development activity or other alteration which is found likely to include, be adjacent to, or likely to effect the function of one or more critical areas. The Critical Area Review may be in conjunction with the SEPA, site plan review, or other City of Ferndale development application processes.

B. As part of this process, the Critical Areas Administrator shall:

1. Verify the information provided by the applicant;
2. Confirm the nature, extent and type of any critical area identified;
3. Determine if a critical area is impacted;
4. Assess the impacts to critical areas likely to result by the proposed activity;
5. Determine if any mitigation proposed by the applicant is sufficient to protect critical areas, or adequately mitigate for their disturbance, and address public health, safety and welfare concerns consistent with the purpose and intent of this Chapter.

C. Unless otherwise indicated, the applicant shall be responsible for the preparation, submission and expense of any required assessments and reviews, critical areas technical studies, plans, and all other work in support of the application.

D. In circumstances where the protective provisions for more than one critical area occur, the most restrictive regulation shall apply.

### **16.08.170 Application.**

For any proposed activity not found to be exempt pursuant to Section 16.08.090, the applicant shall provide critical areas information individually or in conjunction with application for any of the permits or approvals identified under Section 16.08.070(B). Such information shall be submitted on forms provided by the City and/or as described in Section 16.08.190. The applicant is encouraged to review the Ferndale Critical Area Maps when completing portions of applications pertaining to critical areas information.

### **16.08.180 Critical Areas Determination.**

A. The Critical Areas Administrator shall review Critical Areas Maps or visit the site to determine if the site includes or is adjacent to a known or potential critical area, or if the project could have significant adverse impacts on a critical area.

B. The Critical Areas Administrator may waive the requirement for preparation of a technical study if there is substantial evidence that:

1. There will be no alteration of a critical area or its standard buffer; or
2. The development proposal and likely impacts are consistent with the purpose, intent and requirements of this Chapter; or,
3. The requirements established by this chapter will be met.

C. The Critical Areas Administrator shall notify the applicant that a Technical Study is required if it is determined that the proposed project will likely impact a critical area or critical area buffer.

### **16.08.190 Technical Studies.**

A Technical Study shall only be completed by a Qualified Consultant. A Technical Study shall describe the existing conditions of a parcel (and surrounding area) and the proposed project. The goal of the Technical Study is to determine the impact the project will have on a critical area or if public health, safety or welfare may be affected by a proposed project. The objective of the Technical Study is to provide adequate information to the City of Ferndale to determine if the project complies with this Chapter.

A. If a Technical Study is determined to be necessary, then the applicant shall be responsible to arrange for preparation of the study by a qualified consultant for the critical area(s) involved. The Technical Study may be prepared in two steps.

B. Step One of the Technical Study includes a data review and a field reconnaissance sufficient to determine the presence of a critical area. If the reconnaissance reveals that no critical area is present, then a statement of this finding along with appropriate supporting evidence shall be prepared by the consultant and

submitted in report form to the Critical Areas Administrator. The Critical Areas Administrator, at the applicant's expense, may consult with a qualified professional to assess the accuracy of the information provided.

C. If the findings resulting from Step One indicate that a critical area is present OR if the Critical Areas Administrator does not concur with the finding that critical areas are not present, then the Technical Study shall move forward to Step Two.

D. Step Two of the Technical Study shall be a thorough investigation of the identified critical area(s) by a qualified consultant/s and shall result in the submission of a report that adequately describes the existing conditions, at a minimum, the report shall include the criteria described in Appendix A for Technical Studies.

E. It is recommended that the qualified consultant consult with the Critical Areas Administrator prior to or during preparation of the Technical Study to obtain approval for modifications to the content requirements of the study.

F. It is recommended that the applicant discuss the project, discuss its impacts, and proposed mitigation with the Critical Areas Administrator prior to submission of the Technical Study to facilitate inclusion of appropriate mitigation measures.

G. Upon receipt of a Technical Study that is both complete and accurate, the critical areas review process will move forward to the Completion of Critical Areas Review.

#### **16.08.200 Completion of Critical Area Review.**

For projects requiring SEPA, completion of the critical areas review process is the point at which the SEPA threshold of determination is issued. For other projects, completion of the critical areas review process is the date a permit is issued, the date a final approval is granted plus the appeals period, or, unless otherwise approved by the Critical Areas Administrator.

### **SECTION 4 – CRITICAL AREA MITIGATION REQUIREMENTS**

#### **16.08.210 Critical Area Mitigation.**

A. All proposed critical area alterations shall include mitigation sufficient to maintain the functions and values of the critical area, compensate for the lost functions and values of the critical areas, or, to prevent or reduce risk from a hazard posed by a critical area. The mitigation process shall include the following steps in descending order of priority:

1. Avoiding the impact altogether by not taking a certain action;
2. Minimizing the impacts by limiting the degree or magnitude of an action or by otherwise adjusting the action so as to reduce impacts;

3. Rectifying the impact by repairing, rehabilitating or restoring the affected critical area to the conditions in existence prior to the start of the project;
4. Reducing or eliminating the impact over time through preservation and/or maintenance through the course of the action; and,
5. Compensating for the impact by replacing impacted areas, by creating or enhancing substitute resources, or in-lieu fees.

In determining appropriate mitigation measures applicable to shoreline development, lower priority measures shall be applied only where higher priority measures are determined to be infeasible or inapplicable.

A Mitigation Plan shall be completed by a qualified consultant. A Mitigation Plan shall describe the existing conditions of the parcel (and surrounding area) and the proposed project. The goal of the Mitigation Plan is to determine how a project will affect a critical area, inclusive of the buffer and provide compensation for the impact or ways to reduce the impact. A Mitigation Plan, as described in Appendix A, shall be prepared by a qualified consultant.

B. Mitigation, including the buffer, shall not encumber a neighboring parcel without approval from the affected party.

#### **16.08.220 Bonding.**

A. The Critical Areas Administrator shall have the authority to require a bond in cases where components of the mitigation plan, such as restoration, monitoring or maintenance, are likely to take place after issuance of the associated permit or approval by the City.

B. The bond shall be a performance bond guaranteed by an acceptable financial institution with terms and conditions acceptable to the City Attorney.

C. The bond shall be in the amount of one-hundred fifty percent (150%) of either the estimated cost of the uncompleted mitigation measures, OR an estimated cost of restoring the functions and values of the critical areas at risk, whichever is greater.

D. The period of the bond shall be five (5) years, or until the project or portions of a project have been completed and passed the necessary inspections.

## **SECTION 5 - WETLANDS**

### **16.08.230 Wetland Designation.**

Areas that meet any of the classification criteria established below shall be designated as jurisdictional wetlands and shall be subject to the provisions of this Chapter, therefore: all wetlands as described below shall be regulated by the City of Ferndale. The presence or absence of a jurisdictional wetland can only be determined by a qualified consultant. The City of Ferndale may ask for a 3rd party review for confirmation of the presence of a jurisdictional wetland or of a wetland delineation.

Wetlands shall be designated and delineated based on the most recent version of the Washington State Wetlands Identification and Delineation Manual (Washington State Department of Ecology, March 1997, Ecology Publication #96-94). This manual is consistent with the U.S. Corps of Engineers Wetlands Delineation Manual (January 1987).

### **16.08.240 Wetland Rating (categorization) and Functional Assessment.**

Wetlands shall be rated as Category I, Category II, Category III, or Category IV based upon the most recent editions of the Washington State Department of Ecology's Wetlands Rating System for Western Washington (1993).

A functional assessment that describes the functions and values of a wetland may include, but is not limited to, the methodologies described in the most recent editions of the Wetlands Functions Characterization Tool for Linear Projects (Washington State Department of Transportation Environmental Affairs Office, June 2000) or the Methods for Assessing Wetland Function, Volumes 1 and 2, Parts 1 and 2, Washington State Department of Ecology, Publication #'s 99-116 & 99-115.

### **16.08.250 Wetland Technical Study Requirements.**

The Critical Areas Administrator shall use the following as indicators of the need for a Wetland Technical Study:

- A. The site is within or adjacent to an area listed as a wetland in the City Critical Areas Maps;
- B. Documentation through any public resource information source that a wetland exists on or adjacent to the site\*;
- C. A finding by a qualified wetland biologist based on site-specific soils, vegetation and hydrology that the presence of a wetland is likely;
- D. A reasonable belief by the Critical Areas Administrator, based on local information, that a wetland may exist on or adjacent to the site. Such a belief shall be supported through consultation with a qualified consultant.

E. Upon identification that a wetland is present or likely to be present the Critical Areas Administrator shall require that a Technical Study be completed.

F. A Wetland Technical Study shall be prepared by a qualified wetlands biologist as described in Appendix A.

\* In order to determine if a wetland is present on an adjacent parcel, the city shall attempt to contact the adjacent landowner for permission to access the land. If entering the neighboring parcel is not possible, the city shall make observations from the property line, use topographic maps, aerial photographs, and/or soils maps, and use best professional judgment to make a determination.

#### **16.08.260 Wetland Buffer Requirements.**

A. Standard Buffers.

The following standard buffers shall be established for all wetlands based on wetland Categorization. Projects are not allowed within a regulated wetland or its buffer without following the procedures set forth in this chapter:

<b>Wetland Category</b>	<b>Standard Buffer Width</b>
Category I	200 feet
Category II	100 feet
Category III	50 feet
Category IV	25 feet

B. Buffer measurement.

Buffers shall be measured horizontally in a landward direction from the delineated wetland edge.

C. Buffer variation.

The standard buffer width may be modified (increased, decreased, averaged) by the Critical Areas Administrator based on performance criteria of the existing conditions of a wetland or its buffer. A decrease or averaging of said buffers, when proposed by the applicant, shall require a shoreline variance pursuant to Ch. 5.180.

#### **16.08.270 Wetland Mitigation Requirements.**

A. A Wetland Technical Study shall be prepared by a qualified consultant. Wetland mitigation is intended to compensate for the lost functions, values, and aerial extent of the wetlands and buffers disturbed. Wetland mitigation shall be the mitigation ratios set forth in the table below, but can incorporate a land swap of greater habitat value using wetland enhancement ratios described below, the use of an established and city approved wetland mitigation bank that replaces lost functions and values, or a combination of any.

B. All projects that result in permanent or temporary loss or degradation of wetland functions and values or infringe within the regulated buffers shall provide compensatory mitigation based on best available science to offset the losses that will result from the proposed action(s).

C. A Wetland Mitigation plan shall be prepared by a qualified consultant that compensates for the impacts to the wetland or buffers by the proposed action/project. The Wetland Mitigation plan shall be written as per the criteria set forth within the most recent edition of the Guidelines for Developing Freshwater Wetlands Mitigation Plans and Proposals, DOE, March 1994, Publication #94-29 or most recent update.

D. The Wetland Mitigation plan shall include an adequate description of the existing conditions as listed in the Wetland Detailed Study (Appendix A).

E. The following ratios shall be used as a guide to determine the acreage of wetland or habitat to be created, restored, or enhanced in relation to the acreage of wetland loss.

<b>Wetland Category</b>	<b>Wetland Created/Restored : Loss</b>	<b>Wetland Enhanced: Loss (can include 50% upland habitat)</b>
Category I	4:1	8:1
Category II – forested	3:1	6:1
Category II – scrub/shrub emergent	2:1	4:1
Category III		
Category IV	1.25:1	2.5:1

F. A deed restriction shall be placed on the remaining on-site wetlands, wetland buffer, and mitigation area that protect the critical area from future development. If at any time the landowner believes that the critical area is no longer present, the landowner shall retain a qualified biologist to reassess the site. If the qualified biologist determines that the wetland is no longer present, the administrator shall cause notification to be made to the relevant agencies such as the Department of Ecology or the Corps of Engineers to confirm the determination. Written concurrence of these agencies shall be required prior to the alteration of the status of the wetland, buffer, or mitigation area.

**SECTION 6 – FISH AND WILDLIFE HABITAT CONSERVATION AREAS**  
**16.08.280 Fish and Wildlife Habitat Conservation Areas Designation.**



Areas that meet any of the classification criteria established below shall be designated as Fish and Wildlife Habitat Conservation Areas (HCA) and shall be subject to the provisions of this Chapter.

**16.08.290 Fish and Wildlife Habitat Conservation Areas Classification.**

A. Fish Habitat Conservation Areas shall be classified as Types I through V Waters or as per the most recent edition of the Water Typing System: WAC 222.16.030.

B. Wildlife Habitat Conservation Areas. Wildlife habitat shall include those upland areas that meet any of the following criteria:

1. Areas where threatened, endangered or sensitive species (flora and fauna) have a primary association;
2. Habitats of local importance designated by the Ferndale City Council;
3. Stream corridors designated on the City Critical Areas Map;
4. Mature forested areas.

**16.08.300 Fish and Wildlife Habitat Conservation Areas Indicators.**

The Critical Areas Administrator shall use the following indicators to determine the need for a Fish and Wildlife Habitat Conservation Area Technical Study:

A. The site is located within an area listed as a Fish and Wildlife HCA or river/stream habitat in the City Critical Area Maps;

B. Documentation through any public resource information source that a Fish and Wildlife HCA exists on or adjacent to the site;

C. A finding by a qualified biologist that the presence of a Fish and Wildlife HCA is likely;

D. A reasonable belief by the Critical Areas Administrator through local information that a Fish and Wildlife HCA may exist on or adjacent to the site. Such a belief shall be supported through consultation with a qualified consultant.

E. Upon identification that a Fish and Wildlife Habitat Conservation Area is present or likely to be present the Critical Areas Administrator shall require that a Technical Study be completed.

**16.08.310 Fish and Wildlife Habitat Conservation Areas Buffers.**

Fish and Wildlife Habitat Conservation Areas are regulated by this Chapter. Their regulated buffers are set forth below. Projects are not allowed within a Fish and Wildlife Habitat Conservation Area or its buffer without following the procedures set forth in this Chapter.

A. River/Stream

1. River/Stream - Standard Buffers.

The following standard buffers shall be established for all River/Stream Habitats based on their classification:

<b>River/Stream Class</b>	<b>Standard Buffer</b>
Type I Water	200 feet
Type II Water	150 feet
Type III Water	100 feet
Type IV Water	25 feet
Type V Water	25 feet

2. Buffer measurement.

Buffers shall be measured horizontally in a landward direction from the ordinary high water mark of the stream or river. In situations where a stream or river is within a ravine that has a slope greater than 20 percent, the buffer shall be 25 feet from the top of the slope or the designated buffer, whichever is greater. In situations where there is a wetland adjacent to the Typed water, the buffer with the greater distance shall apply.

3. Buffer variation.

The standard buffer width may be modified (increased, decreased, averaged) by the Critical Areas Administrator based on performance criteria of the existing conditions of a wildlife habitat conservation area or its buffer. A decrease or averaging of said buffers, when proposed by the applicant, shall require a shoreline variance pursuant to Ch. 5.180.

4. Stream designations.

The designations, e.g. stream Typings, are indicated on the critical areas map. Field verification of the Typing and buffers shall be confirmed and determined by a qualified biologist. The following streams and river shall have:

- Nooksack River, Type I Water, 200-foot buffer
- Ten Mile Creek, Type II Water, 150-foot buffer
- Cedar Creek, Type III Water, 100-foot buffer
- Deer Creek, Type III Water, 100-foot buffer
- Schell Creek, Type III Water, 100-foot buffer
- Silver Creek, Type III Water, 100-foot buffer
- Whiskey Creek, Type III Water, 100-foot buffer

## B. Wildlife Corridor

For Wildlife Habitat Conservation Areas such as the bald eagle (*Haliaeetus leucocephalus*) territories or great blue heron (*Ardea herodias*) colonies buffer recommendations set forth by the most recent edition of the Management Recommendations for Washington's Priority Habitats and Species, WDFW May 1991 or other agency recommendations that pertain to such habitat/s shall act as a default buffer. A qualified consultant (fish and wildlife habitat consultant) shall make recommendations based on the existing conditions and sensitivities of the habitat in question and the impacts the proposed conditions may have on said habitat.

C. A deed restriction shall be placed on the remaining on-site wildlife corridors, buffer, and mitigation area that protect the critical area from future development. If at any time the landowner believes that the critical area is no longer present, the landowner shall retain a qualified biologist to reassess the site. If the qualified biologist determines that the critical area is no longer present, the landowner shall notify the other relevant agencies such as the Department of Fish and Wildlife to confirm the determination. Written concurrence of these agencies shall be required prior to the alteration of the status of the wetland, buffer, or mitigation area.

### **16.08.320 Fish and Wildlife Habitat Conservation Areas Technical Study**

A Technical Study (which may include a Mitigation Plan or Habitat Management Plan) that protects habitat as described above) shall be prepared by a qualified consultant prior to any land disturbance if the proposed land disturbance is likely to affect a protected species or habitat, is within a designated buffer, or is adjacent to a protected species or habitat. Appendix A describes the conditions required for the completion of a Fish and Wildlife Habitat Conservation Area Technical Study.

## **SECTION 7 – GEOLOGICALLY HAZARDOUS AREAS**

### **16.08.330 Geologically Hazardous Areas Designation.**

Areas that meet any of the classification criteria established below shall be designated as geologic hazard areas and shall be subject to the provisions of this Chapter.

### **16.08.340 Geologically Hazardous Areas Classification.**

Geologic hazard areas shall be classified as steep slopes, earthquake-sensitive areas and volcanic debris flow areas based on the following criteria.

- A. Steep slopes. Steep slopes shall include all areas with a slope inclination greater than or equal to thirty-five percent (35%) with a vertical relief of ten (10) or more feet.
- B. Earthquake-sensitive areas. Earthquake-sensitive areas shall include:
  - 1. Areas where manmade fill or partially decomposed organic material average at least five feet in depth;

2. Filled wetlands;
3. Alluvial deposits subject to liquefaction during severe shaking.

C. Volcanic debris flow areas. Volcanic debris flow areas shall include all areas within the 100-year floodplain as designated in the Ferndale Floodplain Management Ordinance, Chapter 15.24. Due to the relatively low frequency of catastrophic volcanic debris flow events, the protective measures contained in the Ferndale Floodplain Management Ordinance are deemed sufficient to reduce potential risks from such events to acceptable levels.

#### **16.08.350 Geologically Hazardous Areas Indicators.**

The Critical Areas Administrator shall use the following as indicators of the need for a Geologically Hazardous Area Detailed Study:

- A. The site is located within two hundred (200) feet of an area listed as steep slope or earthquake sensitive area on the Critical Areas Map;
- B. Documentation through any public resource information source that a steep slope or earthquake-sensitive area exists on or within two hundred (200) feet of the site;
- C. A finding by a qualified geologist or geotechnical engineer that the presence of a steep slope or earthquake-sensitive area is likely;
- D. A reasonable belief by the Critical Areas Administrator that a steep slope or earthquake-sensitive area may exist on or within two hundred feet of the site. Such a belief shall be supported through consultation with a qualified consultant.
- E. Upon identification that a Geologically Hazardous Area is present or likely to be present the Critical Areas Administrator shall require that a Technical Study be completed (Appendix A).
- F. A deed restriction shall be placed on the Geologically Hazardous Area and buffer that protect the critical area from future development.

#### **16.08.360 Geologically Hazardous Areas Performance Requirements.**

Alteration of a steep slope or earthquake-sensitive area or a site within two hundred (200) feet of such area shall only be permitted if the Technical Study indicates that the project has been designed such that the risks associated with the hazard area have been reduced to within acceptable levels. Mitigation of risks to acceptable levels shall be certified by professional engineer or a geotechnical engineer, i.e. a qualified consultant.

## **SECTION 8 – AQUIFER RECHARGE AREAS**

### **16.08.370 Aquifer Recharge Area Designation.**

Aquifer recharge areas shall be designated based on meeting any one of the following criteria:

- A. Wellhead Protection Areas designated per WAC 246-290;
- B. Sole Source Aquifers designated by the U.S. EPA per the Federal Safe Drinking Water Act;
- C. Areas designated for special protection as part of a groundwater management program per RCW 90.44, 90.48, or 90.58 or WAC 173-100 or 173-200; or
- D. Areas overlying unprotected aquifers used as a source of potable water.

### **16.08.380 Aquifer Recharge Area Technical Study Requirements.**

- A. All proposals within a designated aquifer recharge area that require SEPA review shall be reviewed by the Critical Areas Administrator to determine the potential for adverse impacts to groundwater resources.
- B. If the potential for significant adverse impacts is present, then the Critical Areas Administrator shall require preparation of an aquifer recharge area Technical Study.
- C. An aquifer recharge area Technical Study shall be prepared by a qualified consultant with experience in preparing hydro geologic site assessments. Evidence of these qualifications shall be included with the Technical Study.
- D. The Technical Study shall identify the existing hydro geologic conditions of the project site and the proposed activity's potential to result in contamination of groundwater resources.
- E. The Technical Study shall also identify proposed mitigation measures necessary to reduce potential impacts to groundwater resources.
- F. The Technical Study shall include those criteria designated in Appendix A.

### **16.08.390 Aquifer Recharge Area Performance Requirements.**

Activities requiring preparation of an aquifer recharge area Technical Study shall only be permitted if the Technical Study indicates that the activity does not pose a significant threat to the underlying aquifer system. The Critical Areas Administrator shall establish mitigating conditions necessary to insure protection of groundwater resources.

## **SECTION 9 – FLOOD HAZARD AREAS**

#### **16.08.400 Flood Hazard Areas Designation**

Flood hazard areas are identified by the most recently adopted FEMA Flood Insurance Study and accompanying Flood Insurance Rate Map (FIRM) for Whatcom County, together with FEMA-approved Letters of Map Amendment and Letters of Map Revision.

#### **16.08.410 Flood Hazard Areas Performance Requirements**

All proposed development within designated flood hazard areas shall be consistent with the most current version of the City of Ferndale Floodplain Management regulations, Section 15.24 of the Ferndale Municipal Code.

### **SECTION 10 - DEFINITIONS**

#### **16.08.420 Definitions.**

**Adaptive Management:** the ability of a consultant within the context of a Technical Study to make changes with regard to updated best available scientific evidence regarding mitigation, protection, and identification of critical areas. Adaptive management also includes the ability to change a mitigation plan by varying the final design during construction or the monitoring period due to unforeseen conditions that provide a better result in the created environment. Changes within a design shall be based on best professional judgment and best available science and documented within an as-built or monitoring report.

**Adjacent or adjacent to:** 200 feet of any project that is likely to affect the functions or value of a Critical Area. When determining and describing adjacency, the existing conditions of the buffer shall be considered. These conditions include but are not limited to road or buildings that may functionally isolate a Critical Area, forested areas and fields that provide habitat or protection to a Critical Area, and/or corridors, ditches, or streams (water flow conveyance) that provide a connection. In some situations, greater than 200 feet may be necessary to describe adjacency such as heron colonies, bald eagle territory, or stream water quality.

