Policies for the conservation and protection of resources including, but not limited to, critical areas, groundwater, agricultural land and forest areas, open space corridors, and wildlife habitat.

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6 Natural Resources

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6.1 INTRODUCTION

The Natural Resource element covers several important issues, such as the protection of agricultural land and forest areas, open space corridors, property rights, wetlands, groundwater, rural character, and wildlife habitat protection. The need for conservation and protection of natural resources increases as the County population continues to grow.

The balance between natural resource protection and development influences the economic condition of Island County. Aside from traditional ecological and aesthetic effects, natural resources have the potential to create jobs, provide recreational opportunities, enhance property values, attract customers and revenue to local businesses, increase government revenues, decrease the cost of community services, and improve the local quality of life.

In the 1998 version of the Island County Comprehensive Plan, Natural Lands and Water Resources were addressed as separate Elements. As part of an attempt to reorganize and clarify the Comprehensive Plan, it was determined that these two topics might function more effectively under the same Element. This Natural Resources Element was then developed, and Natural Lands and Water Resources became subcategories under that Element. The Water Resources Element was split up and the information related to water systems was relocated to the Utilities Element while the information to water as a resource was moved to the Natural Resource Element. Sections related to Critical Areas including Wetlands, Fish and Wildlife Habitat Conservation Areas and Geologically Hazardous Areas were also moved into the Natural Resources Element from their previous location within the Land Use Element. By combining all information related to Natural Resources into one Element, protection of these resources can be addressed in a more comprehensive manner, rather than through separate and potentially competing Elements.

NATURAL RESOURCES GOALS

1. **Safeguard the natural environment as an integrated system where the land, water, and air resources interact creating a balanced environment for all life on the islands.**
2. **Preserve a high level of air quality.**
3. **Protect wetlands from a net loss in functions.**
4. **Protect fish and wildlife habitat areas.**
5. **Protect public health, safety, and welfare, to minimize public and private losses due to flood conditions in frequently flooded areas.**
6. **Protect the public health, safety, and welfare from threats resulting from incompatible development being sited on or near steep and/or unstable slopes.**
7. **Manage and protect ground water and provide for resource protection through a common goal of non-degradation for existing and future residents of Island County.**
8. **Protect aquifer recharge areas from contamination and insure long term recharge potential.**

(Continued on next page)

NATURAL RESOURCES GOALS (CONTINUED)

9 Ensure that Island County plans and develops in a manner that utilizes the best available information regarding water resources, so that the resource will be preserved for current and future use.

10 Conserve a variety of natural lands, in both public and private ownership, for the enjoyment and economic benefit of current and future residents of Island County.

11 Prioritize the protection of natural lands that coincide with other valuable resources, including ecological, historical, agricultural, recreational, and cultural lands.

12 Protect natural, scenic, cultural, and historic lands as community assets.

13 Continue to promote active public involvement in the conservation or protection of important natural lands.

14 Continue an open dialogue between Island County, incorporated jurisdictions, special purpose districts, non-profits, and other interested individuals and organizations working toward the conservation or protection of natural lands.

15 Protect existing and ongoing resource management operations and preserving long-term commercial viability of those uses.

6.1.1 DEFINITION OF NATURAL RESOURCES

Natural resources are natural materials, substances, processes or organisms that society depends on and that can be potentially useful for economic gain. Classically, natural resources were thought of as minerals, fossil fuels, timber, water, fish and wildlife. More frequently however, the definition is being expanded to include more abstract resources such as the atmosphere, sunlight and aesthetic value. This Element will cover natural lands, air quality, mineral lands, critical areas and ground water resources. As conversations around natural resources in Island County continue, this Element can be expanded to new resources the community values.

6.1.2 VISION FOR NATURAL RESOURCES

Natural resource systems should be conserved and preserved in recognition of the irreplaceable character of such resources, and of their importance to the quality of life of residents, visitors, and the future generations of Island County. Provisions should be made for natural resources to meet human needs throughout the County in order to protect them, and enhance enjoyment and appreciation of the environment.

6.2 CRITICAL AREAS

Critical areas are lands that possess certain development limitations, or that provide important public resources. However, a property owner cannot be deprived of a reasonable use and the enjoyment of lands on which critical areas and their associated buffers, if any, are located.