**Agriculture or Agricultural activities:** those activities directly pertaining to the production of crops or livestock including but not limited to cultivation, harvest, grazing, animal waste storage and disposal, fertilization, the operation and maintenance of farm and stock ponds, drainage ditches, irrigation systems, and canals, and normal maintenance, operation and repair of existing serviceable structures, facilities, or improved areas.

**Anadromous fish:** fish species that ascend rivers from the sea to spawn.

**Aquifer:** any geologic formation that will yield a significant amount of ground water to a well, spring, or other withdrawal works, in sufficient quantity for beneficial use.

**Aquifer recharge areas:** areas where the prevailing geologic conditions allow infiltration rates which contribute significantly to the replacement of groundwater and which create a high potential for contamination of groundwater resources that serve as a source of potable water supplies.

**Artificial watercourse:** ditches and other water conveyance systems, not constructed from natural watercourses, which are artificially constructed and actively maintained for irrigation and drainage. Artificial watercourses include lateral field ditches used to drain farmland where the ditch did not replace a natural watercourse, roadside ditches, stormwater systems, or any other constructed drainage ditch.

**Best available science:** information gathered, analyzed and presented based on professional experience, expertise and judgment, and established scientific principles and practices. Such principles and practices include peer review, use of scientific methodology, logical analysis and reasonable inference, statistical analysis, rigorous referencing within the scientific literature, and conclusions drawn from within an accepted scientific framework and placed in an appropriate scientific context.

**Best management practices (BMP):** physical or structural tools and/or management practices that, when used singularly or in combination, prevent or reduce adverse impacts to critical areas or their buffers.

**Biologist:** a person having specific relevant expertise who has a minimum of a Bachelor's degree in biological sciences or a related field from an accredited college or university OR equivalent relevant training in fish and wildlife biology and demonstrated 5 years of experience as a practicing biologist in the related field.

**Biological assessment:** a study prepared by a qualified biologist that describes the biotic and a biotic aspects of the site and surrounding area. This includes; but is not limited to, the flora, fauna, plant communities, habitat/s, streams, wetlands, soils, and topography of and on the site and adjacent area.

**Buffer or Buffer area:** the area adjacent to a Critical Area. This includes but is not limited to a naturally vegetated, undisturbed or revegetated zone immediately adjacent to a critical area that helps protect the critical area from adverse impacts to its functions and values OR that helps provide the margin of safety necessary to minimize risk to the public.

**Compensatory mitigation:** replacing project-induced losses or adverse impacts to Critical Areas and includes, but is not limited to, in-kind restoration, creation, or enhancement.

**Contiguous:** land adjoining and touching other land regardless of whether or not portions of the parcel have separate Assessor's tax numbers, are purchased at different times, lie in different sections, are in different government lots, or are separated from each other by private road or private rights-of-way.

**Creation:** actions intentionally performed to establish a critical area, or a portion of a critical area, where one did not formerly exist.

**Critical Areas Administrator:** the Ferndale Planning and Building Director and/or their duly authorized agent.

**Critical area designation:** legal identification and specification of critical areas for regulatory purposes.

**Critical area Technical Study:** a thorough investigation of a proposed activity and the critical area(s) it may impact as required by this chapter (refer to Appendix).

**Critical area indicators:** site-specific features such as vegetation, soils, hydrology, topography or other environmental features established through a site visit or other means that indicate that critical areas are or may be present at a particular location. For critical areas such as aquifer recharge areas, where indicators cannot be identified through a site visit, indicators may be identified through use of critical area maps or other resources.

**Critical area review:** the administrative and investigative process for decision making by the City on authorizations required by this Chapter. The process begins with the filing of an application for an activity within the jurisdiction of this Chapter and concludes with the Final Critical Areas Determination.

**Critical areas:** the following areas as required by RCW 36.70A and WAC 365-190-080, and as defined and regulated in this Chapter: wetlands, geologically hazardous areas, fish & wildlife habitat conservation areas, frequently flooded areas, and aquifer recharge areas.

**Delineation:** the precise determination of wetland boundaries in the field according to the application of specific methodology as described in the most recent edition of the Washington State Wetlands Identification and Delineation Manual, Washington State Department of Ecology publication #96-94 and the U.S. Corps of Engineers Wetlands Delineation Manual (January 1987).

**Dike:** any man-made embankment or revetment normally setback from the river bank or channel in the floodplain for the purpose of keeping floodwaters from inundating adjacent land; material is normally clay.

**Drainage:** the collection, conveyance, containment, and/or discharge of surface and storm water runoff.

**Drainage ditch:** an artificial watercourse constructed to drain surface or ground water.

**Endangered species:** a species native that is designated by the State of Washington or Federal fish or wildlife agency as likely to be extirpated from the State through loss of habitat, prey specie, or loss of life.

**Enhancement:** an action that improves critical area functions or values.



**Final critical areas determination:** the determination by the Critical Areas Administrator that a development activity, as proposed or conditioned, is or is not adequate to mitigate potential impacts to affected critical areas and comply with applicable performance requirements. The determination will be either favorable or unfavorable, indicating that the proposed activity is or is not authorized.

**Fish and wildlife habitat conservation areas (HCA):** areas with which endangered, threatened, sensitive, priority species, their habitat, streams, stream corridors, or mature forested areas, as indicated by local, state, or federal governmental agencies have a primary association.

**Frequently flooded areas:** areas of special flood hazard as designated and regulated pursuant to Chapter 15.24 Floodplain Management of the Ferndale Municipal Code.

**Functional isolation:** a critical area is separated from a proposed project by a pre-existing nonconforming use such as a road but the proposed project is still within the regulated buffer.

**Functions:** those natural processes performed by a critical area and its components.

**Geologically hazardous areas:** areas that because of their susceptibility to erosion, sliding, earthquake, or other geologic events, are not suited to the siting of commercial, residential, or industrial development consistent with public health or safety concerns.

**Geologist:** a person who has received a degree in geology from an accredited college.

**Geotechnical engineer:** a person who is licensed as a civil engineer with the State of Washington and who has recent, related experience as a professional geotechnical engineer.

**Groundwater:** all waters that exist beneath the land surface or beneath the bed of any body of surface water, whatever may be the geological formation or structure in which such water stands or flows, percolates or otherwise moves.

**Habitats of local importance:** a seasonal range or habitat element with which a designated species of local importance has a primary association, and which, if altered, may reduce the likelihood that the species will maintain and reproduce over the long-term.

**Hydro geologic:** as referred to in this Chapter is the study of groundwater.

**Initial critical areas determination:** the determination by the Critical Areas Administrator that a proposed activity is within or in proximity to a critical area or would have probable significant adverse impact to a critical area.

**In-lieu fee:** a fee paid as compensation for impacting a critical area in-place of completing compensatory mitigation. Any in-lieu fee paid shall go towards protection of habitat commensurate to compensate the lost functions and values of the critical area affected by a development.

**In-kind compensation:** to replace critical areas, such as wetlands, with substitute critical areas whose characteristics closely approximate those affected by a regulated activity.

**Mature forest:** is a coniferous forest that has a mean age stand greater than 75 years old or a deciduous forest that has a mean age stand greater than 50 years old.

**Mitigation:** avoiding, minimizing, reducing, rectifying, eliminating or compensating for project-induced, adverse impacts to critical areas.

**Mitigation bank:** a properly developed collection of existing, created, restored or enhanced wetlands and their protective buffers that are created or established using best available science to provide mitigation credits to offset future adverse impacts to wetlands from approved projects elsewhere.

**Mitigation plan:** a detailed plan indicating actions necessary to mitigate adverse impacts to critical areas.

**Modified natural watercourse:** that segment of a natural watercourse that has been modified and is maintained by diking and drainage districts, and where such modification was not the result of an illegal action.

**National wetland inventory:** an inventory that was developed by the U.S. Fish and Wildlife Service, which used aerial photography to map wetlands across the United States.

**Native vegetation:** plant species that are indigenous to the area.

**Natural watercourse:** any stream in existence prior to settlement that originated from a natural source. An example of a natural watercourse is a stream that originates in a wetland or upland area, flows through agricultural, rural and/or urban land, and ultimately empties into a saltwater bay or another watercourse. A natural watercourse may have been ditched or piped.

**Off-site:** an action away from the site or not on the site at which a critical area has been or will likely be adversely impacted by a regulated activity.

**On-site:** action on or immediately adjacent to the site at which a critical area has been or will likely be adversely impacted by a regulated activity.

**Ongoing agriculture:** the continuation of any existing agricultural activity including crop rotations as designated by the Natural Resources Conservation Service.

**Ordinary high water mark (OHWM):** the mark on the shores of all water which will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation; provided that, in any area where the ordinary high-water mark cannot be found, the ordinary high-water mark adjoining freshwater shall be the line of mean high-water. (WAC 173.22.030.)

**Out-of-kind compensation:** is to replace critical areas, such as wetlands, with substitute critical areas whose characteristics do not closely approximate those affected by a regulated activity.

**Passive recreation:** use of the land that does not involve any land disturbance such as cutting vegetation, disturbing soil, or recreation vehicle use. Passive recreation includes but is not limited to bird watching, fishing, and hiking.

**Performance requirements:** specific, measurable criteria that a proposed development activity must conform to and that may be used to determine the degree to which said activity complies with the provisions of this Chapter.

**Potable water:** water that meets the quality standards for drinking purposes as established by the State of Washington.

Primary association: **habitat that is used by a plant or animal species that is necessary for survival, but does not include incidental areas used by faunal species.**

**Qualified consultant:** a person having relevant expertise through education, training and/or experience who is capable of providing the specified professional services at the level required by this Chapter. Qualified consultants include fish and/or wildlife biologists, geologists or geotechnical engineers, and wetland specialists. Experience shall be a minimum of 5 years full time work in the related field.

**Reasonable use:** use and development of land at the minimum necessary to not preclude **all** economic use of the land as it is zoned and in compliance with the provisions of the City's Shoreline Master Plan.

**Restoration:** the return of a critical area or buffer to a state in which its functions and values approach its unaltered state as closely as possible.

**Riparian area:** the portion of habitat extending from the ordinary high-water mark (OHWM) of a stream to that part of the upland influenced by elevated water tables or flooding. It includes the area that directly influences the aquatic ecosystem, provided riparian areas associated with an existing system of dikes and levees shall not extend beyond the toe of the slope on the landward side of the dike or levee structure.

**Sensitive species:** a species native to the State of Washington, that is vulnerable or declining and is likely to become endangered or threatened in a significant portion of its range within the State without cooperative management or the removal of threats as designated by WAC 232-12-011.

**Shoreline Master Program:** the Shoreline Master Program of the City of Ferndale as codified in the Ferndale Municipal Code.

**Site assessment:** a site-specific analysis that identifies the presence of critical areas, classifies and designates each critical area, documents site conditions, analyzes project-generated impacts, and identifies appropriate mitigative measures. Site

assessments include wetland reports, hydro geologic reports, and habitat management plans.

**Slope:** an inclined earth surface, the inclination of which is expressed as the ratio of horizontal distance to vertical distance from the toe to the top of the surface. The slope may also be expressed as a percent based on the quotient of the vertical distance divided by the horizontal distance.

**Stream:** a natural flow of water.

**Species of Local Importance:** those species that may not be endangered, threatened or sensitive from a statewide perspective, but are of local concern due to their population status, sensitivity to habitat manipulation, or other educational, cultural or historic attributes. A species shall only be considered as being of local importance upon official designation as such by the City Council.

**Technical Review Committee Meeting** is a meeting requested by an applicant to have the directors of Planning and Building, Public Works, and Parks including the Fire Marshal or other personnel review a proposed development application and provide comments regarding conformance with City of Ferndale regulations.

**Technical Study:** a thorough investigation of the subject parcel, the proposed activity, and the critical area(s) a proposed activity may impact as required by this Chapter.

**Threatened species:** a species, native to the State of Washington, that is likely to become endangered in the foreseeable future throughout a significant portion of its range within the state without cooperative management or the removal of threats as designated by WAC 232-12-011.

**Values:** the desirable attributes associated with a critical area and its components that contribute to public health, safety and welfare, or biological diversity.

**Wetland or wetlands** means areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soft conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. For the purposes of this Chapter, those portions of a lake that meet the definitional criteria for "wetland" shall be regulated under the wetland section of this Chapter. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas created to mitigate conversion of wetlands.

**Wetland delineation** means mapping wetlands and establishing a wetland edge or boundary in accordance with the manual adopted under RCW36.70.A.175 pursuant to RCW 90.58.380.

**Wetland reconnaissance** means a site assessment of wetlands in accordance with the methodologies stipulated in the manual adopted under RCW36.70.A.175 pursuant to RCW 90.58.380.

**Wetland specialist** means a person who has earned a Bachelor's Degree in science with specific or related course work in wetland ecology, hydrology or soils science from an accredited college or university and who has five years of professional experience in wetland delineation, functional assessment and mitigation OR equivalent training and experience. A Professional Wetland Scientist (PWS) certified through the Society of Wetland Scientists or Washington State may be required at the discretion of the Critical Areas Administrator.

**Wildlife Corridor:** A linear travel route that is commonly used by faunal species. Wildlife corridors may include but are not limited to streams, riparian zones, flyways, fallow fields, or a connection of forested areas. Roads, developments, homesites, and agricultural fields may intersect wildlife corridors.

## **APPENDIX A**

### **Technical Study Criteria**

The Technical Study is a report that describes the critical area, the existing conditions of the parcel and surrounding area, the proposed conditions, and may include how the proposed conditions will or may affect the regulated Critical Area. Actual contents of the Technical Study will vary depending on the Critical Area involved, the proposed development, and advice from the Critical Areas Administrator. A Technical Study may be or include a mitigation plan, wetland study, fish and wildlife habitat study, geological hazardous area study, an aquifer recharge study, a flood hazard study, or other study or report that satisfies the requirements of this Chapter.

In general the Technical Study shall include:

1. A description of the methods used and names and qualifications of consultant/s performing the field work;
2. A location map of subject parcel;
3. A survey or drawing of the parcel with north arrow and scale;
4. A description of the biotic and abiotic conditions of the parcel, that includes at a minimum a description of the soils, vegetation, and hydrology;
5. The location, boundary and extent of the critical area and regulated buffer;
6. Detailed description of the critical area, its functions, values and/or associated hazard;

7. A description of the surrounding properties;
8. A description of critical areas within 200 feet of the subject parcel if practical;
9. A discussion of the regulations that pertain to the critical areas identified.
10. A separate compensatory mitigation plan if required by this Chapter or suggestions regarding mitigating measures to offset and/or compensate for the effects the proposed development may have on the critical area.

### **Mitigation Plan**

All proposed mitigation shall be contained in a proposed Mitigation Plan. Actual contents of the Mitigation Plan will vary depending on the Critical Area involved, the proposed development, and advice from the Critical Areas Administrator. At a minimum, the mitigation plan shall include the following:

1. A description and drawing of the existing conditions;
2. A description and drawing of the proposed conditions, i.e. project;
3. Proposed mitigation;
4. How the proposed mitigation will maintain or compensate for the lost functions and values of the critical area or reduce potential risks posed by the critical area;
5. Monitoring and/or inspections that are deemed necessary to insure the adequacy of the proposed mitigation, a minimum 5 year monitoring period is recommended;
6. Remedial measures that may be necessary based on the results of monitoring and/or inspection;
7. Professional expertise necessary to install, maintain, monitor or inspect proposed mitigation measures; and
8. Any bonding deemed necessary to insure performance and/or maintenance of the proposed mitigation.
9. All mitigation plans may include Adaptive Management strategies.
10. Mitigation for biological work shall occur, in order of preference, 1. on-site and in-kind; 2. on-site and out-of-kind, 3. off-site, 4. out-of-kind.

### **Wetland Technical Study Requirements.**

A Wetland Technical Study shall be completed by a qualified wetland specialist that adequately describes the existing conditions of the parcel and shall include at a minimum the following information:

1. Description of the methods used and names and qualifications of wetland consultant/s performing the fieldwork;
2. Location map of subject parcel;
3. A survey or adequate drawing of the parcel indicating property boundaries, north arrow, scale, and topography;
4. A description of the biotic and abiotic conditions of the parcel, that includes at a minimum a description of the soils, vegetation, and hydrology;
5. Identification of the extent and boundaries of all wetlands and wetland category as determined according to the methodology identified in Sections 16.08.240 and 250, and their regulated buffer;
6. Detailed description of the wetland functions and values and a description of the wetland community and classification (rating, categorization and description of the functions and values) prepared according to the classification system identified in Section 16.08.250. The assessment of wetland functions and values shall address the following if applicable: fish and wildlife habitat; buffer size and function; age and classes of the wetland communities and populations; ecotone complexity; enhancement potential; flood and storm drainage potential; presence of sensitive, threatened, or endangered plants or animals; size of wetland or habitat; support of base flow and surface/groundwater recharge and discharge; uniqueness of habitat to area or in general; water quality functions; wetland/habitat classification diversity; wildlife corridors and linkage to other habitats; (functional) isolation; and aesthetics, or other appropriate functions.
7. A description of the surrounding properties;
8. A description of critical areas within 200 feet of the subject parcel if practical;
9. A description and discussion of the regulations (local, state, and federal) that pertain to critical areas on the subject parcel.

### **Fish and Wildlife Habitat Conservation Areas Technical Study Requirements.**

A Fish and Wildlife HCA Technical Study shall be prepared by a qualified biologist and shall include the following:

1. Description of the methods used and names and qualifications of consultant/s performing the field work;
2. Location map of subject parcel;
3. Survey of the parcel indicating property boundaries, north arrow, scale, and topography;
4. Identification of the type, location and extent of the HCA on the project site plan that adequately describes the existing conditions of the parcel;
5. A description of the surrounding properties;
6. A description of HCA's within 200 feet of the subject parcel if practical;
7. A regulatory analysis, including a discussion of any federal, state, tribal and/or local requirements or management recommendations that have been developed for the species and/or habitats in question.
8. This study may include a habitat management plan to protect or mitigate for disturbances to protected species.

#### **Geologically Hazardous Areas Technical Study Requirements.**

A Geologically Hazardous Area Technical Study shall be prepared by a qualified geologist or geotechnical engineer and shall include the following:

1. Identification of the type, location and extent of the hazard area on the project site plan;
2. An assessment of the geologic and engineering characteristics of the proposed sites;
3. A geotechnical analysis of the project in relation to the proposed site, including discussion of potential impacts on the hazard area, the project site and adjacent properties;
4. A mitigation plan, including documentation of preparation or concurrence by a professional engineer, discussing how the project has been designed to avoid or minimize risks associated with the identified hazard area.

#### **Aquifer Recharge Area Technical Study Requirements.**

All proposals within a designated aquifer recharge area that require SEPA review shall be reviewed by the Critical Areas Administrator to determine the potential for adverse



impacts to groundwater resources. If the potential for significant adverse impacts is present, then the Critical Areas Administrator shall require preparation of an aquifer recharge area Technical Study. An Aquifer Recharge Area Technical Study shall be prepared by a qualified consultant such as a geologist or geotechnical engineer and shall include the following:

1. An aquifer recharge area Technical Study shall be prepared by a qualified consultant with experience in preparing hydro geologic site assessments. Evidence of these qualifications shall be included with the Technical Study.
2. The Technical Study shall identify the existing hydro geologic conditions of the project site and the proposed activity's potential to result in contamination of groundwater resources.
3. The Technical Study shall also identify proposed mitigation measures necessary to reduce potential impacts to groundwater resources.

#### **Flood Hazard Areas Technical Study Requirements**

A flood Hazard areas report shall be prepared by a qualified professional who is a hydrologist, or engineer, who is licensed in the state of Washington with experience in preparing flood hazard assessments.

1. The site area of the proposed activity;
2. All areas of a special flood hazard area, as indicated on the flood insurance map(s), such as the 100-year flood elevation, 10- and 50-year flood elevations, floodway within two hundred (200) feet of the project area;
3. All other flood areas indicated on the flood insurance map(s) within two hundred (200) feet of the project area.
4. Proposed development, including the location of existing and proposed structures, fill, storage of materials, and drainage facilities, with dimensions indicating distances to the floodplain;
5. Clearing limits;
6. Elevation of the lowest floor (including basement) of all structures, and the level to which any non-residential structure has been flood proofed;

**ATTACHMENT 2**

Floodplain Management Regulations  
FMC 15.24

**ATTACHMENT 3**

City of Ferndale Development Standards  
Chapter 13



## **CITY OF FERNDALE SHORELINE MASTER PROGRAM**

### **APPENDIX**



## **Restoration Plan Public Access Plan**

**June 2009**

**City of Ferndale  
P.O. Box 936  
2095 Main Street  
Ferndale, WA 98248**

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# Restoration Plan

## Restoration Plan Overview

The overarching goal of the SMP Restoration Plan is to identify the opportunities for restoring the ecological function for those areas within the City that have experienced degradation. With this in mind, it should be noted that the opportunities for restoration within Ferndale's SMP jurisdiction are limited. In the opinion of the City, the best opportunities for restoration lie outside of Ferndale's limited shoreline jurisdiction.

With the Nooksack River "book-ended" by the Interstate 5 Bridge at the northern terminus of the City's SMP jurisdiction and by the Burlington Northern Railroad Bridge and City Main Street Bridge at the southern terminus, the wild attributes of the Nooksack are, by necessity, severely limited in this area. The City is not able to move any of these bridges and nor would the City want to remove these vital transportation infrastructure structures.

The best opportunities for restoration lies in the City's ability to partner with jurisdictions to the north and south on enhancement projects. In particular, there exists great opportunities for the City of Ferndale to partner with the Lummi Tribe on enhancement projects. The Lummi Nation contains much land that is well suited for restoration projects. The City has and will remain committed to



*Isolated Wetland on Riverfront Golf Course*

advancing projects that serve this purpose. In particular, the City will be working with the Lummi's on the creation of wetland banking opportunities that should provide an opportunity for off-site restoration and mitigation projects that will benefit the ecology of the river and the area.

## Restoration Plan Definitions

As applicable to this Appendix in general and the Restoration Plan specifically, the following terms shall have the following meaning:

"City" shall mean the City of Ferndale.

“Demonstrable” shall mean capable of being demonstrated or proven, clearly evident or obvious.

“No Net Loss of Shoreline Ecological Function” shall mean no demonstrable or significant loss and/or degradation of established or identifiable shoreline ecological function that are the result of development activity.

“Must” means a mandate; the action is required.

“Shall” means a mandate; the action is required.

“Significant” and/or “Significantly” shall mean demonstrable and/or substantial.