Critical areas are:

A. Wetlands
B. Areas with a critical recharging effect on aquifers used for potable water
C. Fish and Wildlife habitat conservation areas
D. Frequently flooded areas
E. Geologically hazardous areas

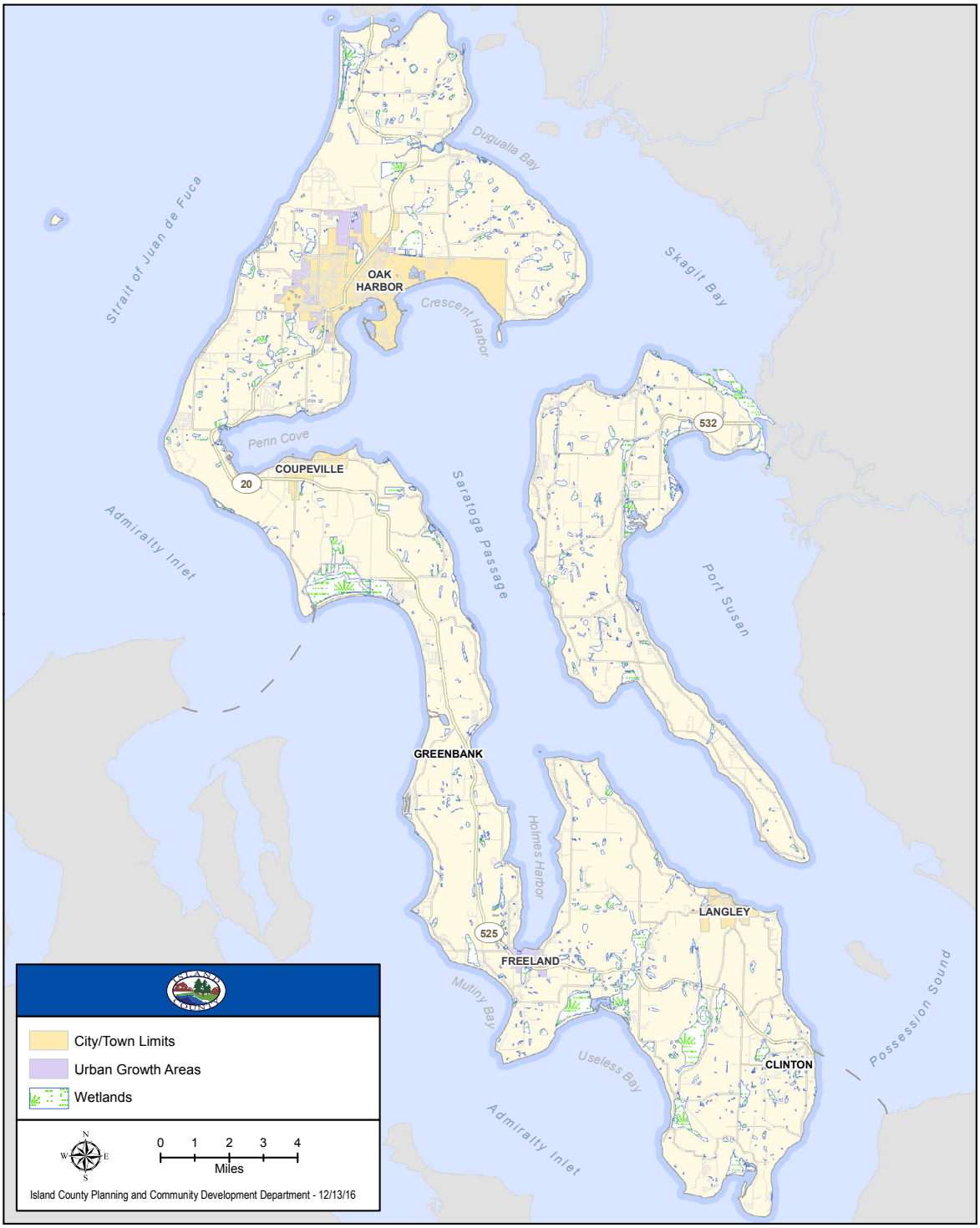
Prior to adoption of the 1984 Island County Code, many critical areas in Island County had been disturbed by past development, logging, or other human activity. Some critical areas are essentially in pristine condition, having recovered from logging or other activity which has occurred on or near them in the last century or so. Many of the County's most valuable critical areas lie in undeveloped rural areas and in resource lands. Efforts to protect critical lands will likely be more effective in rural areas than in urban areas. When goals intended to protect critical areas compete or conflict with goals for curtailing sprawl, a balance will be reached based on priorities outlined in this Plan and the goals of the GMA. For example, some alteration to highly degraded wetlands within UGAs may be acceptable to discourage sprawl. Critical areas within areas of high development pressure, such as UGAs, will have different forms and levels of protection than critical areas within rural areas and resource lands.

Limited information is available on location and boundaries of many types of critical areas. The Critical Areas maps (Maps F through J), provide a generalized location based on authoritative studies, e.g., maps generated by the Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species Program; occurrence maps generated by the Washington Department of Natural Resources (WDNR) Natural Heritage Program; United States Fish and Wildlife Services (USFWS) National Wetland Inventory maps; DNR Water Type maps; maps of frequently flooded areas prepared by the Federal Emergency Management Agency; and maps of identified wetlands prepared for the County in 1990. In addition, the County currently is updating its maps of the shoreline areas to include commercial and recreational shellfish areas; kelp and eelgrass beds; and herring and smelt spawning areas. These maps are intended for informational (but not necessarily regulatory) purposes. Detailed on-site inspections may be required to determine if an area meets the designation and classification criteria. These studies may take precedence over generalized mapping.

The County is responsible for updating and maintaining the maps on a regular basis, as additional information is developed through studies and subsequent determinations. Considerable progress can be made toward protecting some types of critical areas simply by making the information in these maps and other materials readily accessible to current and potential landowners, development interests, and the populace. Altering critical areas in the past has resulted more often from ignorance of the location, function, and value of a given critical area rather than deliberate intent to disturb it. However, other types of critical areas may be severely impacted by wide dissemination of their exact location. Island County will make the location of wetlands, streams and steep slopes publicly available but will not disclose the location of sensitive species when disclosure might harm those species or their habitat.

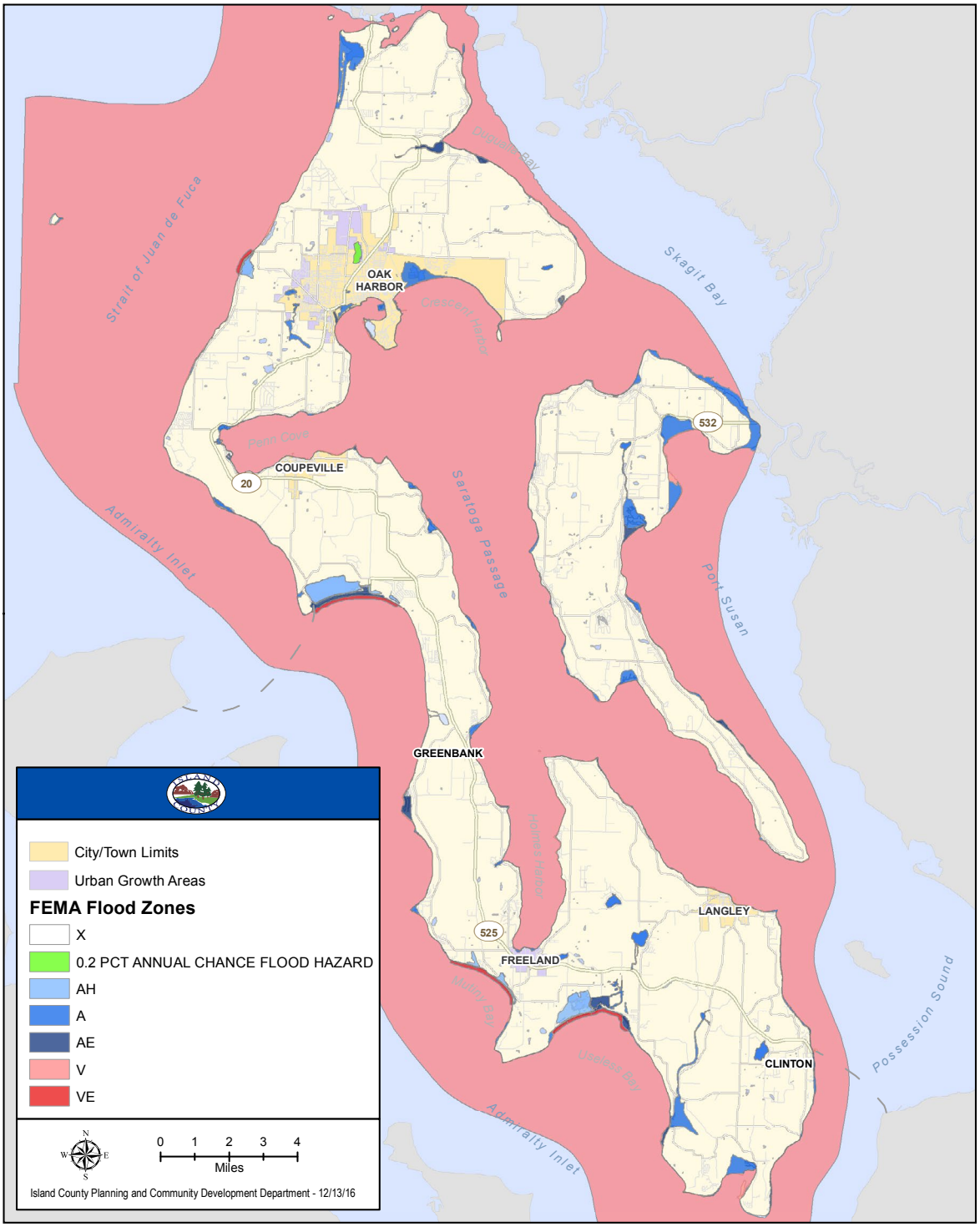
Effective enforcement is an important component of any critical areas protection program. The enforcement action and severity of any penalty must be proportionate to the nature and circumstances of the violation, and the damage or risk to private and public resources. When wetlands or fish and wildlife habitat conservation areas are damaged in violation of the law, restoration to at least pre-existing functional condition will be required.