“Substantial” and/or “Substantially” shall mean clearly demonstrable and/or meaningful in a practical sense.

### **Restoration Goals, Objectives, & Policies**

The City of Ferndale desires to promote the protection and restoration of degraded shoreline ecological functions where appropriate, implementable and practical. To this end, the following goals, objectives, and policies are adopted:

#### *Goal 1*

Ensure that “no net loss” of shoreline ecological function results from development within the shoreline jurisdiction.

##### Objective 1A

Develop regulations and incentives within the SMP that promote the implementation of the “no net loss” goal.

##### Objective 1B

Encourage the concept of “no net loss” through the identification of current ecological function for development projects proposed within the Shoreline jurisdiction

##### Policy 1A

Emphasize prevention of degradation of the ecological functions of the shoreline when reviewing shoreline permit application

##### Policy 1B

Identify appropriate mitigation measures during the permitting process that will encourage no net loss of ecological function

#### *Goal 2*

Restore impaired shorelines and improve their ecological function

##### Objective 2A

Ensure that, if possible, future development within the shoreline jurisdiction improves the ecological functions of impaired areas

## Objective 2B

Work with permitting agencies and other regulatory jurisdictions in identifying appropriate mitigation measures for development projects within the shoreline jurisdiction

## Policy 2A

Encourage development mitigation measures that serve to enhance native vegetation

## Policy 2B

Ensure that the requirements for buffers or other mitigation measures are appropriate and facilitate the achievement of impaired function restoration



*View of Tennant Lake and Railroad Tracks*

## Goal 3

Improve water quality

## Objective 3A

Protect and where feasible restore freshwater habitat and habitat forming processes

## Objective 3B

Manage and treat stormwater to improve water quality, decrease peak flow and increases the use of stormwater best management practices

## Policy 3A

For development projects within Ferndale's SMP jurisdiction, utilize best available science and best management practices for stormwater treatment and detention

## Policy 3B

Priority should be given to protection and restoration of natural process that are needed to support ecosystem and habitat functions which lead to improvements in water quality

## Existing & Ongoing Restoration Projects

Most of the existing and future restoration projects are outside of Ferndale's SMP jurisdiction and many are centered in strategies designed to enhance the salmon habitat within the Nooksack River. While these projects will not provide specific projects within



Ferndale, they will provide important habitat enhancement projects that will benefit Ferndale. For a complete listing of the enhancement projects contemplated within our WRIA, please refer to the listings on page 20 through 27.

### **Degraded Areas and Impaired Ecological Functions**

As noted previously, the shoreline areas of the City can be divided into three categories – the Nooksack River, the City’s streams (10-Mile, Whiskey, Silver & Schell), and the wetlands within the 100-year floodplain. The following discussion regarding degraded areas will follow this classification.

#### *Nooksack River*

As noted, the Nooksack River as it flows through Ferndale is rip-rapped, channalized, and has limited direct access. From an ecological function standpoint, the river primarily serves as a fish passage corridor. There are little or no areas that would provide off-channel refuge or other beneficial habitat/functions. The land holdings along the river are centered in two entities – the City’s Vanderyacht Park and the Riverfront Golf Course (private property).

#### *City’s Streams*

10-Mile Creek – remnants of a formerly man-made lake. The creek’s shoreline is within City’s SMP jurisdiction but its junction with the Nooksack River is outside of our jurisdiction. The creek is characterized by Reed Canary Grass, is therefore a slow moving stream and has limited salmon habitat function.

*Whiskey Creek* – Extremely channalized within Ferndale. The creek’s terminus with the Nooksack is outside of our SMP jurisdiction and is limited by a culvert under Interstate 5. Does have salmon spawning areas and juvenile salmon habitat.

*Silver Creek* – Contains adult salmon habitat but is limited by extensive beaver habitat and a pipe that brings the creek under Interstate 5.

*Schell Creek* – Very limited adult salmon habitat. Connection to Red River and eventually into Lummi Bay is outside of the City’s SMP jurisdiction.

*Wetlands Within 100-Year Floodplain.* Very limited ecological function outside of migrating waterfowl habitat. With these wetlands being isolated from the Nooksack and the majority of



these wetlands in areas of the City which will experience development pressures, off-site mitigation combined with avoidance is the preferred avenue for restoration. If these wetlands are avoided, the inclusion of buffers as required by the City's Critical areas Ordinance would be required. In these instances, the preference will be for native vegetation to be used in the buffer areas to the extent practical.

### **Potential Restoration Opportunities**

As was the case for the degraded habitat discussion, the potential restoration opportunities will also be discussed following the three SMP categories above.

#### *Nooksack River*

As noted, the primary function of the Nooksack River as it passes through Ferndale is one of fish migration. Outside of the migration issue, the potential for restoration and enhancement lies in two areas- those potential restoration projects sponsored by the City on City property abutting the Nooksack (primarily Vanderyacht Park), and those restoration and enhancement projects encouraged by the City and on private property.

Regarding the current City-owned property (Vanderyacht Park), there exists potential for increased riparian planting using native vegetation along the river bank and a more ambitious (and expensive) concept of constructing off-channel fingers into the park that would provide refuge for salmon and other freshwater aquatic creatures.

The potential also exist for restoration projects on private property along the Nooksack River. Due to the predominately rip-rapped shoreline along the Nooksack, any private property enhancements would most likely be either on the golf course property or the property owned by Samuels Furniture. In either instance, the City believes that the key to encouraging restoration on these private parcels is to offer development incentives.

Due to the designation of "Conservancy" for these private parcels fronting the Nooksack, most development activity would be precluded. Under the City's incentive-based approach for riverfront restoration, development that normally would not be

allowed would be considered if the development is tied to enhancement projects that, on balance, serve to increase the functionality of the river habitat. In this way, future development on "Conservancy" parcels would be allowed if there was a determination that the "net ecological function" of the area under SMP jurisdiction was significantly improved.



#### *City's Streams*

For all of the streams within the Ferndale SMP jurisdiction, the best

opportunities for restoration exist outside of our jurisdiction. This is because many of the stream's confluence with the river are not within Ferndale and/or their upper reaches are also outside of Ferndale's corporate boundary. With this said, there still exist modest opportunities for enhancement of the streams through the planting of native vegetation which should provide shade and shelter for salmon and other organisms. With the buffer requirements contained in the City's Critical Areas Ordinance, the City believes that appropriate opportunities for modest enhancement of the streams ecological function is possible.

*Wetlands Within 100-Year Floodplain.*

Most if not all of the wetlands within the 100-year floodplain in Ferndale are isolated from the river and therefore have limited ecological function. They do provide flood attenuation and habitat for migrating waterfowl and freshwater organisms. As was the case for the streams, the opportunities for enhancement lie predominately in the buffer requirements in the CAO and any opportunities to enhance the buffers through the planting of native vegetation.

**Incentives for Restoration on Private Property**

Ferndale has designed the provisions of their SMP using a "no net less of ecological function" approach. With this in mind, the City has determined that any restoration on private property should be tied directly to increasing the function of any shoreline or wetland associated with the site together with incentives to promote the restoration and enhancement. These incentives include permitting limited development in the Conservancy Zone and allowing increased height, lot coverage and decreased setback requirements.

Realizing that in most instances development proposals simply avoid the wetlands or provides mitigation, the City desires to increase the amount and scale of restoration by providing these incentives.

Normally development is precluded in conservancy zone areas. While this serves to keep the status quo related to ecological function, there exists no incentive to actually restore or enhance the ecological function of these areas when they are on private property. As a result, the SMP would permit limited development within the Conservancy Zone when this development is tied to restoration and/or enhancement on-site.

With a "no net loss" philosophy, it is the City's position that development would be permitted within Conservancy Zones if the proposed restoration/enhancement's increase in shoreline/wetland function is greater than any potential decrease in ecological function associated with the development.

By way of example, the Conservancy zone's ecological function along the Nooksack between the I-5 Bridge and the Main Street Bridge is primarily flood attenuation with low wetland/riparian function. There are no areas for salmonid spawning or refuge – only fish migration up and down the river. Any proposed development in this area would

need to demonstrate a “net increase in ecological function”. Thus if a development would provide off-channel habitat areas in return for development within the area, it would be allowed if, in the determination of the City, the increase in ecological function associated with off-channel areas is significant and does not substantially decrease the existing flood attenuation function.

Under this approach there is a direct nexus and proportionality between the scale and scope of the development and the scale and scope of the enhancement, with the balance falling in favor of net increase in ecological function. As noted in Section 8.110 of the City’s Shoreline Master Plan, water-orientated uses are preferred; however, non-water-orientated uses may be considered as a Conditional Use when they are part of a mixed-use development which includes restoration and/or public access.

### **Implementation Strategy & Funding**

The implementation strategy and funding is also broken down into two classifications – for those projects sponsored by the City on city property and secondly, for those projects on private property.

#### **Projects on City Property**

The major city-wide project which currently has an implementation strategy and funding concept is Storm Drainage. In the fall of 2005, the City completed its first-ever Comprehensive Stormwater Master Plan (Storm Comp Plan). The Storm Comp Plan contained a three-prong approach and strategy for tackling the storm drainage issues in Ferndale. The City is now in the process of implementing the Storm Comp Plan’s recommendations and, in April of 2006, the City Council adopted the first city-wide storm drainage fees for this purpose.

Realizing that water quality is essential to the beneficial ecological functions of the shoreline in Ferndale, the implementation of a city-wide storm drainage program has far reaching implications.

The Storm Comp Plan included three classifications of activities – initial city-wide storm drainage system cleaning, inspection and correction – eventual construction of storm drainage conveyance piping – and thirdly, the construction of up to 5 large-scale regional storm drainage ponds.

The activities included in the Storm Comp Plan are envisioned to take up to 20 years to complete and will cost over \$8 million. With the institution of the new storm drainage fees, the first phase is expected to begin in 2008.

#### **Projects on Private Property**

The strategy for encouraging restoration and enhancement projects on private property were previously discussed but center on an incentive-based approach that would link restoration and enhancement to the allowability of development that (lacking the restoration) would not normally be permitted.

An example would be future development at the Riverside Golf Course or at Samuels Furniture (both located adjacent to the river). If either of these private property owners were to propose non-water-orientated development of their property, it would most likely be denied based on the “conservancy” designation of the property. If however, a proposed development on these properties were tied to an enhancement project that would improve the ecological function of the land, the development proposal might have merit.

The strategy therefore used by the City for restoration and enhancement projects on private property will be to provide development incentives (allowing development where conceivably prohibited or discouraged) when development projects include a restoration component. The deciding factor used by the City in these instances will be to weigh the benefits of restoration/enhancement vs. the potential negative effects of development. If on balance, the development projects provide significantly more potential benefit vs. potential detriment from an ecological function standpoint, the city may permit the project.

As a result of this strategy, the funding for private property restoration and enhancement will lie with the property owner and the ability of the City, together with our permitting partners, to permit appropriate development on parcels previously precluded from development when a significant net benefit to the ecological function of the shoreline can be demonstrated.

### **Restoration Incentive Program**

The following elements of the City’s Restoration Incentive Program provide the standards by which such incentives would be reviewed and regulated. As noted in this Appendix, the Restoration Incentive Program is designed to consider limited development in the “Conservancy” areas of the city that, without such an incentive program, would preclude most development opportunities.

#### *Measurement of “Net Gain”*

In order for a private developer to make application under the City’s SMP Restoration Incentive Program, the following steps shall be necessary:

- A “current status” biological assessment of the site would need to be completed by a consultant who, at the sole discretion of the City **and with** Ecology consultation, is qualified to determine the current shoreline ecological function(s) of the project site together with the overall shoreline ecological function(s) of the area surrounding the site (i.e. the specific ecological landscape unit). The study boundaries of the “current status report” would be determined by the City in consultation with the land owner and the Department of Ecology.
- A “restoration potential” study would then be completed by a consultant who, at the sole discretion of the City and with Ecology consultation, is qualified to determine the restoration potential for the site in question and the potential

increases in shoreline ecological function that are feasible on the proponent's site.

- A “future status” biological assessment of the site and the entire study area included in the “current status” report would need to be completed by a consultant who, at the sole discretion of the City and with Ecology consultation, is qualified to determine the potential future enhanced shoreline ecological function(s) of the project site following the proposed restoration activities as well as the potential negative effects of the land owner's development plan on the site's shoreline ecological function.
- The City would then issue a “net gain” decision that would determine if the future status biological assessment demonstrates a significant after-development gain in the shoreline ecological function.

### **Restoration Activities and Specific Development Uses**

The specific restoration activities that would qualify for consideration would, naturally, vary from one site to another within the City's SMP jurisdiction due to the varying ecological functions currently in existence. The City has developed the following standards for accessing potential restoration activities.

- First preference would be for restoration activities that enhance, if possible, an existing shoreline ecological function identified on the site in question.
- Second preference would be for restoration activities that provide for beneficial shoreline ecological functions that are not currently observed on the site in question.

The specific development uses that would be considered for the site will also vary given the different areas of the City within the Shoreline jurisdiction. The City has developed the following standards for accessing potential development activities.

- First preference would be for development activities that would not degrade the current shoreline ecological function(s).
- Second preference would be for development activities that would not degrade the current shoreline ecological function(s) nor adversely affect the enhanced ecological functions that are being considered for the site in question.

As an example, should the development that is proposed be precluded in the area (i.e. – development in the Conservancy shoreline designation), any allowed development would need to meet the “net gain” in ecological function defined herein. Should the predominate current ecological function be identified as low quality wetland/riparian habitat, the following conditions will need to be demonstrated:

- The site's primary ecological function is currently (prior to any proposed development) low quality wetland/riparian habitat – as evidenced by the required biological assessment.
- The proposed restoration activity(s) serves to increase the functionality of the wetland/riparian habitat on the site - as evidenced by the required biological functional assessment.
- The potential detrimental effect of the development is less than the potential positive effect of the restoration - as evidenced by the required biological functional assessment.

Another example would be where it is not considered feasible (from an ecological standpoint) to enhance the current primary ecological function but the proponent is proposing enhancements that would provide for ecological function on the site that is not currently observed. In this case, the following conditions will need to be demonstrated:

- The site's primary ecological function is currently (prior to any proposed development) flood attenuation – as evidenced by the required biological assessment and flood modeling.
- It is demonstrated that increasing this ecological function is not feasible (flood attenuation cannot be increased through physical means – there are no artificial structures that could be removed or other means of increasing this function).
- The proponent is proposing to create and/or enhance another ecological function on the site (i.e. – creation of off-channel refuge, etc.)
- The potential detrimental effect of the development is less than the potential positive effect of the restoration – in this case, flood modeling has shown that the proposed development will not lessen the flood attenuation, that the off-channel proposal will significantly enhance the biological function and that the off-channel project does not have the affect of diminishing the primary ecological function (flood attenuation).

Should, in the City's determination, this significant net gain be demonstrated, the City could permit the development to occur as a Conditional Use having additional flexibility concerning the current limitations in the City (i.e. – setbacks, height limitations, floor area ratios, etc.).

### **Timelines & Benchmarks**

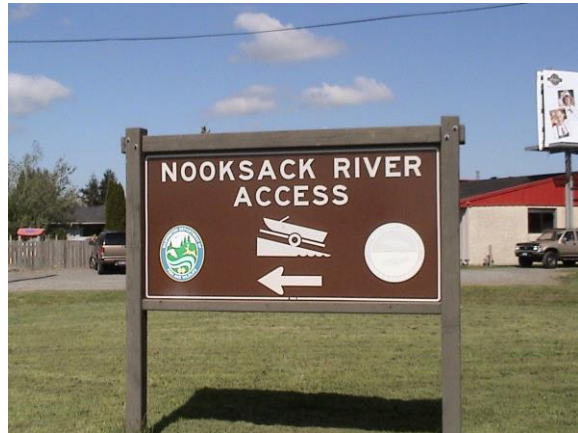
The timeliness for restoration projects contemplated by the City (i.e. storm water management) will commence in 2007 and will be on-going for many years. The timelines for restoration projects contemplated by private parties is more uncertain and

would, by necessity, be tied to the land owners willingness to consider development projects that could lead to restoration. The benchmarks for both categories of potential enhancement and restoration will be the net increase in the ecological functionality of the properties.

## **Public Access Plan**

### **Public Access Overview**

Given the three classifications of shorelines within Ferndale (i.e. – Nooksack River, Various Streams, & 100-Year Floodplain Wetlands), public access is only deemed appropriate for areas of the Nooksack River. Given that the overriding principle for public access under the Ferndale Shoreline Master Program is access without net loss of shoreline function, direct public access to the streams and the 100-year floodplain wetlands are not deemed to be appropriate. There does however exist current and potential direct and indirect public access opportunities on public property for areas of the Nooksack River as it runs through the City of Ferndale.



As will be demonstrated in this section, the existing and contemplated public access opportunities on public property within the City are many and will carry out our desire to provide public access to the Nooksack River. In addition, the City believes that an incentive program for access on private property along the Nooksack River would be appropriate.

### **Classification of Shoreline Uses and Access**

Shoreline uses includes three broad classifications; water-dependent, water related, and water-enjoyment. With the Nooksack River being a wild and scenic river, the ability for either water-dependant or water-related uses is severely limited – suffice it to say that the City does not currently have any businesses that could be deemed water-dependant or water-related. The City also believes that the potential for future water-dependent or water-related commercial enterprises to be very limited. Even with this limitation, the City does provide water-enjoyment opportunities along the portion of the Nooksack that flows through the City.

Water-enjoyment activities can either be active (direct physical access) or passive (water view). In all instances, both direct and indirect water-enjoyment access is provided via existing public property along the Nooksack River.

### **Public Access Principles**

The principles of public access within Ferndale are centered in the ability of the public to gain physical access to the river on public property and the ability of the public to enjoy viewing the river at various points in the City on public property. With the City owning



four (4) public parks (Vanderyacht, Hastings, Centennial Riverwalk, & Pioneer Park) either directly on the Nooksack or adjacent to the river, the principle of promoting public access while protecting private property rights can be achieved. In addition, views of the river are afforded from the Main Street Bridge as it crosses the Nooksack. Please refer to the map on page 18 for existing public property along the Nooksack River.

Regarding the provision of public access to the River on private property, due to the reasons outline above, the City does not believe that it is appropriate or necessary to tie increase public access (active or passive) to private development within the SMP jurisdiction. With this said, the City would like to provide incentives to private property owners to provide increased public access to the River. These incentives are outlined below and include enhanced development opportunities tied to increased public access.



*Railroad Bridge – Vanderyacht Park in Background*

### **Current Public Access Needs & Opportunities**

The Nooksack River extends for approximately 6,200 feet as it passes through Ferndale (from the I-5 Bridge to the north to the PUD water intake point to the south). Of this, public property directly on the River constitutes approximately 3,800 feet (see map on page 18).

### **Existing Public Access on Public Property – Within Ferndale SMP Jurisdiction**

This existing public property along the Nooksack provides for both active and passive public access. Active public access is provided at Vanderyacht Park while passive public access is provided at Hastings Park, the Centennial Riverwalk, Pioneer Park, and from the Main Street Bridge.

### **Existing Public Access on Public Property – Adjacent to Ferndale SMP Jurisdiction**

Abutting Ferndale to the south (as a result, just outside of Ferndale’s SMP jurisdiction) is Whatcom County’s Hovander Park. Formally a family farm, Hovander Park includes 720 acres and has over one mile of river frontage on the Nooksack. While direct access to the river is limited, a trail along the river affords many views of the Nooksack.

In addition to Hovander Park, there exists a State of Washington boat launch on the Nooksack which lies just outside of our SMP jurisdiction. This boat launch naturally affords active access to the Nooksack River. See the map on page 19 for the location of Hovander Park and the State of Washington boat launch.

### **Existing Public Access on Private Property**

The largest private land holding along the Nooksack River as it passes through Ferndale is the Riverfront Golf Course. Golf courses are unique in so far as they, by nature, provide passive and active access to their surroundings. In the case of Ferndale, this passive public access includes views of the River. Naturally due to the nature of the game, this access is limited to actual players and does not include the general public on an unrestricted basis.

### **Access Needs**

With the extensive amount of relatively unrestricted public access on public property and the somewhat restricted public access on a selected private property, access to the River is numerous and varied.

### **Incentives for Public Access on Private Property**

As noted, there exists many opportunities for public access to the Nooksack River both within Ferndale and in its immediate surroundings. Accordingly, it is the City's position that increased public access on private property along the Nooksack is not necessary.

With this said, it is also the position of the City that increased public access on private property would serve to promote the public interest. As a result, the City would like to encourage increased public access to the River on private property through incentives that would balance increased public access on private property in exchange for increased development opportunities on private property along the Nooksack.

This incentive approach would permit increased development within "conservancy" zone along the river when combined with public access. For projects that includes Public Access and whose affect yields a net increase in ecological function, the height, setback, and lot coverage limitations would be set at the next highest use category (see matrix on page 89 of SMP). For example, a project in the Conservancy Zone that qualifies for incentives would be bound by the height, setback, and lot coverage limitation of the Rural classification.



*View of Vanderyacht Park from Hastings Park*

As noted in the Restoration Plan section of this document, it is the City's position that it would permit development within the Conservancy zone along the Nooksack in return for restoration and enhancement on site. Through this provision, the increased functionality of the shoreline as a result of the restoration/enhancement would permit the development to occur. Under this scenario, increased shoreline functionality would be the net result of development allowability.

Allowing or increasing public access to the shoreline does not inherently carry with it a probability of increased shoreline functionality however. The function of the shoreline is not necessarily increased through public access but it is not necessarily reduced either. In many ways it is the form of the public access that dictates an increase or decrease in shoreline functionality. In many instances, direct active access to the shoreline may serve to reduce the functionality of the shoreline while indirect passive access to the shoreline may have no net effect on the shoreline functionality and may serve the public interests (water view is considered a public benefit).

As a result, it is the position of the City to not tie increased public access on private property to the allowability of development within the shoreline conservancy zone but rather to tie increased public access to the shoreline on private property with the scale of the allowed development and the nature of the public access. Under this arrangement, developers who provided public access would be granted bonus height allowability, bonus reduced setback, and/or bonus lot coverage ratios.

The bonus allotments would be tied to the level of public access (active or passive, direct or indirect) with a larger bonus for direct, active access and smaller bonuses for indirect, passive access.

For example, should a development proposal come forward on private property along the Nooksack, it would be deemed appropriate to allow the development in return for restoration/enhancement of the shoreline. Additionally should there be an additional public access opportunity, the City would consider modifications to the scale of the development.

With this said, it is important to ensure that the bonus allowability does not serve to reduce the functionality of the shoreline. Thus, using the above example, the provision for active direct access to the Nooksack could be tied to a bonus height limitation allowing an additional story to be added to the building. This height increase would not, in this example, serve to degrade the perceived function of the shoreline (flood attenuation) while increased lot coverage or reduced setback (both of which would increase the building footprint) could degrade the shoreline functions.

Overall however, the City does not deem it appropriate to tie the requirement for both restoration/enhancement and public access to the allowability of development in the Conservancy zone. On balance (due to overall function of the shoreline) the City considers restoration/enhancement to be more important than public access.

### **Potential Public Access Opportunities**

While public access opportunities on private property may be limited, opportunities do exist for increased public access to the shoreline on public property. What follows is a brief outline of the known future public access opportunities on public property.

### **Whatcom County Pedestrian and Bicycle Bridge Across the Nooksack**

Whatcom County, through an advisory committee, has proposed a footbridge across the Nooksack linking Hovander Park with Pioneer Park (and then on to Vanderyacht Park via the Riverview Plaza and Trail). This bridge would be constructed near the PUD water intake point since this is the closest point across the river as it flows through Ferndale. Please refer to Attachment B for more information.

### **Washington State Coast Millennium Trail (CMT)**

The CMT currently runs north from Bellingham through Hovander Park and then out to the Cherry Point area. As part of the Whatcom County Pedestrian and Bicycle Nooksack River Bridge project (discussed above), the CMT's route could be altered to include passage through Ferndale along the Nooksack River and then out to the coast.



*Nooksack River as it flows through Ferndale*

# **CITY OF FERNDALE SHORELINE MASTER PROGRAM**



## **ADDITIONAL INFORMATION**

**Shoreline Jurisdictional Boundary Justification and Description  
Assumptions Made Concerning Scientific Information  
Data Gaps in Scientific Information  
Risks To Ecological Functions  
Cumulative Impact Analysis  
Area-By-Area Shoreline Analysis**

**June 2009**



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## Executive Summary

Ferndale SMP Additional Information – June 2009

This section is meant as a supplement to the City's Shoreline Master Program (SMP). As such it provides additional information related to the design and implementation of the Shoreline regulations.

The regulated shore lands within the City of Ferndale are those associated with the Nooksack River, a shoreline of statewide significance, and Ten-Mile Creek, a stream of greater than 20 cubic feet per second mean annual flow. For SMP regulatory purposes however, the City has also included wetlands within the 100-year floodplain.

Thus, as the enclosed maps demonstrate, the shoreline jurisdiction within Ferndale consists of those areas surrounding the Nooksack River, Ten-Mile Creek and the wetlands within the 100-year floodplain.

Included in this supplement is a more detailed discussion of the ecological functions of those areas within Shoreline jurisdiction, the assumptions made regarding Best Available Science (BAS) and any deviations there from, risk to ecological functions associated with the SMP provisions, and any identified data gaps that might have impacts to this analysis and regulation.

Overall, the City believes that sufficient Best Available Science exists to appropriately designate Shoreline jurisdiction. The assumptions made as to the sufficiency of the BAS, the data gaps in scientific data and the risks associated with the SMP provisions have been identified, discussed, and determined to be adequate for the preparation of an updated SMP.

Given the three distinct SMP jurisdictional areas (river, streams, and 100-year floodplains), the following approach is adopted by the City:

### **Nooksack River**

Normally preclude development in the "conservancy" zone unless restoration/enhancement is tied to development and where the restoration/enhancement's potential increase in ecological function outweighs the potential negative effects of development on the area's ecological function. It is the



City's position that restoration/enhancement along the River within the conservancy zone, when it includes the construction of off-channel habitat, will offset an associated limitation of this area for flood attenuation. The City's position is that off-channel habitat serves a greater ecological function within Ferndale than flood attenuation.

### **Creeks (10-Mile, Schell, Whiskey, and Silver)**

The City's position relative to the creeks is to require setbacks and buffers in line with the requirements of the City's Critical Areas Ordinance (CAO). The City feels that the requirements of the CAO by and unto itself are sufficient to ensure the ecological functions of the area's creeks.

### **Wetlands Within the 100-Year Floodplain**

With the exception of the wetland complex in Area 13 (see map on page 91) and the wetland complex in Area 15 (see map on page 93), the City's position is that the majority of wetlands within the 100-year floodplain within Ferndale demonstrate low value functions. The majority of the wetland complex in Area 13 is not within the City limits. The high value wetland complex in Area 15 include areas zoned General Commercial and Manufacturing. For this wetland complex in Area 15, the City has established two new Shoreline designations entitled "General Commercial Conservancy" and "Manufacturing Conservancy". The purpose of these designations is to recognize the value of the wetlands in these areas and to alert prospective developers of the increase likelihood of additional impediments to development.

As noted above, it is the position of the city that, other than those wetlands within the 100-year floodplain discussed above the remainder of these areas, in most cases, should not be included in the SMP jurisdiction due to these wetlands not being "associated" with a shoreline and therefore should not be avoided, restored, or enhanced. It is the City's preference for these low quality wetlands (many of which are Prior Converted Cropland) that they be filled and developed with appropriate off-site mitigation. Following the guidance of Best Available Science (BAS), it is the City's position that ecological function is enhanced when off-site mitigation is tied to a mitigation bank site or another appropriate site where existing high quality wetlands can be expanded, restored and enhanced. Expanding and enhancing existing high quality wetlands, per the results of BAS, yield far better results than attempts to preserve isolated low quality wetlands.

The City has broken the SMP jurisdictional areas into 16 distinct areas whose characteristics and ecological processes are discussed. Please refer to these area-by-area discussions for more information. In addition, a generalized discussion of the City of Ferndale's shore lands is included in the following section.

## **Process Overview**

### **PROCESS BACKGROUND**



The City of Ferndale has embarked on a multi-year process of updating our 1983 SMP. This process has included intensive field work and public involvement. During this update process, a new SMP manual was developed and adopted by the Department of Ecology. For this reason, the City has attempted to modify the existing SMP to comply with these new standards.

### **PROCESS UNERPINNING**

The SMP jurisdictional areas in Ferndale can be broken down into three distinct areas. First there is the Nooksack River and its related floodway. Second are the wetlands associated with the 100-year floodplain and third are the area's creeks – 10-Mile Creek (as a result of flow volume), Schell Creek, Whiskey Creek, and Silver Creek (included due to their unique ecological function).

As is discussed below, new Whatcom County flood modeling was used to determine the floodway of the Nooksack River, the dimensions of the 100-year floodplain, and the wetlands associated with the 100-year floodplain.

### **PROCESS TIMELINE**

Following an extensive public process between 1999 and 2001, the City of Ferndale submitted a new SMP to the DOE on 5 December 2001 for their review. The new SMP replaced the 1983 Shoreline Master Program. That submittal package included:

- \* December 5, 2001 cover letter for submittal of Shoreline Master Program
- \* November 19, 2001 City of Ferndale Ordinance 1263 adopting SMP
- \* City of Ferndale, November 19, 2001 Shoreline Master Program
- \* City of Ferndale, November 19, 2001 Shoreline Master Program Map
- \* City of Ferndale, 1999 through 2001 Shoreline Master Program Record of Development Process
- \* City of Ferndale, August 8, 2001, SEPA Documentation
- \* City of Ferndale, Comments received up to November 2001
- \* City of Ferndale, Interested Parties up to November 2001

This work, while extensive, was insufficient to update our Shoreline Master Plan to meet the new requirements adopted by DOE. As a result, the City continued to complete work on the SMP following the adoption of a revised budget and work plan by the City Council.

The City continued to work on updating the SMP and in 2004, after several discussions with DOE, the city obtained grant funding to complete the required additional work. During 2004 and 2005 a revised SMP Map was prepared (and is currently in use per DOE), and the SMP text was revised. That map and text were considered by the City Council following public hearings, after which the Council authorized the submittal of the May 2, 2005 SMP map and March 24, 2005 SMP text to DOE for review.

Upon review, DOE then suggested that additional revisions to the SMP text be made, and additional supporting documentation be developed and submitted. The additional supporting documentation was completed in 2006 and 2007 and is included in this supplemental report. The SMP text revisions are included in the attached SMP dated January 2008. The location of all required text revisions and additional supporting documentation is shown in the attached SMP Submittal Checklist.



*Nooksack River – looking south from Main Street Bridge*

## **PROCESS APPROACH**

The unique underlying approach to SMP jurisdictional boundaries adopted for the update to the Ferndale SMP was “no net rise”. With the Nooksack River bisecting the City and “feeding” (via associated groundwater) many of the wetlands within the 100-year floodplain, it was believed that utilizing BAS related to the dynamics of the Nooksack River would best serve to protect and enhance the ecological functions of the critical areas under SMP jurisdiction.

This approach was embodied in the use of flood modeling data produced by the Whatcom County Flood Division. This modeling project has been underway for many years by the County and has received support from various state agencies including the Department of Ecology. The use of the flood modeling data was crucial in determining a new map of the Ferndale “floodway”.

The City had completed previous projects whose purpose was to determine the floodway of the Nooksack River as it flows through the City. Naturally this floodway information was used to determine appropriate SMP boundaries, including the determination of the 100-year floodplain. The floodway determination was directly used to map any wetlands within the 100-year floodplain.

As noted on the 1983 SMP jurisdictional map and the 2006 SMP jurisdictional map, the expansion of the modeled floodway and expansion of the 100-year floodplain had the effect of dramatically expanding the new SMP jurisdictional areas. See the map on page 77 for a visual presentation of the different SMP jurisdictional areas.

Given the dynamics of the Nooksack River and its important ecological function, the City, in conjunction with the Whatcom County Flood Division and the Department of Ecology attempted to determine probable future development (and needed fill) at the fringe of the newly mapped floodway. Various versions of potential fill scenarios were

inputted into the flood model until the maximum probable fill was identified that had the effect of “no net rise” in the Nooksack River (given the effects of a 100-year flood event).

Following this review of various fill/flood scenarios, the City and DOE determined appropriate SMP boundaries along the Nooksack River and its floodway. By using this approach, it was believed that appropriate SMP/DOE involvement will occur in those areas where excessive fill might negatively effect the ecological flood function of the floodway. Conversely, it was also believed that SMP/DOE involvement will appropriately be precluded on those parcels whose probable fill patterns will not adversely effect the ecological function of the river and its floodway.

### **LIST OF INVENTORY SOURCES USED**

The following inventory sources were used in the preparation of Ferndale’s SMP. In addition, there are included inventory sources that were used as reference material in the compilation of the Plan.

Ferndale Floodway Analysis – prepared by Scott Wenger 2000 – delineation of Nooksack River floodway with city limits

Ten-Mile Creek Floodway Analysis – prepared by ATSI Inc. 2004 – delineation of floodway using soils analysis and on-site wet season inundation

Nooksack River Flood Modeling – prepared by Northwest Hydraulic Consultants 2001 – flood modeling for Nooksack River in Ferndale jurisdiction – west of Interstate 5 and north of Main Street

NRCS soil maps for Ferndale Washington

Wetland and Stream Mapping and Analysis – prepared by ATSI Inc. 2004

Ordinary High Water Analysis – Nooksack River – prepared by ATSI 2004

Nooksack River Flood Modeling – prepared by Whatcom County Surface Water Division 2005 – analysis of “no net rise” and cumulative fill scenarios using projected 100-year flood elevations

FEMA Base Flood Elevation Data

Ferndale Topographic Elevations – derived from April 2002 aerial photographic mapping

The following additional references sources were also used to update Ferndale’s Shoreline Master Program:

Ferndale SMP Additional Information – June 2009

Azous, A.L. and R.R. Horner, eds. 2001. *Wetlands and Urbanization: Implications for the Future*. Boca Raton, FL: CRC Press (Lewis Publishers).

Cooke, S.S. May 1996. Wetland and Buffer Functions Semi-Quantitative Assessment Methodology. Cook Scientific Services. Seattle, WA.

Cooke, S.S., Editor. 1997. *A Field Guide to the Common Wetland Plants of Western Washington and Northwestern Oregon*. Seattle Audubon Society, Washington Native Plant Society. Seattle, WA.

Cowardin, L.M. V. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. Office of Biological Services, Fish and Wildlife Service, U. S. Dept. of the Interior. FWS/OBS-79/31.

Cronk, J.K. and M.S. Fennessy. 2001. *Wetland Plants: Biology and Ecology*. Boca Raton, FL: CRC Press (Lewis Publishers).

Department of Natural Resources. 1995. *Washington Forest Practices*. Department of Natural Resources, Forest Practices Division: Olympia, WA.

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*, Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss.

Federal Register. 15 January 2002. Part II. Final Notice of Issuance of Nationwide Permits; Notice.



Ferndale, City of. 2004. *City of Ferndale Critical Areas Ordinance, Chapter 16.08*. Ferndale, WA.

Franklin, J.F., and C.T. Dyrness 1973. *Natural Vegetation of Oregon and Washington*. Oregon State University Press. Corvallis, Oregon.

Goldin, A. 1992. *Soil Survey of Whatcom County Area, Washington*. U.S.D.A. Soil Conservation Service, Washington State Department of Natural Resources, and Washington State University, Agriculture Research Center.

Haeussler, S., D. Coates, and J. Mather. 1990. *Autecology of Common Plants in British Columbia: A Literature Review*. FRDA Report 158. B.C. Ministry of Forestry and Canada - B.V. Forest Resource Development Agreement; Victoria, B.C.

Hickman, J.C, ed., 1993, *The Jepson Manual, Higher Plants of California*, University of California Press, Berkeley, CA.

Hitchcock, C.L. and A. Cronquist. 1973. *Flora of the Pacific Northwest*. University of Washington Press. Seattle, Washington.

Holling, C.S. (ed.). 1978. *Adaptive Environmental Assessment and Management*. John Wiley, New York.

Hruby, T., T.Granger, K. Brunner, S. Cooke, K. Dublanica, R. Gersib, L. Reinelt, K. Richter, D. Sheldon, E. Teachout, A. Wald, and F. Weinmann. July 1999. *Methods for Assessing Wetland Functions Volume 1*:

Keddy, P. A. 2000. *Wetland Ecology: Principles and Conservation*. New York: Cambridge University Press.

Kollmorgen Corporation. 1998. *Munsell soil color charts*, Baltimore, MD.

Leonard W.P., H.A. Brown, L.L.C. Jones, K.R. McAllister, and R.M. Storm. 1993. *Amphibians of Washington and Oregon*. Seattle Audubon Society. Seattle, WA. 168 pp.

Mitsch, W.J. and J.G. Gosselink. 2000. *Wetlands*, 3<sup>rd</sup> ed. John Wiley & Sons, New York. 920 pp.

National Wetland Inventory, 1987. U.S. Department of the Interior: Fish and Wildlife Service.

Peterson, R.T. 1990. *A Field Guide to Western Birds*. Peterson Field Guides. Houghton Mifflin Co. Boston, Massachusetts.

Reed, P.B., Jr. 1988. *National List of Plant Species that occur in Wetlands: 1988 Northwest*. Biological Report 88 (26.9), U.S. Fish and Wildlife Service, St. Petersburg, Florida.

Richardson, J.L. and M.J. Vepraskas (Eds.). 2001. *Wetland Soils: Genesis, Hydrology, Landscapes, and Classification*. Lewis Publishers, Boca Raton, Florida.

Stebbins, R.C. 1985. *A Field Guide to Western Reptiles and Amphibians*, 2nd edition. Houghton Mifflin Co. Boston, Massachusetts.

Tiner, R.W. 1999. *Wetland Indicators, A Guide to Wetland Identification, Delineation, Classification, and Mapping*. Lewis Publishers, Boca Raton, Florida.

United States Department of the Interior, Fish and Wildlife Service. 1977. □National Wetlands Inventory Maps, □ Scale 1:24,000. Office of Biological Services.

Washington Department of Ecology. 1993. *Washington State Wetlands Rating System for Western Washington*. Publication #93-74.

Washington State Department of Ecology, *Washington State Wetlands Identification and Delineation Manual*, March, 1997; Pub. No. 96-94.

### **LIST OF MAP SOURCES USED**

The following map sources were used in the preparation of Ferndale's SMP. In addition, there are included map sources that were used as reference material in the compilation of the Plan.

City of Ferndale Comprehensive Plan Map – land use designations – 1998

City of Ferndale Zoning Map – land use designations – 2005

City of Ferndale Shoreline Master Plan – shoreline designations - 1995

City of Ferndale Shoreline Master Plan – shoreline designations – 2005

Ferndale Aerial Photo Maps – shoreline areas #1 thru #16 – 2005

Whatcom County Surface Water Division – flood modeling maps – 1005

FEMA Flood Maps – FIRM

City of Ferndale Critical Areas Ordinance Maps – critical area summary delineation – 1997

City of Ferndale Critical Areas Ordinance Maps – critical area summary delineation – 2004

City of Ferndale Aerial Photography Series – 2002 – mapping for topography and land use

Whatcom County Soils Survey – 1988

Whatcom County Critical Areas Map – fringe areas analysis – 1994

Whatcom County Critical Areas GIS Mapping – fringe area analysis – 2002

Washington State Priorities Species and Habitat Maps – fish habitat – 2003

Whatcom County Aquifer Well-Head Protection Maps – 1997

Whatcom County Aquifer Recharge Maps – 2000

## Shoreline Characterization, Inventory and Use Analysis – Ecosystem Wide

As noted in previous sections, the City used a wide array of inventory material, maps, and ecological function analysis reports to compile and prepare the Shoreline Master Program. Please refer to the “list of inventory sources used” and the “list of map sources used” for more information.

### Shoreline Inventory Overview

The Shoreline jurisdiction within Ferndale can be broken into three (3) distinct categories; 1) the Nooksack River, 2) wetlands within the 100-year floodplain, and 3) four creeks (Whiskey, 10-Mile, Schell, and Silver). Refer to the map on page 76 for the location of these features.

### Shoreline Inventory Characteristics & Function Overview

Given the three classifications of the City’s shoreline jurisdiction from above, the following general characteristics exist:



#### Nooksack River

Contained and armored shoreline within limited riparian habitat. Best riparian habitat exists on the west side of the river from the Vanderyacht Park north to the Interstate 5 Bridge. River area on east side (golf course side) characterized by a narrow strip of riparian habitat (moderate habitat). Lowest quality habitat located from the railroad bridge south to the southern city limits. The primary function of the River is fish passage.

*Nooksack River View South from Main Street*

### 100-Year Floodplain Wetlands

Limited function. These areas have been extensively farmed and graded with drainage ditches and culverts installed. Little or no direct connection to the Nooksack River. Following the guidance in WAC 173-22-030(1) and 173-22-040(3c) these wetlands may not be within Shoreline jurisdiction. The primary function of these wetlands is for migratory waterfowl habitat. The exception is two large wetland complexes mapped as Area 13 and Area 15. Area 13 includes Schell Creek and is a major drainage for the hillsides surrounding Ferndale. Area 15 are the wetlands associated with Tennant Lake. Even though these wetlands have been separated from Tennant Lake by both the

Burlington Northern Railroad line and a city street, they still preserve many of their high quality wetland features.

### **Streams (Whiskey, 10-Mile, Schell, and Silver)**

Whiskey Creek – degraded salmonid habitat (lower reaches), channalized and culverted with Reed Canary Grass. Limited spawning and juvenile habitat – limited by access culvert under the Interstate 5 bridge.

10-Mile Creek – Salmonid habitat, extensive Reed Canary Grass, spawning areas north of city, remnants of a man-made lake. Modest function as water quality (Reed Canary Grass). Primary function as salmon habitat (juvenile rearing and adult passage).

Schell Creek – ditched and channalized, little or no spawning habitat, is connected to Red River, good site for enhancement. Could function as juvenile salmon habitat.

Silver Creek – very much like Whiskey Creek, small stretch in city, creek in ravine. Primary function is for adult salmon passage.

### **Shoreline Characterization - Overview**

To understand the characterization of the shoreline area within the City of Ferndale, reference to the maps included in this appendix will prove useful. As can be seen, the Nooksack River, as it passes through the City is severely channalized with rip-rap. Due to the existence of the Interstate 5 bridge to the north and the Burlington Northern Railroad Bridge and Main Street Bridge to the south, the channel of the Nooksack is well defined, armored, and not permitted to migrate between the “book-ends”.



*10-Mile Creek*

Due to the urban-level of development within Ferndale along the river, there is also low ecological functionality. From a fish habitat standpoint, there are no redds, no off river channels, and little other areas that would provide refuge for salmon or other species. In essence, the river serves as a fish passage corridor. This is the characterization of the river as it passes through the City and from an ecological standpoint, it is the City contention that these limited functions are appropriate for an urban setting.

Given the small amount of river that is included in our jurisdiction, the physical constraints posed by the I-5 bridge (there is no opportunity for channel migration to the north of the bridge – the river must pass under the bridge in its current configuration) and its urban setting, the characterization of the river as it passes through Ferndale is drastically different than the settings both upstream and down.



As will be noted in the restoration section, there exists little quality restoration opportunities within Ferndale. The areas best suited for restoration are south of the City (as the river nears the bay) and upstream of the City (where spawning and rearing habitat exists).

Another factor that both limits the ecological function of the river and defines its characteristics within Ferndale is the existence of rip-rap dikes on both sides of the river. From the point that the river passes under the I-5 bridge to the point that it exists the city to the south, both sides of the river are confined by dikes.

The Nooksack River bisects the City of Ferndale, a shoreline of statewide significance (Figures 1 and 2). Interstate-5, the Main Street Bridge, and the railroad bridge have historically altered and affected the ecological condition of the river by constricting flow, altering flood patterns, restricting the channel migration zone, and functionally isolating faunal habitats to the north and south of this area.

Land use outside of the City of Ferndale within the 100-year floodplain, along the river, is primarily agricultural. The shoreline jurisdiction area within the city limits is a combination of undeveloped, recreational, commercial, and residential land. Land within the floodway is mostly undeveloped agricultural land, city parks, or golf course. Land along the major arterial, Main Street, and at the intersection of Interstate-5 and Main Street is developed with commercial businesses.

The Nooksack River and immediate shoreline provide habitat for listed species such as bald eagles (*Haliaeetus leucocephalus*) that use this portion of the shoreline for feeding and resting (perch) habitat. Listed fish such as the Puget Sound Chinook (*Oncorhynchus tshawytscha*) and bull trout (*Salvelinus confluentus*) and proposed listed species such as Coho (*O. kisutch*) are present in the river. The river is a corridor for fish, waterfowl, passerine birds, and small and large mammals. Swans (*Cygnus spp.*) have been observed in the surrounding agricultural fields.



The Nooksack River is mostly contained either within man-made dikes or a well defined channel with steep banks that restrict regular seasonal flooding. Large woody debris is sparse, the riparian vegetation is narrow, and sand bars are exposed during low summer flow.

The shoreline area with moderate function and value (floodway) have been designated as conservancy or are zoned as floodway and will not be developed without corresponding restoration and/or enhancement. The areas that are zoned floodway and have a land use designation of conservancy will be used as mitigation sites.

The conditions of the City of Ferndale within shoreline jurisdiction are such that few areas remain that will be developed. Those areas that will be developed have city services, are adjacent to roads, or have the lowest functions and values regarding the

shoreline environment. As discussed, these areas are appropriate for development with the elimination of these low quality wetlands and appropriate off-site mitigation.

The goals of the City of Ferndale are to protect the existing functions of the environment of the shoreline, to increase habitat functions within areas of the shoreline that have the greatest habitat value, protect those areas of high ecological value from development, develop those areas within shoreline jurisdiction that are currently served by public roads and city utilities, and focus development in areas with the lowest ecological value.

The shoreline land use designations for the shoreline areas have been updated and increased in scope and area. The new designations were selected by combining the following information:

1. Existing conditions (i.e., residential, commercial, parks, golf course, undeveloped).
2. Placement of fill to affect a no-net-rise of the river during a 100-year storm event.
3. A new map of the 100-year floodplain was produced that uses best available information and provides better protection to infrastructure and the environment.
4. Protection of the floodway.
5. Increased protection over the previous land use designations based on environmental concerns (flooding and habitat).
6. To provide suitable and appropriate development of homes, business, and utilities.

### **Shoreline Characterization - Shoreline and Adjacent Land Use Patterns**

Ferndale, while on the Nooksack River, does not have any current or proposed uses that would be considered “water-dependent” or “water-orientated”. This is due to two factors. First, the river is armored as it passes through the City and secondly, with the Nooksack being a wild river and Ferndale being very far upstream from the bay, there have been no viable water-dependent or water-orientated uses that have been financially feasible. With Ferndale being a growing urban center, there exists opportunities for water-enjoyment uses related to restaurants and other public facilities. In addition, the Riverside Golf Course is situated on the eastern side of the Nooksack River as it passes through the City.

### **Shoreline Characterization - Transportation and Utility Facilities**

As noted previously, Ferndale is book-ended by the Interstate 5 bridge to the north and the railroad and city bridges to the south. In addition, the Public Utility District (PUD) has its primary water extraction point at the southern end of the Nooksack (south of the railroad and city bridge). The City's water treatment facility and wastewater treatment facility are also located at the southern portion of the city next to the PUD water facility. These two city facilities are not located on the river but rather are across the river frontage street, approximately 300 feet from the river's edge.



*Nooksack River – View North from Hastings Park*

It should be noted that both the Interstate 5 bridge and the Burlington Northern Railroad Bridge can be considered essential public infrastructure that serve both a Homeland Security function as well as vital economic transportation links for Washington State and the west coast of America.

With the existence of the freeway bridge, railroad bridge, city access bridge, PUD water plant, city water plant, and city wastewater plant, the

need for the armoring of the Nooksack as it passes through Ferndale becomes apparent. As noted, it is necessary for the Nooksack to flow through the City in a defined and stable built environment. The very survival of the bridges and public water and wastewater facilities depends on the stability of the Nooksack in this area. This combined with the limited ecological function of the Nooksack as it passes through Ferndale (as opposed to the function of the river both upstream and downstream), means that the characterization of the Shoreline environment within Ferndale is less dynamic than for other jurisdictions.

### **Shoreline Characterization - Critical Areas**

The City has identified and roughly mapped the City critical areas for use in our Critical Areas Ordinance (CAO). As detailed in the CAO, there exists wetlands scattered throughout the City. There are little fish and wildlife conservation areas within the City due to its urban nature and limitations due to the characterization of the river environment in Ferndale (as discussed above) and there are limited geologically hazardous areas.

In the arena of frequently flooded areas, there exists a defined floodway of the Nooksack River as it passes through the City. This area includes the Riverview Golf



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Course located on the eastern side of the Nooksack. This golf course area has been designated as conservancy due to the flood attenuation purposes that this area represents. With this said, it should be noted that even this floodway area of the golf course serves a limited function. With the man-made flow restriction embodied in the Interstate 5 bridge, there is a limited amount of water that can flow under the bridge during flood events. This not only limits the amount of floodwater that can flow over the golf course during flood events but it also serves to drive the flood characteristics for the land north of Ferndale.

This land area surrounding the Nooksack River north of Ferndale is outside of our SMP jurisdiction but with much of it being undiked, there exists much opportunity for the river to dynamically alter its course and utilize the land on either side of the river for floodplain use. As you might expect, the functionality of the Nooksack north of the City is dramatically different than its functionality as it flows through the City.

### **Shoreline Characterization - Degraded Areas with Potential for Ecological Restoration**

The potential for restoration for sites and areas with degraded ecological function will be discussed in greater depth in the Restoration Section of the SMP and your attention is directed there. With this said, there are limited opportunities for restoration in the City due to the limiting factors discussed above.

The built environment in Ferndale is the result of over 200 years of human activity. There is literally nothing within Ferndale's SMP jurisdictional areas that is not the result of human activity. The entire area has been diked, plowed, farmed, developed, and logged. In fact much of the SMP jurisdictional areas (Barrett Creek for example) are the result of damming and diking. The existence of Tennant Lake (outside of our SMP jurisdiction to the south) is a direct result of the construction of Interstate 5 and the Burlington Northern Railroad.

The reach of the Nooksack River between the bridges represents a functionally isolated area of the river that has substantial impediments to restoration due to the critical infrastructure facilities located in this area.

The area of the golf course could serve as a restoration site with the potential for the construction of off-river channels. As will be discussed in the Restoration Section however, this area is designated as Conservancy, is private property, and may only have hopes of restoration if such private land owner restoration is tied to a limited development proposal.

The area where Barrett Creek enters the Nooksack could be a candidate for restoration but this area is outside of our SMP jurisdiction.

### **Shoreline Characterization - Areas of Special Interest**

Within Ferndale there are no developing or redeveloping harbors or waterfronts, no previously identified toxic or hazardous material clean-up sites, no dredged material disposal sites, and no eroding shoreline sites. In the area of priority habitats, there are limited opportunities along the Nooksack River due to the required armoring and the majority of Tennant Lake (to the south of the City) is outside of our SMP jurisdictional boundaries.

There does exist limited opportunities to improve the habitat within Whiskey Creek and this area has been identified in our CAO as an area of concern. In addition, the area of Schell Ditch (Area 13) can and does serve water quality and flood attenuation purposes.

The last area of special interest is the wetland complex near Tennant Lake in Area 15. These high quality wetlands are currently zoned General Commercial and Manufacturing. Due to the existence of these wetlands, specific areas within Area 15 have been designated as “General Commercial Conversancy” and “Manufacturing Conversancy”.

### **Shoreline Characterization - Shoreline Public Access**

Due to the limited public uses on the Nooksack, its wild and dynamic characteristics, and the armored shoreline of the river as it passes through Ferndale, there are limited opportunities for shoreline public access. There does exist a public boat launch on the eastern shore of the Nooksack just to the south of the City (boat launch is outside of our jurisdiction).



*State Boat Launch - Ferndale*

### **Shoreline Characterization - Channel Migration Zones and Flood Plains**

Due to many factors previously highlighted, the Nooksack River’s channel will not be allowed to migrate as it passes through the city. In addition the floodway within the city is also limited and cannot be expanded. With this said however, there exists much opportunity for both channel migration and flood plain utilization to the north of the city and in a limited sense, to the south of the City.

### **Shoreline Characterization - Archaeological Resources**

With Ferndale located on the shoreline of the Nooksack River, the existence of Native American archaeological sites is not unusual. This is tempered with the extensive human diking and armoring of the Nooksack as it passes through the City. There is one known archaeological site to the north of the Interstate 5 Bridge. Prior development activity unearthed this site and the property owner has worked with State and Tribal agencies regarding the site.

## Shoreline Analysis of Ecological Function – Ecosystem Wide

### Identified Shoreline Ecosystem-Wide Process & Functions

As discussed, the ecosystem processes at work within Ferndale are uniquely limited in scope and applicability. With the Nooksack River bisecting the City, it could be assumed that a major ecological function would be flood attenuation and fish habitat. In actuality neither function is at work within the Ferndale SMP jurisdiction.

From a flood attenuation standpoint, there is little flood storage capability within the city due to the river being “book-ended” by the Interstate 5 bridge to the north and the Railroad and City access bridges to the south. This physical constraint on the river means that there is a) little or no ability to functionally increase the flow of the river under the I-5 Bridge and b) the “floodway” flow between the bridges is physically constrained by the size of the golf course and the flow limitation under the I-5 Bridge.

The City can do nothing to increase the flow capability under the I-5 Bridge which means that the flood plain to the north of the city (outside of our SMP jurisdiction) is crucial for flood attenuation.

The same can be said for fish habitat. Given Ferndale’s physical location on the river, the aquatic system within Ferndale’s SMP jurisdiction offers neither spawning nor rearing habitat. The Nooksack River, as it flows through Ferndale, has no off-river channels, though the possibility exist for the creation of such habitat (see the Restoration Section for this discussion). The greatest opportunity for increased fish habitat lies in the City partnering with other jurisdictions to the north and south of the City.



*Tennant Lake*

The other aquatic ecosystem areas within Ferndale include the 100-year floodplain wetlands associated with Tennant Lake (Tennant Lake is actually outside of Ferndale), the wetlands associated with Barrett Creek (Barrett “lake”/creek is outside of our SMP jurisdiction), certain portions of Whiskey Creek (where Whiskey Creek joins the Nooksack is outside of our SMP area), and certain portions of Silver Creek (southern portion of Silver Creek – where it enters the Nooksack – outside of our SMP).

For the remainder of the critical areas within our SMP jurisdiction (wetlands generally associated with the 100-year floodplain), their habitat functions can best be protected through application of the avoidance/buffer requirements contained in the City’s Critical Areas Ordinance.

### Shoreline Ecosystem – General Measures Necessary to Protect/Restore Functions

As noted above, Ferndale's SMP jurisdiction includes areas that have been drastically altered by the effects of Human civilization. It is also the City's contention that restoration of the potential ecological functions of the Nooksack as it passes through Ferndale are very limited and may not be feasible. With the flow-restriction of the Interstate 5 bridge and the limited floodplain function for the golf course that fronts on the rivers as it passes through Ferndale, there is little that could be done to alter this arrangement. As has been shown by the flood modeling conducted for the revision to the SMP, there is adequate floodway area in Ferndale to accept the 100-year flood waters of the Nooksack.

Also, from a fish habitat standpoint, there is little that can be done on the Nooksack as it passes through Ferndale. The identified measures that can be taken on the River to improve its ecological functionality are discussed in the Restoration Section of the SMP.

The identified scientific measures that can be taken to protect an/or improve the ecological function of the other areas of SMP jurisdiction within Ferndale (areas around 10-Mile Creek, Whiskey Creek, and Silver Creek) are embodied in the requirements of the City's Critical Areas Ordinance.

### **Shoreline Ecosystem – Specific Measures Necessary to Protect/Restore Functions**

Regarding the River, streams, and associated floodplain within Ferndale, the City has considered the following:

#### Hydrologic

Regarding the transport of water and sediment across the natural range of flow variability, the City has relied on the BAS incorporated into the Whatcom County flood modeling completed for this update to our SMP. As discussed previously, the City used a "no net rise" approach to the determination of maximum fill scenarios that would not adversely affect the ability for flood water to flow through the City while not causing any upstream or downstream deterioration of flood attenuation ability.

In the very short stretch of the Nooksack that passes through Ferndale, the rivers bank is armored and therefore there are no pools or riffles, one small gravel bar and virtually no recruitment of woody debris.

#### Shoreline Vegetation

There is a moderate amount of native vegetation along the River as it passes through Ferndale. On one side of the river is the Riverfront Golf Course and on the other a city park (near the water) and residential housing (on higher banks above the river). For both sides of the river, there is a moderate amount of bank stabilization but little in the way of provision for large woody debris or other organic material. Please refer to the Restoration Section for more information regarding riverside vegetation capability.

#### Habitat for Native Species

As noted, the Nooksack – as it passes through Ferndale – offers little in the way of redds, resting, hiding, or food production capability. The ability to increase this ecosystem function is discussed in other sections of the SMP.

## **Shoreline Jurisdiction Boundary, Justification, and Description**

### **Overview and Justification**

Meetings between City staff, City consultants, the DOE, and Whatcom County were held during 2004 and 2005 to finalize the shoreline jurisdiction boundary. The boundary was determined by flood elevation and safety, and, protection of the shoreline ecological functions. We combined information from the following to determine the final Shoreline Jurisdictional Boundary.

1. The flood analysis that Mr. Scott Wenger completed for the city, regarding the floodway of the Nooksack River.
2. On-site determination of the floodway of Ten-Mile Creek based on soils and ATSI staff observations of wet season inundation.
3. Flood models of the Nooksack River prepared by Northwest Hydraulic Consultants Inc. for the DOE west of Interstate-5 and north of Main Street.
4. NRCS soil maps.
5. Wetlands and stream maps prepared by ATSI.
6. OHWM determined by ATSI and topographic data.
7. Modeling completed by Ms. Paula Cooper and Ms. Nicci Bourne, of the Whatcom County Surface Water Division, to analyze a no-net-rise (cumulative fill area) in flood elevation based on a projected 100-year flood elevation of the Nooksack River and the placement of fill within the 100-year floodplain.

The 100-year floodplain was determined using a combination of the FEMA base flood elevation data and the most recent topographic map based on elevations generated during the April 2002 aerial photographic mapping. A new map of the 100-year floodplain based on best available information was developed for use in the SMP.

Multiple meetings were held during 2004 between the DOE staff, Ferndale staff, Ms, Cooper and Ms. Bourne, and ATSI staff to produce a final shoreline jurisdictional boundary and overall shoreline jurisdiction. This shoreline jurisdiction area is a combination of factors that include:

1. Areas that are a minimum 200 feet landward from the floodway.



2. Areas that protect the riparian functions of the Nooksack River (a water of statewide significance) and Ten-Mile Creek (a stream with greater than 20 cfs mean annual flow).
3. Areas within the floodway of Ten-Mile Creek.
4. An area that will affect a no-net-rise from cumulative fill and within the 100-year floodplain of the Nooksack River.

### **Shoreline jurisdiction boundary description**

For purposes of the SMP, the City has determined the jurisdictional boundaries using the following geographical descriptions. Please refer to the map on page 76 to further understand these boundary descriptions.

1. Beginning on the right bank of river at the southern city limits to Main Street, the Shoreline Jurisdiction (SJ) is 200 feet landward from the floodway of the Nooksack River.
2. The jurisdictional line begins at toe of slope of the railroad tracks to the southern edge of fill from the feed mill east of Second Street because of no-net-rise in the 100-year flood elevation of the Nooksack River.
3. The line continues along the 100-year flood elevation line to between Willard Street and Somerset Street.
4. The line continues north at 200 feet landward from the floodway of the Nooksack River.
5. The line continues at 200 feet landward from the floodway of the Nooksack River until the north city limits.
6. Beginning on the left bank of the river at the southern city limits to Main Street the line is greater than 200 feet from the floodway because of no-net-rise in the 100-year flood elevation of the Nooksack River.
7. The area from Main Street to the northeast corner of Samuels Furniture is based on 200 feet from the floodway of the Nooksack River.
8. The jurisdictional area from the northeast corner of Samuels Furniture to Interstate-5 is based on project fill along Main Street and no-net-rise in the 100-year flood elevation of the Nooksack River.

9. The line continues area along the west edge of Interstate-5 is at the toe of the slope of Interstate-5 based on no-net-rise in the 100-year flood elevation of the Nooksack River.
10. The jurisdictional area adjacent to the bridge abutments of Interstate-5 is based on 200 feet from the floodway of the Nooksack River.
11. The line continues on the eastern side of Interstate-5 to Barrett Road is 200 feet from the floodway of the Nooksack River.
12. The jurisdictional area from Barrett Road east to the eastern city limits is 200 feet landward of the edge of the floodway of Ten-Mile Creek or as in the eastern portion of this reach where the line abuts Main Street; the line is beyond the 100-year floodplain to protect the riparian area of Ten-Mile Creek north of Main Street.
13. In addition, all wetlands within the 100-year floodplain are included.

### **Changes to Shoreline Jurisdictional Boundaries and Designations**

This revision to the City of Ferndale's Shoreline Master Program has included both alterations to the SMP jurisdictional boundaries as well as changes to the SMP land use designations. For the most part, this revision increases the SMP jurisdictional areas and also increases the SMP areas designated as "conservancy". The city believes that these changes will enhance the opportunities to preserve and enhance the ecological functions of land within the SMP area.

### **Changes to SMP Jurisdictional Boundaries**

Referring to the "old" SMP map on page 75, you can see that the jurisdictional boundaries included basically two areas. First, the SMP boundary for the Nooksack River only included a 200 foot area adjacent to the river along its bank. Secondly, the old SMP boundary included a small strip of land on the southern edge of 10-mile Creek.

The "new" SMP jurisdictional map on page 76 reflects that these two areas have been expanded. For the Nooksack River, the SMP boundary was expanded to include all of the land within the floodplain that was identified through the County flood modeling as areas that would experience a net increase in flooding given various fill scenarios.

Regarding the 10-Mile Creek area, the new map on pages 76 & 81 also reflects an increased SMP area that corresponds to the 200 foot jurisdictional SMP boundary. Increased and more refined mapping has allowed the City to more closely define shoreline jurisdiction boundaries as reflected on these maps. The last change in SMP jurisdictional boundaries that are reflected in Ferndale's revised SMP are the

wetlands within the 100-year floodplain. As reflected on the page on page 76, these wetland areas have been identified and mapped.

### **Changes to Shoreline Designations**

The greatest change in designations is the expansion of the “conservancy” designation for the floodway areas associated with the Riverview Golf Course. With the expansion of the SMP boundary to encompass the golf course, this area has also been designated conservancy. In addition, the conservancy designation has also been expanded on the western side of the Nooksack as it passes through Ferndale. As was the case for the golf course property, this expansion to the conservancy designation was in response to the remapping (and expansion) of the floodway area within Ferndale.



*Wetland “Water Hazard” on Riverfront Golf Course*

### **Shoreline jurisdiction descriptions by area**

For SMP purposes, the City has divided the jurisdictional area of the City into 16 distinct areas. These areas were determined through a combination of similar ecological function and geographical similarities/differences. A description of each area follows and includes a map showing the jurisdictional boundaries, the location of the area in relation to the city itself and the existing comprehensive plan land use designations.

### **Jurisdictional Determination Process**

City consultants walked and reviewed areas that are within and adjacent to the 100-year floodplain of the Nooksack River that are within the City of Ferndale and immediate surrounding area. This enabled the consultant to work with City staff and the DOE to document the existing ecological conditions, to understand existing and planned development conditions, and determine potential rehabilitation areas that fall within shoreline jurisdiction. This report has divided the shoreline jurisdiction into 16 discrete areas for discussion purposes. These areas are:

- Area 1. Wetlands within 100-year floodplain south of Main Street, east of Interstate-5. See map on page 79.

- Area 2. Residential area north of Main Street adjacent to Ten-Mile Creek on the eastern edge of the city limits. See map on page 80.
- Area 3. Commercial area north of Main Street adjacent to Ten-Mile Creek east of Barrett Road. See map on page 81.
- Area 4. Ferndale Town Center within 200 feet of floodway. See map on page 82.
- Area 5. Whiskey Creek wetlands within 100-year floodplain. See map on page 83.
- Area 6. Agricultural land in the northeast corner of Interstate-5 and the Nooksack River. See map on page 84.
- Area 7. Residential area in the northwest corner of Interstate-5 and the Nooksack River. See map on page 85.
- Area 8. Riverside golf course. See map on page 86.
- Area 9. Vander Yacht Park and vicinity south to Main Street. See map on page 87.
- Area 10. Commercial area in northeast corner of Main Street and the Nooksack River. See map on page 88.
- Area 11. Residential area in the southwest corner of Main Street and the Nooksack River, to Tosco Park. See map on page 89.
- Area 12. Tosco Park area. See map on page 90.
- Area 13. Wetlands in the 100-year floodplain south and north of City Hall. See map on page 91.
- Area 14. Southeast corner of Main Street and the Nooksack River. See map on page 92.
- Area 15. Wetlands in the 100-year floodplain near Tennant Lake. See map on page 93.
- Area 16. Silver Creek. See map on page 94.

## **Potential Conflicts Between SMP and Comp Plan Land Use Designations**

As noted in the SMP, most development within the shoreline areas will be subject to the conditions contained in the city's Critical Areas Ordinance (as well as others). While we believe that any conflicts in designated land use will be reconciled through this process, there exist certain areas that have the potential for land use conflicts. These areas are specifically discussed below.

**POTENTIAL CONFLICT #1 - Area 1**  
**Wetlands within 100-year floodplain south of Main Street, east of Interstate 5**

Area 1 includes the wetlands within the 100-year floodplain of the Nooksack River south of Main Street, east of Interstate-5 (Figures 2 and 4). This area is mostly agricultural land (PCC) but contains some commercial, residential, and forested areas.



Comprehensive Plan Designation  
– Area 1 - “General Commercial”

Shoreline Master Program Designation – Area 1 - The SMP boundary is at the northern edge of this area of the City. As such, the majority of the land within this area is outside of Shoreline

Jurisdiction. There are however, wetlands within the 100-year floodplain within this area. These wetlands however fail the “proximity” and “influence” tests contained in WAC 172-22-030(1) and 173-22-040(3c) and therefore should be precluded from shoreline jurisdiction.

Comp Plan & SMP Conflicts – Area 1 – The areas of conflict include those wetlands within the 100-year floodplain contained in Area 1 that are designated “Commercial” per the City’s Comprehensive Plan.

This potential conflict is mitigated by the preliminary mapping of critical areas within this area (wetlands within 100-year floodplain). As specific projects are proposed in this area, on-site wetland delineation will be required per city development regulations. These wetland areas are roughly mapped on the City’s Critical Areas Ordinance and once confirmed through delineation, development will only be allowed following the adoption of appropriate mitigation measures. This can include avoidance, on-site mitigation and off-site mitigation. Sufficient and appropriate buffers will be required per our CAO and any proposed development will be accomplished through a cooperative process between the City, developer and the Department of Ecology.

It is the city's position however that these wetlands are isolated, have no direct connection to the river, are of low quality and should be filled and developed with appropriate off-site mitigation.

**POTENTIAL CONFLICT #2 - Area 3**

**Commercial area north of Main Street adjacent to Ten-Mile Creek east of Barrett Road.**



Area 3 includes the commercial area north of Main Street adjacent to Ten-Mile Creek east of Barrett Road. This area is within 200 feet of the floodway of Ten-Mile Creek and a portion of Ten-Mile Creek. The southern portion of this area consists of a hotel, bank, drive-up restaurant, and gas station/truck stop. The northern portion of this area is an agricultural field.

Comprehensive Plan Designation – Area 3 - “General Commercial

Shoreline Master Program Designation – Area 3 – The majority of Area 3 is within Shoreline Jurisdiction with a portion of the area designated “Conservancy” and a portion designated “Urban”

Comp Plan & SMP Conflicts – Area 3 – The areas of conflict include those areas designed “Commercial” per the Comp Plan but “Conservancy” per the SMP. In addition there may be a conflict between appropriate development in the areas designated “urban” in the Comp plan but adjacent to the areas designated “Conservancy” per the SMP.

Specific development proposals for this area will include on-site delineation and appropriate setback, buffers and/or mitigation. Overall, the City believes that appropriate development can occur in this area.

**POTENTIAL CONFLICT #3 - Area 5**

**Whiskey Creek wetlands within 100-year floodplain.**



Area 5 includes the Whiskey Creek wetlands and Whiskey Creek within the 100-year floodplain of the Nooksack River. The wetlands are all Category III and IV farmed palustrine emergent wetlands that are dominated by non-native herbaceous species such as reed canary grass. Whiskey Creek provides salmonid, waterfowl, and large and small mammal habitat. This area is currently not developed.

Comprehensive Plan Designation – Area 5 – “Residential” –

formation – June 2009

Shoreline Master Program Designation – Area 5 – The SMP designates that there are wetlands within the 100-year floodplain within Area 5. These areas are also mapped on the City’s Critical Areas Ordinance and roughly include Whiskey Creek and associated wetlands.

Comp Plan & SMP Conflicts – The only areas of potential conflict exist between the wetland mapping and designation per the SMP and those designations included in the City’s Critical Areas Ordinance. While the entire area is zoned “residential”, this zoning designation will be subservient to the requirements of the SMP and the CAO. When specific land use proposals are brought to the City, critical areas mapped on the CAO and confirmed via on-site designation will be precluded from development. In addition, buffers will be required per the CAO.

Given the inherent limitations of mapping and zoning specifics, the City believes that it is best served by project-driven delineation to determine “no build” areas and appropriate buffers to protect identified critical areas within Area 5.

**POTENTIAL CONFLICT #4 - Area 13**  
**Wetlands in the 100-year floodplain south and north of City Hall.**



Area 13 includes the wetlands in the 100-year floodplain near City Hall. These wetlands are a combination for palustrine forested and palustrine emergent.

The forested and emergent wetlands south of City Hall are dominated by cottonwood and red alder trees with an understory of hard hack (*Spiraea douglasii*) and salmonberry (*Rubus spectabilis*) and predominantly reed canarygrass and cattails (*Typha latifolia*) respectively. Portions of these wetlands are ditched. These wetlands are Category III wetlands because of their dominance of the reed canarygrass and lack of habitat features.

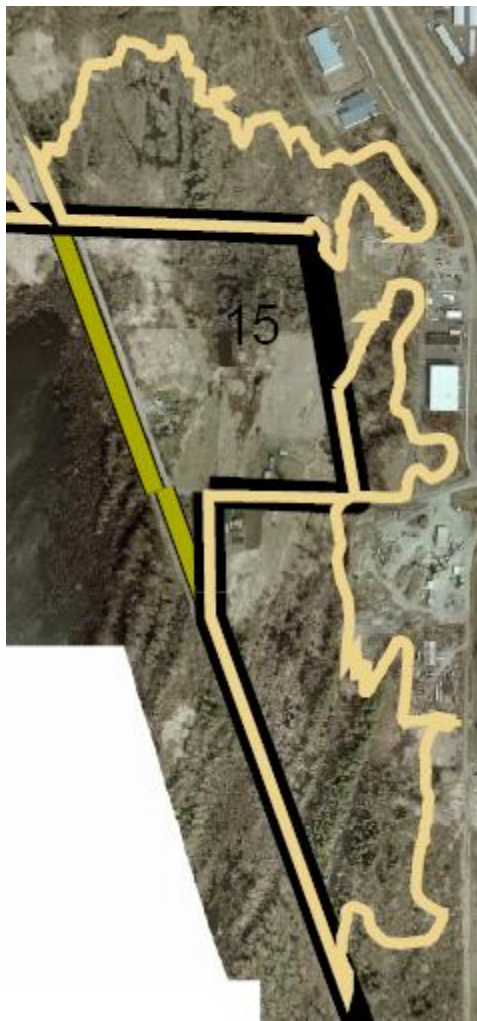
The wetlands north of City Hall are all small, functionally isolated, dominated by reed canarygrass, provide little habitat functions, and are Category IV Wetlands. Per the “associated” test (WAC 173-22-030(1) and 173-22-040(3)), these wetlands may be determined to not be within Shoreline jurisdiction.

Comprehensive Plan Designation - Area 13 - “General Commercial

Shoreline Master Program Designation – Area 13 – This area includes wetlands that are within the 100-year floodplain.

Comp Plan & SMP Conflicts – Area 13 – The areas of conflict include those wetlands within the 100-year floodplain contained in Area 13 that are designated “Commercial” per the City’s Comprehensive Plan.

This potential conflict is mitigated by the preliminary mapping of critical areas within this area (wetlands within 100-year floodplain). As specific projects are proposed in this area, on-site wetland delineation will be required per city development regulations. These wetland areas are roughly mapped on the City’s Critical Areas Ordinance and once confirmed through delineation, development will only be allowed following the adoption of appropriate mitigation measures. This can include avoidance, on-site mitigation and off-site mitigation. Sufficient and appropriate buffers will be required per our CAO and any proposed development will be accomplished through a cooperative process between the City, developer and the Department of Ecology.



**POTENTIAL CONFLICT #5 - Area 15**  
**Wetlands in the 100-year floodplain near Tennant Lake.**

Area 15 includes the wetlands in the 100-year floodplain of the Nooksack River north and east of Tennant Lake. These wetlands are a combination of Category II and Category III palustrine forested wetlands. Most of this area is undeveloped and undisturbed. The area is bisected by the railroad tracks and a narrow paved road. Few homes occur in the area with commercial buildings and businesses on the eastern edge along LaBounty Road. Commercial structures include a concrete batch plant and light industry adjacent to LaBounty Road.

Comprehensive Plan Designation – Area 15 – “Industrial” and “General Commercial”

Shoreline Master Program Designation – Area 15 – The SMP identifies this area as having wetlands



within the 100-year floodplain. While the majority of this mapped wetland complex falls outside of the City's Urban Growth Area, there are areas of the identified wetland areas that extend into the UGA.

Comp Plan & SMP Conflicts – Area 15 – The areas of conflict include those high quality wetlands within the 100-year floodplain that extend into the Industrially designated area of the City within Area 15.

This potential conflict is mitigated by the preliminary mapping of critical areas within this area (wetlands within 100-year floodplain). Additionally, certain portions of this area have been assigned an additional “General Commercial Conversancy” and “Manufacturing Conversancy” designation for Shoreline Management purposes so as to additionally alert developers of the potential for limited development activity. As specific projects are proposed in this area, on-site wetland delineation will be required per city development regulations. These wetland areas are roughly mapped on the City's Critical Areas Ordinance and once confirmed through delineation, development will only be allowed following the adoption of appropriate mitigation measures. This can include avoidance, on-site mitigation and off-site mitigation. Sufficient and appropriate buffers will be required per our CAO and any proposed development will be accomplished through a cooperative process between the City, developer and the Department of Ecology.

**POTENTIAL CONFLICT #6 - Area 16**  
**Silver Creek.**



Area 16 includes the area of Silver Creek that is within the 100-year floodplain of the Nooksack River. Silver Creek provides habitat for Coho salmon and resident trout. The riparian area is narrow, approximately 100 to 150 feet in width, within and adjacent to the immediate channel and ravine. This area provides habitat for fish within the stream and habitat for a variety of large and small mammals, passerine birds, and raptors. Interstate-5 functionally isolates this western portion of the stream corridor with the eastern portion of the stream; however, fish passage is possible under Interstate-5.

Comprehensive Plan Designation – Area 16 – “Industrial

Shoreline Master Program Designation – Area 16 – The SMP identifies this area as having wetlands within the 100-year floodplain.

Comp Plan & SMP Conflicts – Area 16 – The areas of conflict include those wetlands within the 100-year floodplain that extend into the Industrially designated area of the City within Area 16.

This potential conflict is mitigated by the preliminary mapping of critical areas within this area (wetlands within 100-year floodplain). As specific projects are proposed in this area, on-site wetland delineation will be required per city development regulations. These wetland areas are roughly mapped on the City’s Critical Areas Ordinance and once confirmed through delineation, development will only be allowed following the adoption of appropriate mitigation measures. This can include avoidance, on-site mitigation and off-site mitigation. Sufficient and appropriate buffers will be required per our CAO and any proposed development will be accomplished through a cooperative process between the City, developer and the Department of Ecology.

### **ASSUMPTIONS MADE CONCERNING SCIENTIFIC INFORMATION**

The major assumption related to the Shoreline areas of Ferndale is that the majority of these areas are primarily influenced by groundwater (for the wetlands within the 100-year flood plain) and influenced by the Nooksack River and 10-Mile Creek (for those associated and connected shoreline areas). The City has conducted extensive study of the critical areas within the City and this information is detailed in the above section related to inventory sources used for the update. These studies are assumed to be sufficient to form the basis of the SMP work contained in this update.

The two broad areas determined to be within SMP jurisdiction (200 feet from a shoreline of state significance and wetlands within the 100-year flood plain) have, as their basis of designation various assumptions as to their ecological function and related scientific information. It is assumed that the areas abutting the Nooksack River within Ferndale’s SMP jurisdiction (basically the area along the river [and floodway] “book-ended” by the I-5 bridge to the north and the Main Street Bridge to the south) are appropriately designated as “conservancy”. The assumption is that to fully maximize the potential ecological functions, this should be a “no build” zone. The assumption is that by not allowing development within these areas and identifying appropriate restoration techniques, the identified ecological functions of these areas can be preserved and enhanced. Additionally, however, the City believes that development within the Conservancy Zone would be appropriate if such development tied to restoration and/or enhancement whose effect outweighs the detrimental effect of development. Please refer to the Restoration Plan of the SMP for more information.



For the wetlands within the 100-year floodplain. The assumption is that they are primarily influenced by groundwater and that by applying appropriate buffers and other mitigation techniques, that the ecological functions of these areas can be

preserved. Another underlying assumption is that these wetlands may not be the best areas for restoration. With this said, there may be specific wetlands within the 100-year floodplain that would benefit from restoration. This is discussed in more depth in the restoration section of the SMP.

*Tennant Lake, Railroad & Associated Wetlands*

Another key assumption is that the provisions of the City's Critical Areas Ordinance (CAO) will be sufficient to regulate areas within SMP jurisdiction. The City completed an update to their CAO in late 2004 and the BAS available at the time is substantially the same as that available for this SMP update.

The CAO represents an overlay to the other regulations established by the city and, in the event of any conflict between the CAO and other regulations, the more restrictive shall apply. The City is also making the same assumption related to the SMP, that is, the more restrictive regulations regarding development of parcels within SMP jurisdiction shall apply.

The CAO identifies buffers for critical areas and the assumption is that these buffers are sufficient to protect critical areas. Another critical assumption incorporated into the CAO and included in the SMP is that development surrounding wetlands, if developed in compliance with the provisions of the CAO, will be sufficient to not detrimentally effect wetlands.

As part of the CAO, the City has produced maps that define the locations of known or potential critical areas. These maps were based on best available scientific information and includes information gathered through field inventory work and information available from state and federal sources. The assumption is that these maps will be used as a source of generalized information and shall not be a substitute for site specific assessments. The actual type, extent, and boundary of critical areas (including wetlands but exempting frequently flooded areas) shall be determined by a qualified consultant on a site-specific basis according to the provisions then in effect.

The City is also relying on the provisions of the Floodplain Management Ordinance to regulate the areas considered to be frequently flooded per RCW 36.70A and WAC 365-190. This ordinance was based on BAS and is assumed to be sufficient for its intended purpose.

The last major assumption underpinning this revised SMP is the accuracy of the new flood modeling conducted by Whatcom County. While the use of this new tool undoubtedly served to expand SMP jurisdiction, this should not be used as a justification for the new models effectiveness. It is the belief of the City that the new flood model represents best available science and appropriately serves as the basis for SMP jurisdictional boundaries.

From a global perspective, the following assumptions also underlie the drafting of the SMP:

- new shoreline designations adequately include all areas appropriate to the SMP
- limited and appropriate development within the Conservancy Zone (between I-5 and Railroad Bridge) will maintain this area's ability to continue its ecological function
- With more area under Shoreline jurisdiction, appropriate development will occur in compliance with provisions of SMP
- Areas slated for "Conservancy" may be best suited for restoration
- Areas not designated as Conservancy will be appropriately designed to mitigate adverse environmental impacts
- Using the "no net rise" approach for SMP jurisdiction will best protect these critical areas while permitting appropriate development within the city.
- Areas mapped as wetlands within the 100-year floodplain are roughly mapped and will need detailed site-specific delineation tied to specific development proposals and may be determined to fail the "associated" test for inclusion in Shoreline jurisdiction.

#### **DATA GAPS IN SCIENTIFIC INFORMATION – CITY WIDE**

This section is intended to discuss the city-wide data gaps and their associated risk to SMP assumptions. For an area-specific discussion of these data gaps and any unique risk and data gaps, please refer to the data gap discussion for each of the 16 SMP areas designated by the City.

Given that the SMP jurisdictional areas are primarily influenced by 1) surface water flow and flooding related to the Nooksack River and 2) ground water flow related to the wetlands within the 100-year floodplain, there are two primary data gaps.

The first relates to the flood modeling conducted to determine the "no net rise" calculations used to determine the new SMP jurisdictional boundaries along the Nooksack River. River dynamics are particularly difficult to model and the wild river characteristics of the Nooksack make this modeling even more challenging. As detailed in the SMP, the City working in conjunction with the Department of Ferndale SMP Additional Information – June 2009



Ecology and the Whatcom County Flood Control Division, developed SMP

*Golf Course River Frontage on Nooksack*

jurisdictional boundaries following a likely set of development (and fill) scenarios. This work, while extremely valuable in determining the effects of fill and development in areas adjacent to the river, carries the risk of gaps in scientific knowledge that underpins the flood modeling mathematics. Therefore, as it relates to SMP jurisdictional boundaries and mitigation techniques identified in the SMP, the potential gap in scientific knowledge related to flood modeling carries a risk to the appropriateness of the SMP provisions.

There is a risk that the “conservancy” designation for the expanded floodway areas along the Nooksack River are inadequate to permit sufficient unrestricted floodway flow. There is also a risk that the modeling has identified an area of floodway/conservancy areas that are too expansive and therefore restrict appropriate development from occurring.

The other gap in BAS associated with the flood modeling is related to the expanded 100-year floodplain identified as a result of the flood modeling. The assumption is that the flood modeling accurately and appropriately expanded the mapped 100-year floodplain which had the effect of expanding the mapped wetlands within the 100-year floodplain.

Just as was the case for the flood modeling itself (in relation to floodway sufficiency), there is a potential data gap associated with these associated wetlands. On one hand, there is a risk (as a result of the data gap) that certain wetland areas associated with the revised 100-year flood plain might have been omitted from SMP jurisdiction. Conversely, there is a data-gap related risk that more wetlands associated with the 100-year floodplain have been identified thus precluding appropriate development on wetland areas whose ecological function have been erroneously assumed.

The remaining data gap is associated with the assumptions as to the effect of groundwater and the related wetlands. While the topography of Ferndale is well documented, generalizations have been made as to the exact subsurface groundwater dynamics at play within the City. Soil type information is generalized and assumptions have been made as to the accuracy (at depth) of the soil analysis.

Thus, with data gaps on the stratification of soil characteristics and subsurface hydrological dynamics, the exact factors at play related to the site-specific wetlands carry risks of overly broad jurisdictional boundaries as well as overly restrictive jurisdictional boundaries.

## **RISKS TO ECOLOGICAL FUNTIONS ASSOCIATED WITH SMP PROVISIONS – CITY WIDE**

Discussed briefly above were the data gaps as well as some of the risks associated with the data gaps. This section is intended to discuss the risks to the ecological functions

associated with the provisions of the SMP. As was the case for data gaps, this discussion is intended to be a city-wide discussion. For a detailed area-specific discussion of risks associated with SMP provisions, please refer to the area-specific discussion in later sections.

As noted, the primary area of SMP jurisdiction is the Nooksack River and its associated floodway. While the City is bisected by the Nooksack, it is also book-ended by the Interstate 5 bridge to the north and the Burlington Northern Railroad and City bridge to the south. The result of this arrangement is that the river is channelized as it passes through the city. This is an important factor as the primary purpose of the river's floodway is to attenuate the effects of seasonal flooding. Given the dynamics of the Nooksack and this channelization, an important factor to be considered in designating the SMP provisions was the sufficiency of the floodway determination.

As noted on the SMP maps, the floodway areas of the City have been designated as "conservancy" in order to preserve the ecological function of the area (flood attenuation). In addition, flood modeling has been performed to determine the level of appropriate fill while preserving the effectiveness of the floodway.

The risks associated with the floodway determination, mapping of conservancy areas and appropriate fill mass is that the modeling performed is insufficient to attenuate the effects of a 100-year flood. This risk is somewhat offset by the "book-ending" noted above. With the physical flow restriction associated with the I-5 bridge, there is literally a limited of water that can flow under the bridge. Thus the real risk is that the water flow in the Nooksack associated with seasonal flooding will be such that the river water backs up and spreads over the floodplain to the north of the Interstate 5 bridge.



*Looking South to Interstate 5 Bridge*

This upriver flooding was built into the flood modeling performed by Whatcom County and the maximum fill line as established through this modeling took into consideration the effects of bridge flow restriction and floodway sufficiency in the city.

The other risk to ecological function relates to the wetlands within the 100-year floodplain. As was the case for the floodway determination, these designations were an outgrowth of the Whatcom County flood modeling. As a result, there is a risk that the mapping was insufficient to delineate all of the wetlands within the 100-year floodplain.

The other associated risk is that the requirements of the City's Critical Areas Ordinance (CAO) and its associated buffers are insufficient to mitigate the potentially adverse effects of development. As is the case for other jurisdictions, the wetlands mapped through our CAO have been classified by function. The result being that there are larger buffers for higher quality wetlands. Given the best available science through which the CAO and the SMP were developed, it is the belief of the City that the ecological functions of these wetlands can be preserved through implementation of the provision of the CAO and SMP.

### **CUMULATIVE IMPACT ANALYSIS**

The City of Ferndale anticipates the full build-out of the City. Given the City's location on Interstate 5 and the regional nature of anticipated future retail development, Ferndale, currently at a population of 10,000, will be substantially larger in the future. With this said, it is also the City's position that this cumulative impact of development should have no net adverse impact of the ecological function of the shoreline. As it relates to the three classifications of shoreline within the City, the following applies:

**Nooksack River** – The flood modeling developed by Whatcom County and used by the City and DOE in determining the shoreline jurisdictional boundaries utilized a “no net rise” approach wherein different fill vs. flood scenarios were inputted into the computer model to determine the maximum amount of fill that could be placed on the fringes of the floodway while not affecting upstream or downstream flooding. In effect, this approach used a cumulative impact approach.

As a result, it is the City's belief that the anticipated cumulative effect of anticipated future development surrounding the river will have no net detrimental effect on the ecological function within this area. This assumes that development will occur at the fringe of the floodway but no development within the floodway area unless the development is tied to increased ecological function and restoration/enhancement.

Should development be proposed within the floodway and should this development be tied to restoration and/or enhancement, it is also the City's belief that this development can proceed because the allowability of development within the conservancy zone (river floodway) is appropriate if the effect of restoration and/or enhancement is at least equal to the effect of development.

**City Streams** – Given eventual build out of the city, it is the position of the city that the current buffers and setbacks contained in our development regulations and Critical Areas Ordinance are sufficient to ensure that there is no net loss of ecological function. In addition, the City's new Stormwater Program, begun in May of 2006, provides long-

term funding to begin the process of constructing stormwater facilities that will have a positive effect on the water quality of our areas streams.

Thus, it is the City's position that the effects of the City's storm drainage program will offset the effects of future residential construction in the areas surrounding the shoreline jurisdiction.

**Wetlands within 100-year Floodplain** – As was the case for the streams, the City's current development standards and provisions of the Critical Areas Ordinance should be sufficient to ensure the ecological function of these wetlands. With either an avoidance or mitigation approach, future development on sites where there exists 100-year floodplain wetlands should provide reasonable assurance of the ability for these areas to maintain their ecological function.

Also, as noted, only specific wetlands have been identified as having sufficient ecological function to warrant avoidance, restoration and/or enhancement. For the majority of the City's wetlands, fill and development (tied to appropriate off-site mitigation) is the preferred development scenario.

For these low quality isolated wetlands within the 100-year floodplain, the "associated" test included in WAC 173-22-030(1) and 173-22-040(3) will be the determining factor in establishing specific Shoreline jurisdiction.

Wetlands within the 100-year floodplain must meet the two-pronged associated test in order to be under shoreline jurisdiction. The two prongs are "proximity" and "influence". Proximity is a general determination of location and proportionality of the size of the system under review. Proximity to a small stream is usually a much shorter distance compared to proximity to a larger river system. Influence may work in one direction or in both directions (i.e. the wetland influences the water body or the water body influences the wetland). Influence includes but is not limited to one or more of the following: periodic inundation, location within a floodplain, or hydraulic continuity.





*Silver Creek*

## **Area by Area Shoreline Analysis**

As previously noted, the City has divided the shoreline jurisdiction into 16 distinct areas. What follows is an overview of each of these areas:

### **Area 1. – Map on page 79**

Area 1 includes the wetlands within the 100-year floodplain of the Nooksack River south of Main Street, east of Interstate-5. This area is mostly agricultural land but contains some commercial, residential, and forested areas.



#### **Identification and analysis of ecological processes and functions**

There is no natural connection between this area and the Nooksack River. The area is functionally isolated from the river by Main Street to the north and Interstate-5 to the west. The area seldom floods because of protected commercial development to the north and Main Street that acts as a berm. The areas within shoreline jurisdiction are functionally isolated wetlands within the 100-year floodplain. Ecological function considered to be low with full development with off-site mitigation considered the best option.

#### **Characterization of shoreline ecological systems**

The wetlands in the area are primarily low function Category III and IV palustrine emergent wetlands. This is explained below in “Critical Areas”. Much of the area is Prior Converted Cropland appropriate for development.

#### **Demonstration of how characterization shaped policies and regulations**

This area has a SMP land use designation of URBAN. The northern portion is serviced by Main Street utilities, there is an adjacent Whatcom Transit authority bus terminal nearby, the area is adjacent to easy access to Interstate-5, is zoned Highway Commercial and General Commercial, and is designated Commercial on the Comprehensive Plan. Because of the proximity of this area to a major Interstate interchange, zoning, services, and low functioning wetlands (those areas within shoreline jurisdiction), this area was determine suitable for commercial development.

#### **Structures, impervious surfaces, and modifications**

The area currently has about 2 percent impervious surfaces as roads and homes. Future development of the site will require current DOE stormwater standards be applied.

### **Critical areas**

The wetlands in the area, those within shoreline jurisdiction are predominantly Category III and IV palustrine emergent wetlands that have been historically farmed. Some areas are Category III palustrine scrub-shrub and palustrine forested wetlands. All impacts to wetlands functions are required by the SMP and the CAO to be fully mitigated. Preference would be for full development with off-site mitigation.

### **Degraded areas/ sites – restoration potential**

There are no degraded areas or suitable restoration sites in Area 1.

### **Areas of special interest**

None identified at this time.

### **Adjacent land conditions/regulations**

The surrounding area (to the east and south) is zoned low density residential and/or within Whatcom County. Interstate-5 and a main arterial, Barrett Road, border the western edge and Main Street, a major arterial, borders the northern edge.

### **Existing and potential public access sites**

The shoreline jurisdiction areas are functionally isolated wetlands, there is no public access required nor warranted.

### **General channel migration zone**

The area is south of the historic channel migration zone (CMZ). The CMZ no longer functions in this area because the 3 bridges “funnel” all river flow under the bridges. If the river were allowed to migrate in it’s historic zone in this area, it would remove portions of Interstate-5, a major interchange, the main arterial to Ferndale, and the main line of the railroad.

### **Data gaps**

None identified at this time.

### **Historic/archeological/cultural sites**

None identified at this time.

### **Future shoreline demand and potential conflicts**

There are no significant future shoreline demands or potential conflicts anticipated in this area. All impacts to areas within shoreline jurisdiction or their buffers will be fully mitigated.

### **Restoration plans**

None identified at this time or deemed appropriate for this area.

### **Shoreline ecological functions altered by permitted and exempt actions**

The areas of shoreline jurisdiction, i.e., functionally isolated wetlands, when impacted will be fully mitigated. Suitable restoration sites are discussed for other areas.

### **Area 2. – Map on page 80**

Area 2 is the residential area north of Main Street adjacent to Ten-Mile Creek on the eastern edge of the city limits and a portion of Ten-Mile Creek. This area is within 200 feet of the floodway of Ten-Mile Creek and extends outside of the 100-year floodplain to protect the riparian functions of Ten-Mile Creek.



The residential area is fully developed into homes and yards. Ten-mile Creek is within a depressional channel. It is dominated by reed canarygrass (*Phalaris arundinacea*) within the floodway and surrounded by willows (*Salix spp.*) and red alder (*Alnus rubra*) trees from the toe of the slope (the area landward of the floodway) to the top of the slope in most areas.

### **Identification and analysis of ecological processes and functions**

Ten Mile creek lies within the 100-year floodplain of the Nooksack River and is situated within a depressional, wide channel. Ten Mile Creek is a salmonid stream. Most of Area 2 is within the depressional channel of Ten Mile Creek. The area from the top of the bank (the south or left bank of the creek) is developed into a residential area and is out of the direct influence of the main channel of the creek.

### **Characterization of shoreline ecological systems**

The wetlands within the channel have a moderate function and are Category III palustrine emergent and scrub/shrub wetlands. The wetlands and creek attenuate flood flow to the Nooksack River which become dry (other than the main channel) in the summer months and form into a continuous ponded area in the winter months. This portion of Ten Mile Creek filters upgradient sediment transport and is “filling” up and has become a “wetland” as compared to it’s historical characterization as “Barrett Lake”. The portion of Ten Mile Creek is also a series of beaver ponds that are predominantly emergent vegetation.

### **Demonstration of how characterization shaped policies and regulations**

This area has a SMP land use designation of RESIDENTIAL and CONSERVANCY Area 2 is zoned RS 8.5-Single Family Residential where there are homes, and Floodway within the Ten-Mile Creek drainage/floodway. The area is designated Residential and Floodway on the Comprehensive Plan. Ten-Mile Creek, its floodway

and riparian area, the area of highest functional value within shoreline jurisdiction, will remain protected because of the fish and wildlife habitat protection requirements in the SMP and CAO.

### **Structures, impervious surfaces, and modifications**

The area currently has about 20 percent impervious surfaces as roads and homes. Any future development in the residential area will likely not occur as this area is fully developed. No development will occur within the Ten Mile Creek floodway.

### **Critical areas**

Ten-Mile Creek provides habitat for beaver and waterfowl and is a salmonid stream. Listed species do not occur in this area.

### **Degraded areas/ sites – restoration potential**

Although the edges of Ten-Mile Creek are dominated by native canopy and shrub vegetation, the floodway of the stream is dominated by reed canarygrass. Ten-Mile Creek is a salmonid stream, provides habitat for beavers and waterfowl, is a corridor directly connected to the Nooksack River and is within both the 100-year flood plain of the Nooksack River and is within shoreline jurisdiction because the mean annual flow of Ten-Mile Creek exceeds the shoreline standard. Because of the dominance of reed canarygrass, the habitat functions are reduced. It is recommended that the floodway of Ten-Mile creek be enhanced by planting native trees and shrubs to increase habitat and reduce the dominance of reed canarygrass.

### **Areas of special interest**

Ten Mile Creek and its associated wetlands.

### **Adjacent land conditions/regulations**

The area to the north of Area 2 is in Whatcom County and zoned agricultural. The area to the south is residential and Main Street. There are no land use conflicts in this area.

### **Existing and potential public access sites**

There is no public access for this area other than the residential area by the inhabitants. Ten Mile Creek will remain protected with no public access unless the “Friends of Barrett Lake” provide a means of access.

### **General channel migration zone**

Area 2 is not within the historic CMZ of the Nooksack River because it occurs within a well defined depressional channel of Ten Mile Creek. The CMZ of Ten Mile Creek is active and within the well defined depressional channel.

### **Data gaps**

None identified at this time.

### **Historic/archeological/cultural sites**

None identified at this time.

### **Future shoreline demand and potential conflicts**

There are no significant future shoreline demands or potential conflicts anticipated in this area. All impacts to areas within shoreline jurisdiction or their buffers will likely not occur because the area is designated conservancy. The residential area will remain residential.

### **Restoration plans**

None identified at this time. The “Friends of Barrett Lake” may utilize Ten Mile Creek and it’s associated wetlands as a restoration project.

### **Shoreline ecological functions altered by permitted and exempt actions**

The areas of shoreline jurisdiction that have the greatest ecological functions are protected with a conservancy designation.

## **Area 3. – Map on page 81**

Area 3 includes the commercial area north of Main Street adjacent to Ten-Mile Creek east of Barrett Road. This area is within 200 feet of the floodway of Ten-Mile Creek and a portion of Ten-Mile Creek. The southern portion of this area consists of a hotel, bank, drive-up restaurant, and gas station/truck stop. The northern portion of this area is an agricultural field. Ten-Mile Creek is discussed in Area 2 above.



### **Identification and analysis of ecological processes and functions**

See Area 2 above.

### **Characterization of shoreline ecological systems**

See Area 2 above.

### **Demonstration of how characterization shaped policies and regulations**

This area has a SMP land use designation of URBAN and CONSERVANCY. Area 3 is zoned Highway Commercial and designated Commercial on the Comprehensive Plan. The area is currently 90 percent developed or being developed. The developed area has a land use designation of URBAN and Ten-Mile Creek has a land use designation as CONSERVANCY. Ten-Mile Creek is protected under the wetlands and streams Chapters within the SMP and have a required buffer.

### **Structures, impervious surfaces, and modifications**

This area is approximately 50 percent impervious, with future impervious surfaces projected. Stormwater generated runoff from the truck stop pavement likely degrades the water quality of Ten Mile Creek and requires attention.

### **Critical areas**

See description of Area 2 above.

### **Degraded areas/ sites – restoration potential**

See description of Area 2 above.

### **Areas of special interest**

See description of Area 2 above.

### **Adjacent land conditions/regulations**

The surrounding area (to the east and south) is zoned low density residential and/or within Whatcom County. Interstate-5 and a main arterial, Barrett Road, border the western edge and Main Street, a major arterial, borders the northern edge.

### **Existing and potential public access sites**

See Area 2 above.

### **General channel migration zone**

See description of Areas 1 and 2 above.

### **Data gaps**

None identified at this time.

### **Historic/archeological/cultural sites**

None identified at this time.

### **Future shoreline demand and potential conflicts**

Future shoreline demands or potential conflicts in this area occur as the commercial area continues to develop. All impacts to areas within shoreline jurisdiction or their buffers will be fully mitigated.

### **Restoration plans**

Refer to Area 2 above. Area 3 has potential water quality problems from stormwater runoff generated by the truck stop parking area and gas station. This potential problem requires analysis.

### **Shoreline ecological functions altered by permitted and exempt actions**

The areas of shoreline jurisdiction within Ten Mile Creek will not be developed. The riparian area, i.e., the commercial area will require buffer restrictions, and water quality/quantity mitigation.

#### **Area 4. – Map on page 82**

Area 4 includes the northern portion of the proposed Ferndale Town Center within 200 feet of Nooksack River floodway.

#### **Identification and analysis of ecological processes and functions**

This area consists of fill material and provides little habitat, ecological process or functions.

#### **Characterization of shoreline ecological systems**

See discussion for Area 2.

#### **Demonstration of how characterization shaped policies and regulations**

This area has a SMP land use designation of URBAN. Area 4 is zoned Highway Commercial and designated Commercial on the Comprehensive Plan. Area 4 is fill material, provides little habitat, and is being developed.

#### **Structures, impervious surfaces, and modifications**

This area is and will be entirely impervious (compacted fill material or parking lot).

#### **Critical areas**

Critical areas do not occur in this area.

#### **Degraded areas/ sites – restoration potential**

None identified at this time.

#### **Areas of special interest**

None identified at this time on the site. Swans have been observed in the general area, particularly on the agricultural fields to the north.

#### **Adjacent land conditions/regulations**

The surrounding area is agricultural land to the north (Whatcom County) and developed land (commercial to the south).

#### **Existing and potential public access sites**

The shoreline jurisdiction area is a filled site that will soon be a commercially developed area and does not require public access.





### **General channel migration zone**

This area is within the historic channel migration zone (CMZ). The CMZ no longer functions in this area because the 3 bridges “funnel” all river flow under the bridges. If the river were allowed to migrate in its historic zone in this area, it would remove portions of Interstate-5, a major interchange, the main arterial to Ferndale, and the main line of the railroad.

### **Data gaps**

None identified at this time.

### **Historic/archeological/cultural sites**

None identified at this time.

### **Future shoreline demand and potential conflicts**

This area is going to be developed but does not conflict with the SMP or CAO.

### **Restoration plans**

None identified at this time.

### **Shoreline ecological functions altered by permitted and exempt actions**

The areas of shoreline jurisdiction, i.e., that area within 200 feet of the Nooksack River floodway are designated URBAN and zoned commercial.

## **Area 5. – Map on page 83**

Area 5 includes the Whiskey Creek wetlands and Whiskey Creek within the 100-year floodplain of the Nooksack River. The wetlands are all Category III and IV farmed palustrine emergent wetlands that are dominated by non-native herbaceous species such as reed canarygrass. Whiskey Creek provides salmonid, waterfowl, and large and small mammal habitat. This area is currently not developed but has surrounding residential development.



### **Identification and analysis of ecological processes and functions**

This area is the lower reach of Whiskey Creek within the 100-year floodplain of the Nooksack River and is described above.

### **Characterization of shoreline ecological systems**

See description above.

### **Demonstration of how characterization shaped policies and regulations**

This area has a SMP land use designation of RESIDENTIAL. Area 5 is zoned Multiple Residential and designated High Density Residential and Low Density Residential on

the Comprehensive Plan. The wetlands and Whiskey Creek are provided protection under the wetlands and streams Chapters of the SMP and provisions of the CAO. There is a proposal to develop this site into residential. The proposal will not impact the wetlands within the 100-year floodplain. All wetland impacts outside of the 100-year floodplain will be mitigated. There will be a no-net-loss of wetland functions in this area post development.

### **Structures, impervious surfaces, and modifications**

The area currently is currently not developed.

### **Critical areas**

Whiskey Creek is a salmonid stream and the stream corridor and associated wetlands are dominated by reed canarygrass. This area can be planted with native trees and shrubs such as willows, red osier dogwood (*Cornus serica*), cottonwood (*Populus balsamifera*), and alder. This will increase wildlife habitat and provide shading for Whiskey Creek. Portions of Whiskey Creek have been ditched and could be rechanneled to better mimic natural conditions. Large woody debris and snags could be added as well.

### **Degraded areas/ sites – restoration potential**

See description above.

### **Areas of special interest**

None identified at this time

### **Adjacent land conditions/regulations**

The surrounding area to the west is zoned low density agricultural and within Whatcom County. The area within shoreline jurisdiction is that portion of Whiskey Creek within the 100-year floodplain and will not be developed.

### **Existing and potential public access sites**

The area is under private ownership. There is no public access for this area and is not recommended to protect the functions and values of Whiskey Creek.

### **General channel migration zone**

The area is not within the CMZ of the Nooksack River.

### **Data gaps**

None identified at this time.

### **Historic/archeological/cultural sites**

None identified at this time.

### **Future shoreline demand and potential conflicts**

There are no significant future shoreline demands or potential conflicts anticipated in this area. All impacts to areas within shoreline jurisdiction or their buffers will be fully mitigated.

### **Restoration plans**

This area is not slated for restoration but will be encourage if residential development is to occur in the immediate area. A development plan for the area to the west of the shoreline jurisdictional area has been applied for to the City of Ferndale. This proposed development will not occur within shoreline jurisdiction but will include mitigation by enhancing that portion of Whiskey Creek within shoreline jurisdiction.

### **Shoreline ecological functions altered by permitted and exempt actions**

The areas of shoreline jurisdiction, i.e., that area of Whiskey Creek within the 100-year floodplain of the Nooksack River will not be altered.

### **Area 6. – Map on page 84**

Area 6 includes the agricultural land in the northeast corner of Interstate-5 and the Nooksack River that lies within 200 feet of the floodway. This area is predominantly agricultural land, palustrine emergent wetlands, and riparian vegetation. An archeological site occurs at this location. Most of this area is currently farmed for row crops or pasture. The native riparian area of the river is sparse, concentrated along the slopes of the bank of the river. The vegetated area is dominated by red alder, bigleaf maple (*Acer macrophyllum*), and Himalayan blackberry (*Rubus procerus*). A small ditched stream conveys water from an agricultural drainage system into the river. Juvenile salmonids have been observed in the “lower” portion of this ditched stream.



### **Identification and analysis of ecological processes and functions**

This area often floods, is within the riparian corridor of the Nooksack River, and is undeveloped. See comments above.

### **Characterization of shoreline ecological systems**

Associated wetlands are present in this area. However, much of this area is under row-crop cultivation, including the wetlands, which affect the ecological functions. There is a very narrow corridor of native vegetation directly adjacent to the river. See comments above.

### **Demonstration of how characterization shaped policies and regulations**

This area has a SMP land use designation of CONSERVANCY and RURAL. Area 6 is zoned Floodway and designated Floodway on the Comprehensive Plan, and is in the floodway of the Nooksack River. The designations CONSERVANCY and RURAL apply within the area of the floodway of the Nooksack River and the area within the no-net-rise in the 100-year flood elevation, respectively. The area of highest habitat value, the “lower riverine bench” will remain undeveloped because of its conservancy designation.

### **Structures, impervious surfaces, and modifications**

There are no structures in Area 6.

### **Critical areas**

See comments above.

### **Degraded areas/ sites – restoration potential**

There are no degraded areas however this area is suitable for restoration for a combination of upland, riparian, and wetland enhancement. Himalayan blackberry should be eradicated and the entire area planted into a native forest.

### **Areas of special interest**

There is a complex of recorded archaeological sites in this area.

### **Adjacent land conditions/regulations**

The land to the north of Area 6 is zoned rural. This area is on an upper bench out of the floodplain of the Nooksack River and is adjacent to Interstate-5. Development of this area will not affect the functions of the area within shoreline jurisdiction. The land to the east is in Whatcom County and is agricultural land, within the floodway and will not be developed.

### **Existing and potential public access sites**

This area does not have public access and is not recommended.

### **General channel migration zone**

This area is likely within a small portion the channel migration zone but is not likely because of the proximity of the Interstate-5 bridge (the site is directly adjacent to the bridge) and there is a natural topographic shift that directs all flood flow towards the bridge. The historic CMZ is primarily on the left bank of the river, away from Area 6.

### **Data gaps**

None identified at this time.

### **Historic/archeological/cultural sites**

There is a complex of recorded archaeological sites in this area.

### **Future shoreline demand and potential conflicts**

There are no significant future shoreline demands or potential conflicts anticipated in this area.

### **Restoration plans**

This area is recommended for riparian restoration.

### **Shoreline ecological functions altered by permitted and exempt actions**

Area 6 is mostly within the floodway, zoned conservancy, and will not be developed.

### **Area 7. – Map on page 85**

Area 7 includes the residential area in the northwest corner of Interstate-5 and the Nooksack River. This area is within 200 feet of the floodway of the Nooksack River. The area that is immediately adjacent to the river and within the floodway is dominated by a combination of forested/scrub-shrub wetlands and upland forest. This riparian area is not developable because it is in the floodway. The dominant vegetation along the river includes cottonwood, red alder, willows, red osier dogwood, and Himalayan blackberry. The area that is above the floodway is developed into residential homes.



### **Identification and analysis of ecological processes and functions**

Most of this area is out of the floodway and riparian area of the Nooksack River and therefore lacks the influence of the river. The area that is within the floodway and directly influenced by the river is a narrow corridor that frequently floods, is vegetated with native forested vegetation, and on a “lower” bench. There is a topographic shift up, out of the 100-year floodplain where the residential structures occur. This area is also directly adjacent to Interstate-5 and the bridge that directly influences the hydrological conditions.

### **Characterization of shoreline ecological systems**

See comments above.

### **Demonstration of how characterization shaped policies and regulations**

This area has a SMP land use designation of RESIDENTIAL and CONSERVANCY. Area 7 is zoned Multiple Residential and Floodway and designated High Density Residential and Floodway on the Comprehensive Plan. The area has a land use designation of CONSERVANCY in the floodway and RESIDENTIAL in the 100-year floodplain of the Nooksack River. The riparian area will remain undeveloped because it has a conservancy designation. The area in the floodway is undeveloped or a city park and will remain open space. The area designated residential is currently developed as residences.

**Structures, impervious surfaces, and modifications**

This area is approximately 80 percent impervious surfaces from homes and roads.

**Critical areas**

The wetlands in the area are Category III Wetlands and occur within the floodway of the Nooksack River.

**Degraded areas/ sites – restoration potential**

None identified at this time.

**Areas of special interest**

None identified at this time.

**Adjacent land conditions/regulations**

The northern portion of Area 6 is a residential area that is currently “built-out”. The southern portion is within the floodway and in a native forested area directly adjacent to the river. Current zoning and conditions are not in conflict.

**Existing and potential public access sites**

There are no public access sites in Area 6 and none are recommended.

**General channel migration zone**

This area is not in the CMZ.

**Data gaps**

An on-site confirmation of wetlands is needed.

**Historic/archeological/cultural sites**

None identified at this time.

**Future shoreline demand and potential conflicts**

There are no significant future shoreline demands or potential conflicts anticipated in this area. All impacts to areas within shoreline jurisdiction or their buffers will be fully mitigated.

**Restoration plans**

None identified at this time.

**Shoreline ecological functions altered by permitted and exempt actions**

With implementation of the SMP, no loss of shoreline functions or values are anticipated in this area.

## **Area 8. – Map on page 86**

Area 8 is the 9-hole Riverside Golf Course. This area is within the floodway of the Nooksack River and extends landward to encompass a no-net-rise in the 100-year flood elevation. The golf course is a combination of mowed turf, palustrine emergent wetlands, ponded areas, sparse trees and shrubs between the fairways, and a sparse vegetated riparian edge of the river. Dominant vegetation along the immediate river includes cottonwood, red alder, willows, red osier dogwood, and Himalayan blackberry.

Area 8 lies between Interstate-5 and Main Street, to the east and south respectively and the Nooksack River, to the west and “north”. This area of the river is functionally isolated by the Interstate-5 and railroad bridges. Although the area does flood and is within the floodway and 100-year floodplain, the fact that there are two main transportation corridors that restrict the river, plus the main arterial road to Ferndale, Main Street, is on the southern edge of Area 8, restrict the ecological and hydrological processes of the shoreline area.



### **Identification and analysis of ecological processes and functions**

See comments above.

### **Characterization of shoreline ecological systems**

See comments above.

### **Demonstration of how characterization shaped policies and regulations**

This area has a SMP land use designation of CONSERVANCY. Area 8 is zoned Floodway and designated Floodway on the Comprehensive Plan. Area 8 is within the floodway of the Nooksack River and extends landward to encompass a no-net-rise in the 100-year flood elevation. The small wetlands within the 100-year floodplain of the Nooksack River, those wetlands out of the floodway (adjacent to Main Street and the golf course access road) will likely be filled and mitigated. The area of highest ecological value, i.e., the golf course, is protected because it is in the floodway and is designated CONSERVANCY. The CONSERVANCY designation is conditional in that the city recognizes that there is great potential commercial and public benefit to be derived from appropriate redevelopment of the existing golf course/club house complex, and has specifically addressed this potential in the text of the SMP. Mitigation if the form of enhancement of wetlands and the riparian area would be made a part of any such redevelopment plan.

### **Structures, impervious surfaces, and modifications**

This area is about 1 to 2 percent impervious surface from buildings, a gravel parking area, and a road.

### **Critical areas**

The wetlands in the area, those within shoreline jurisdiction are predominantly Category III and IV palustrine emergent wetlands that are within the golf course or directly adjacent to Main Street. There are a few wetlands nearer the river that are higher functioning scrub/shrub wetlands. All impacts to wetland functions are required by the SMP and the CAO to be fully mitigated.

### **Degraded areas/ sites – restoration potential**

Redevelopment of the golf course can be designed to reduce the size of the fairways (reduced turf); the edge of the river could be enhanced with native trees and shrubs, Himalayan blackberry eradicated, and increase public access with the construction of a trail with viewing areas near the edge of the river.

### **Areas of special interest**

See above.

### **Adjacent land conditions/regulations**

Area 8 is bordered by the Nooksack River to the west and north, Interstate-5 to the east and Main Street to the south. Only the area directly adjacent to Main Street is developable. However, it is likely that the golf course will be reconstructed as discussed above.

### **Existing and potential public access sites**

See above

### **General channel migration zone**

This area may be within the historic channel migration zone (CMZ) but the CMZ no longer functions in this area because the 3 bridges “funnel” all river flow under the bridges. If the river were allowed to migrate in its historic zone in this area, it would remove portions of Interstate-5, a major interchange, the main arterial to Ferndale, and the main line of the railroad.

### **Data gaps**

None identified at this time.

### **Historic/archeological/cultural sites**

None identified at this time.

### **Future shoreline demand and potential conflicts**

All impacts to areas within shoreline jurisdiction or their buffers will be fully mitigated.



## Restoration plans

See above.

## Shoreline ecological functions altered by permitted and exempt actions

With implementation of the SMP, no loss of overall shoreline functions or values are anticipated in this area.

## Area 9. – Map on page 87

Area 9 includes the city owned Vander Yacht Park south to Main Street, and residential and commercial areas to the west and south of the park. This area is within the floodway of the Nooksack River and extends landward to encompass a no-net-rise in the 100-year flood elevation. Vander Yacht Park consists of mowed turf, a stormwater detention pond, a forested area on the northern portion, scattered trees within the park, and a sparse vegetated area along the river. The northern forested area and the area along the river include cottonwood, red alder, Douglas fir (*Pseudotsuga menziesii*), willows, red osier dogwood, Himalayan blackberry, and Japanese knotweed (*Polygonum cuspidatum*). The western portion of this area is developed as residential homes. The southern portion of this area, that area immediately north of the Main Street bridge and near the railroad tracks, is a combination of residences and commercial businesses.



## Identification and analysis of ecological processes and functions

Area 9 is within the floodway of the Nooksack. However, natural flood flow in this area is constrained because the area lies between the Interstate-5 bridge and a combination of the railroad and Main Street bridge.

## Characterization of shoreline ecological systems

There is a city stormwater detention pond, and associated emergent wetland, regularly mowed turf (a city park), and a narrow (50 feet) riparian corridor of primarily native forest.

## Demonstration of how characterization shaped policies and regulations

This area has a SMP land use designation of RESIDENTIAL and CONSERVANCY. Area 9 is zoned Multiple Residential and Floodway and designated High Density Residential on the Comprehensive Plan. Area 9 is within the floodway of the Nooksack River and is designated CONSERVANCY within the floodway of the Nooksack River and RESIDENTIAL outside of the floodway within the no-net-rise in the 100-year flood elevation area. The area in the floodway is city land, including Vander Yacht Park and undeveloped land.

### **Structures, impervious surfaces, and modifications**

The area of impervious surface is negligible.

### **Critical areas**

A palustrine emergent wetland, that is regularly mowed, occurs on the northern edge of a stormwater detention pond. The stormwater detention pond is permanently ponded, and is used by waterfowl, and has an emergent fringe of cattails. Impacts to wetlands are not anticipated.

Riverine wetlands do not occur in this location. There is a steep bank along the edge of the river that has an approximate 8 foot drop.

### **Degraded areas/ sites – restoration potential**

This area could have the immediate edge of the river planted with additional native trees and shrubs, the non-native plants (Himalayan blackberry and knotweed) eradicated, additional trees and shrubs planted on the western edge of the field, a public restroom constructed, and improvements made to the parking area.

### **Areas of special interest**

None identified at this time.

### **Adjacent land conditions/regulations**

Area 9 is a city park that lies within the floodway and is surrounded by residential land. There are no land use conflicts in this area.

### **Existing and potential public access sites**

Area 9 has public access, a gravel parking area, and trails to the rivers edge.

### **General channel migration zone**

The historic CMZ no longer functions in this area because the 3 bridges “funnel” all river flow under the bridges. If the river were allowed to migrate in its historic zone in this area, it would remove portions of Interstate-5, a major interchange, the main arterial to Ferndale, and the main line of the railroad.

### **Data gaps**

None identified at this time.

### **Historic/archeological/cultural sites**

None identified at this time.

### **Future shoreline demand and potential conflicts**

There are no significant future shoreline demands or potential conflicts anticipated in this area. This area is a city park and will remain a city park.

## **Restoration plans**

A trail/riverfront plaza project is planned that would connect Area 9 with Tosco Park, Area 12. Riparian restoration will be made a component of this redevelopment plan.

## **Shoreline ecological functions altered by permitted and exempt actions**

There are no permitted or exempt actions that will alter this area. It is a city park.

## **Area 10. – Map on page 88**

Area 10 includes the commercial structures, parking lots, and immediate vicinity in the northeast corner of Main Street and the Nooksack River. This area is within 200 feet of the floodway of the Nooksack River. This area is immediately north of the railroad bridge and the Main Street bridge. Approximately 80 percent of this area is developed into commercial businesses as buildings and parking areas (impervious surfaces). The immediate edge of the river has been rip-rapped and contains sparse vegetation.



## **Identification and analysis of ecological processes and functions**

There is no natural connection between this area and the Nooksack River. The area is functionally isolated from the river by a dike.

## **Characterization of shoreline ecological systems**

See comment above.

## **Demonstration of how characterization shaped policies and regulations**

This area has a SMP land use designation of URBAN. Area 10 is zoned Highway and General Commercial and designated Commercial on the Comprehensive Plan. These designations do not conflict.

## **Structures, impervious surfaces, and modifications**

Approximately 80 percent of this area is developed with impervious surfaces.

## **Critical areas**

Critical areas do not occur in this area.

## **Degraded areas/ sites – restoration potential**

There are no degraded areas or suitable restoration sites in Area 10, excluding the edge of the river. However, there is limited opportunity to restore the riparian area because it is rip-rapped.

## **Areas of special interest**

None identified at this time.

### **Adjacent land conditions/regulations**

Area 10 occurs on the northern edge of Main Street and is developed. A golf course that is within the floodway occurs to the immediate north.

### **Existing and potential public access sites**

Public access to the river is limited in this location because of the Main Street bridge and the rip-rapped shoreline.

### **General channel migration zone**

The area is not in the CMZ

### **Data gaps**

None identified at this time.

### **Historic/archeological/cultural sites**

None identified at this time.

### **Future shoreline demand and potential conflicts**

There are no significant future shoreline demands or potential conflicts anticipated in this area. All impacts to areas within shoreline jurisdiction or their buffers will be fully mitigated.

### **Restoration plans**

None identified at this time.

### **Shoreline ecological functions altered by permitted and exempt actions**

With implementation of the SMP, no loss of overall shoreline functions or values are anticipated.

## **Area 11. – Map on page 89**

Area 11 includes the residential area in the southwest corner of Main Street and the Nooksack River. This area is within 200 feet of the floodway of the Nooksack River. This area has been diked along the river (the dike continues to the mouth of the river) and is developed as commercial and (single family and multifamily) residential. The dike is rip-rap and contains sparse vegetation. A narrow road is landward of the dike.



### **Identification and analysis of ecological processes and functions**

There is no natural connection between this area and the Nooksack River. The area is functionally isolated from the river by a dike and a paved road.

### **Characterization of shoreline ecological systems**

See comments above.

### **Demonstration of how characterization shaped policies and regulations**

This area has a SMP land use designation of URBAN. Area 11 is zoned Multiple Residential and Central Business, and designated High Density Residential and Commercial on the Comprehensive Plan. These designations do not conflict.

### **Structures, impervious surfaces, and modifications**

This area is approximately 70 percent impervious (roads and structures).

### **Critical areas**

Critical areas do not occur in this area.

### **Degraded areas/ sites – restoration potential**

See below.

### **Areas of special interest**

See below.

### **Adjacent land conditions/regulations**

The surrounding area has the same land conditions and regulations. There are no conflicts.

### **Existing and potential public access sites**

This area is central to an adopted Riverfront Plaza Plan, which includes a trail system connecting Vander Yacht Park with Pioneer Park, closure of Front Street adjacent to the Nooksack River to vehicular traffic, and development of a “pedestrian promenade” and “plaza” adjacent to the existing dike. These improvements will substantially increase public access to and enjoyment of the shoreline in this area.

### **General channel migration zone**

The area is not in the CMZ.

### **Data gaps**

None identified at this time.

### **Historic/archeological/cultural sites**

There are known historic sites within this area, parts of which have been previously investigated without discovery of any historic materials.

### **Future shoreline demand and potential conflicts**

All impacts to areas within shoreline jurisdiction or their buffers will be fully mitigated.

## Restoration plans

Planting of riparian vegetation will be incorporated into the Riverfront Trail/Plaza Plan.

## Shoreline ecological functions altered by permitted and exempt actions

With implementation of the SMP, no loss of overall shoreline functions or values are anticipated.

### Area 12. – Map on page 90

Area 12 is the Connoco-Phillips Sport Complex and other City owned property. It is city owned land that is developed as a city park, a water intake facility, and a sewage treatment facility. This area is within 200 feet of the floodway of the Nooksack River and contains wetlands within the 100-year floodplain of the Nooksack River. The area adjacent to the river has been diked; the dike is rip-rap and contains sparse vegetation. A narrow road is landward of the dike.



The wetlands in Connoco-Phillips Sports Complex area include a palustrine emergent area that is seasonally ponded and dominated by willows and cottonwood trees on the perimeter, mostly reed canarygrass in the shallow portions, and cattails (*Typha latifolia*) and water lily (*Nuphar sp.*) in the interior of the pond. The area is also a wetland mitigation site that is under construction for wetland fill that has occurred during the development of the ball fields for the park.

### Identification and analysis of ecological processes and functions

There is no natural connection between this area and the Nooksack River. The area is functionally isolated from the river by a dike and paved road. The areas within shoreline jurisdiction are functionally isolated wetlands within the 100-year floodplain or within 200 feet of the floodway.

### Characterization of shoreline ecological systems

The wetlands in the area are primarily low function Category III and IV palustrine emergent wetlands.

### Demonstration of how characterization shaped policies and regulations

This area has a SMP land use designation of RESIDENTIAL and RURAL. Area 12 is zoned Multiple Residential and Floodway, and designated High Density Residential and

Floodway on the Comprehensive Plan. The regional park use is consistent with these designations.

### **Structures, impervious surfaces, and modifications**

The area has about 5 percent impervious surfaces, but is entirely modified.

### **Critical areas**

See above.

### **Degraded areas/ sites – restoration potential**

A portion of this area is a wetland mitigation site and currently under construction. The remaining area is developed as residential, city park, sewage treatment, and water intake.

### **Areas of special interest**

The Pioneer Park and Connoco-Phillips Sports Complex.

### **Adjacent land conditions/regulations**

The area to the west is agricultural and in Whatcom County, the area to the north is residential, the area to the south is a combination of sewage treatment and agricultural land. The river abuts the eastern edge. There are no land use conflicts in this area.

### **Existing and potential public access sites**

The edge of the river is diked with limited public access.

### **General channel migration zone**

Although this area may lie in the CMZ, the edge of the river is diked and there is a water intake facility and sewage treatment facility in this area. Flooded is unlikely and discouraged.

### **Data gaps**

None identified at this time.

### **Historic/archeological/cultural sites**

None identified at this time. However, Pioneer Park includes relocated historic buildings.

### **Future shoreline demand and potential conflicts**

There will be on-going demand for use of the Connoco-Phillips Sports Complex and possible expansion of the facility in the future. All impacts to areas within shoreline jurisdiction or their buffers will be fully mitigated.

### **Restoration plans**

A portion of the site is currently under construction as a wetland mitigation area.

### **Shoreline ecological functions altered by permitted and exempt actions**

With implementation of the SMP, no loss of overall shoreline functions or values are anticipated.

### **Area 13. – Map on page 91**

Area 13 includes the wetlands in the 100-year floodplain near City Hall. These wetlands are a combination for palustrine forested and palustrine emergent.



The forested and emergent wetlands south of City Hall are dominated by cottonwood and red alder trees with an understory of hard hack (*Spiraea douglasii*) and salmonberry (*Rubus spectabilis*) and predominantly reed canarygrass and cattails (*Typha latifolia*) respectively. Portions of these wetlands are ditched. These wetlands are Category III wetlands because of their dominance of the reed canarygrass and lack of habitat features.

The wetlands north of City Hall are all small, functionally isolated, dominated by reed canarygrass, provide little habitat functions, and are Category IV Wetlands.

### **Identification and analysis of ecological processes and functions**

There is no natural connection between this area and the Nooksack River. The area is protected from the river by a dike. The areas within shoreline jurisdiction are wetlands within the 100-year floodplain. However, this area is adjacent (to the south) to agricultural fields and low density rural areas to the south, increasing habitat value and stormwater attenuation.

### **Characterization of shoreline ecological systems**

See comments above.

### **Demonstration of how characterization shaped policies and regulations**

This area has a SMP land use designation of URBAN and CONSERVANCY. Area 13 is zoned Central Business and Residential/Office, and designated Commercial on the Comprehensive Plan. The northern portions of these lots are currently used for residential, office, and central business or upland areas that are undeveloped. The southern portions of these lots lie within wetlands. The land use designation of the wetlands is CONSERVANCY. The wetland portions of these parcels will likely not be developed. If wetlands are filled, the functions of the wetlands will be replaced as per the SMP wetlands regulations.



### **Structures, impervious surfaces, and modifications**

The area currently has about 5 percent impervious surfaces as commercial buildings and roads all occurring on the northern portion. The remaining area is wetlands.

### **Critical areas**

Small isolated wetlands occur on the northern portion of Area 13. These wetlands will be filled and mitigated.

### **Degraded areas/ sites – restoration potential**

That portion of Area 13 south of City Hall, the wetlands, could be planted and enhanced with native vegetation, ponded areas constructed to remove reed canarygrass, water quality improved from the stormwater outfall, and the area used as a regional stormwater detention facility.

### **Areas of special interest**

None identified at this time.

### **Adjacent land conditions/regulations**

The northern portion of Area 13 is mostly developed. The southern portion, that area that is entirely wetlands, will remain undisturbed. If impacts to wetlands do occur, the impacts will be mitigated.

### **Existing and potential public access sites**

There is currently no public access to this area but is recommended.

### **General channel migration zone**

The area is not within the CMZ.

### **Data gaps**

None identified at this time.

### **Historic/archeological/cultural sites**

None identified at this time.

### **Future shoreline demand and potential conflicts**

There are no significant future shoreline demands or potential conflicts anticipated in this area. All impacts to areas within shoreline jurisdiction or their buffers will be fully mitigated.

### **Restoration plans**

There is potential for enhancement to the wetlands on the southern portion of this area.

### **Shoreline ecological functions altered by permitted and exempt actions**

There are no use conflicts in Area 13.

## **Area 14. – Map on page 92**



Area 14 includes the southeast corner of Main Street and the Nooksack River. This area is within 200 feet of the floodway of the Nooksack River. This area is a combination of commercial development and a P.U.D. water intake on the northern portion, residential development on the central portion, and pasture and a stormwater detention pond to the south. The northern portion of this area is rip-rapped and sparsely vegetated. The southern area has a narrow vegetated riparian corridor along the rivers edge. This riparian vegetation is dominated by cottonwood, red alder, red osier dogwood, and Himalayan blackberry.

### **Identification and analysis of ecological processes and functions**

Not applicable in this location because of it's proximity to the Main Street Bridge and the occurrence of rip rap on the rivers edge.

### **Characterization of shoreline ecological systems**

See comment above.

### **Demonstration of how characterization shaped policies and regulations**

This area has a SMP land use designation of URBAN and CONSERVANCY. Area 14 is zoned Central Business and General Commercial and designated Commercial on the Comprehensive Plan. The URBAN designation applies to the existing developed area. There is an area waterward of this area that has a CONSERVANCY designation. This area is within the floodway and will not be developed.

### **Structures, impervious surfaces, and modifications**

There is about 30 percent impervious surface in this area.

### **Critical areas**

Critical areas do not occur in this area.

### **Degraded areas/ sites – restoration potential**

None identified at this time.

### **Areas of special interest**

None identified at this time.

### **Adjacent land conditions/regulations**

The surrounding area is developed and does not conflict with this area.

### **Existing and potential public access sites**

There is no public access required nor warranted.

### **General channel migration zone**

Although this area may lie in the CMZ, the edge of the river is diked, and this area is directly south (downriver) of the Main Street bridge. Flooding is unlikely and discouraged.

### **Data gaps**

None identified at this time.

### **Historic/archeological/cultural sites**

There are recorded historical sites in this area, much of which was investigated in conjunction with the Main Street and bridge improvement project.

### **Future shoreline demand and potential conflicts**

There are no significant future shoreline demands or potential conflicts anticipated in this area. All impacts to areas within shoreline jurisdiction or their buffers will be fully mitigated.

### **Restoration plans**

None identified at this time.

### **Shoreline ecological functions altered by permitted and exempt actions**

With implementation of the SMP, no loss of overall shoreline functions or values are anticipated.

## **Area 15. – Map on page 93**

Area 15 includes the wetlands in the 100-year floodplain of the Nooksack River north and east of Tennant Lake. These wetlands are a combination of Category II and Category III palustrine forested wetlands. Most of this area is undeveloped and undisturbed. The area is bisected by the railroad tracks and a narrow paved road. Few homes occur in the area with commercial buildings and businesses on the eastern edge along LaBounty Road. Commercial structures include a concrete batch plant and light industry adjacent to LaBounty Road. The wetlands in this area require a detailed description and better location mapping because of the potential use conflicts from additional development in the area.

### **Identification and analysis of ecological processes and functions**

Ferndale SMP Additional Information – June 2009



See comments above. The area is functionally isolated from the Nooksack River by the main line of the railroad tracks. However there is a natural connection/corridor (although severed by the railroad) and a hydrological connection between this area and the Nooksack River. Flooding of the Nooksack River in this area is unlikely because of the railroad.

### **Characterization of shoreline ecological systems**

See above.

### **Demonstration of how characterization shaped policies and regulations**

This area has a SMP land use designation of URBAN and CONSERVANCY. Specifically, certain areas have been designated as “General Commercial Conversancy” and “Manufacturing Conversancy” as a subset of URBAN. Area 15 is zoned General Commercial, Highway Commercial, and Manufacturing, and is designated Commercial and Industrial on the Comprehensive Plan. The area is developing consistent with current zoning. In addition, it is likely that at some point in the future, the Smith Road interchange will be redeveloped in order to provide an east-west connector across Whatcom County. Smith Road is the only practical alternative to providing that through connection, and it is further likely that a roadway corridor will need to be developed west of I-5 and through this general area. It is therefore important that the precise extent of critical areas are known so a “least impact” corridor can be identified for future development. Mitigation of impacts associated with this probable future development would be appropriately mitigated. Areas may be identified which conflict with the CONSERVANCY Designation and would be considered for redesignation at that time.

### **Structures, impervious surfaces, and modifications**

Impervious surfaces are negligible.

### **Critical areas**

See comments above.

### **Degraded areas/ sites – restoration potential**

Area 15 is the wetlands that are adjacent to Tennant Lake and within and outside of the 100-year floodplain. The area should be mapped with greater accuracy and documented for actual wetland boundaries, functions, values, attributes, and species abundance, distribution, and occurrence. Restoration areas and concepts could be determined and mapped at that time.

### **Areas of special interest**

Areas of special interest are the wetlands.

### **Adjacent land conditions/regulations**

There is a potential conflict between the land use designations and occurrence of wetlands in this area. This area requires further study.

Ferndale SMP Additional Information – June 2009

### **Existing and potential public access sites**

There is no public access required nor warranted at this time. There is public access to Tennant Lake, a Whatcom County park.

### **General channel migration zone**

Although historically this area was in the CMZ, this area is not in the CMZ because of the natural (elevation gain) and manmade features (such as Interstate-5) that block flood flow.

### **Data gaps**

See above.

### **Historic/archeological/cultural sites**

None identified at this time.

### **Future shoreline demand and potential conflicts**

See comments above.

### **Restoration plans**

See comments above.

### **Shoreline ecological functions altered by permitted and exempt actions**

See comments above.

## **Area 16. – Map on page 94**

Area 16 includes the area of Silver Creek that is within the 100-year floodplain of the Nooksack River. Silver Creek provides habitat for Coho salmon and resident trout. The riparian area is narrow, approximately 100 to 150 feet in width, within and adjacent to the immediate channel and ravine. This area provides habitat for fish within the stream and habitat for a variety of large and small mammals, passerine birds, and raptors. Interstate-5 functionally isolates this western portion of the stream corridor with the eastern portion of the stream; however, fish passage is possible under Interstate-5.



### **Identification and analysis of ecological processes and functions**

This area is within the 100-year floodplain of the Nooksack River but has no physical connection as it is separated by a main arterial, Slater Road. The area only floods from high water within Silver Creek.

### **Characterization of shoreline ecological systems**

See comments above.

### **Demonstration of how characterization shaped policies and regulations**

This area has a SMP land use designation of CONSERVANCY. Area 16 is zoned Manufacturing and Highway Commercial, and is designated Industrial on the Comprehensive Plan. The area is essentially a stream corridor and associated wetlands which are protected in accordance with wetlands and fish and wildlife regulations.

### **Structures, impervious surfaces, and modifications**

The area within shoreline jurisdiction, the channel of Silver Creek, has no impervious surfaces.

### **Critical areas**

The wetlands in this area are directly associated and adjacent to Silver Creek.

### **Degraded areas/ sites – restoration potential**

There is potential for Riparian habitat enhancement.

### **Areas of special interest**

None identified at this time.

### **Adjacent land conditions/regulations**

The surrounding area is zoned highway commercial. However, the buffers of Silver Creek are regulated in the SMP.

### **Existing and potential public access sites**

Public access is not recommended.

### **General channel migration zone**

The area is not in the CMZ.

### **Data gaps**

None identified at this time.

### **Historic/archeological/cultural sites**

None identified at this time.

### **Future shoreline demand and potential conflicts**

There are no significant future shoreline demands or potential conflicts anticipated in this area. All impacts to areas within shoreline jurisdiction or their buffers will be fully mitigated.

### **Restoration plans**

None identified at this time. However, potential exists for riparian enhancement projects.

**Shoreline ecological functions altered by permitted and exempt actions**

With implementation of the SMP, no loss of overall shoreline functions or values are anticipated.