MAP 6A. Wetlands

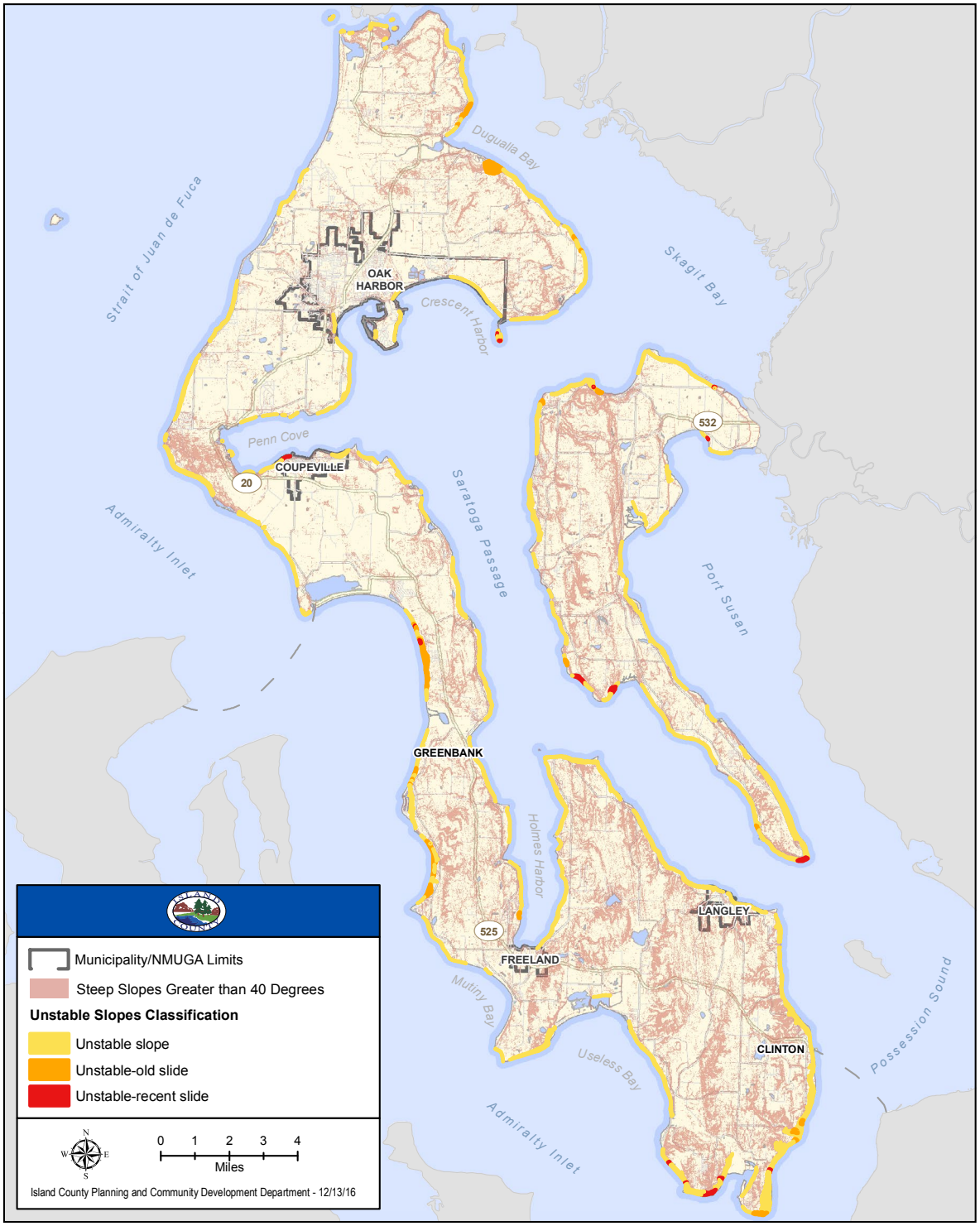


This map is intended to be used as a GUIDE. Island County is providing this information as a general geographic representation that should not be used for precise measurements or calculations. Some of the features on this map are not accurately depicted. Any user of this map assumes all responsibility for use and agrees to hold Island County harmless for liability, damages, or loss incurred by use of this information. Specific questions should be directed to Island County's Department of Planning and Community Development.

MAP 6B. Flood Plains



MAP 6C. Steep and Unstable Slopes



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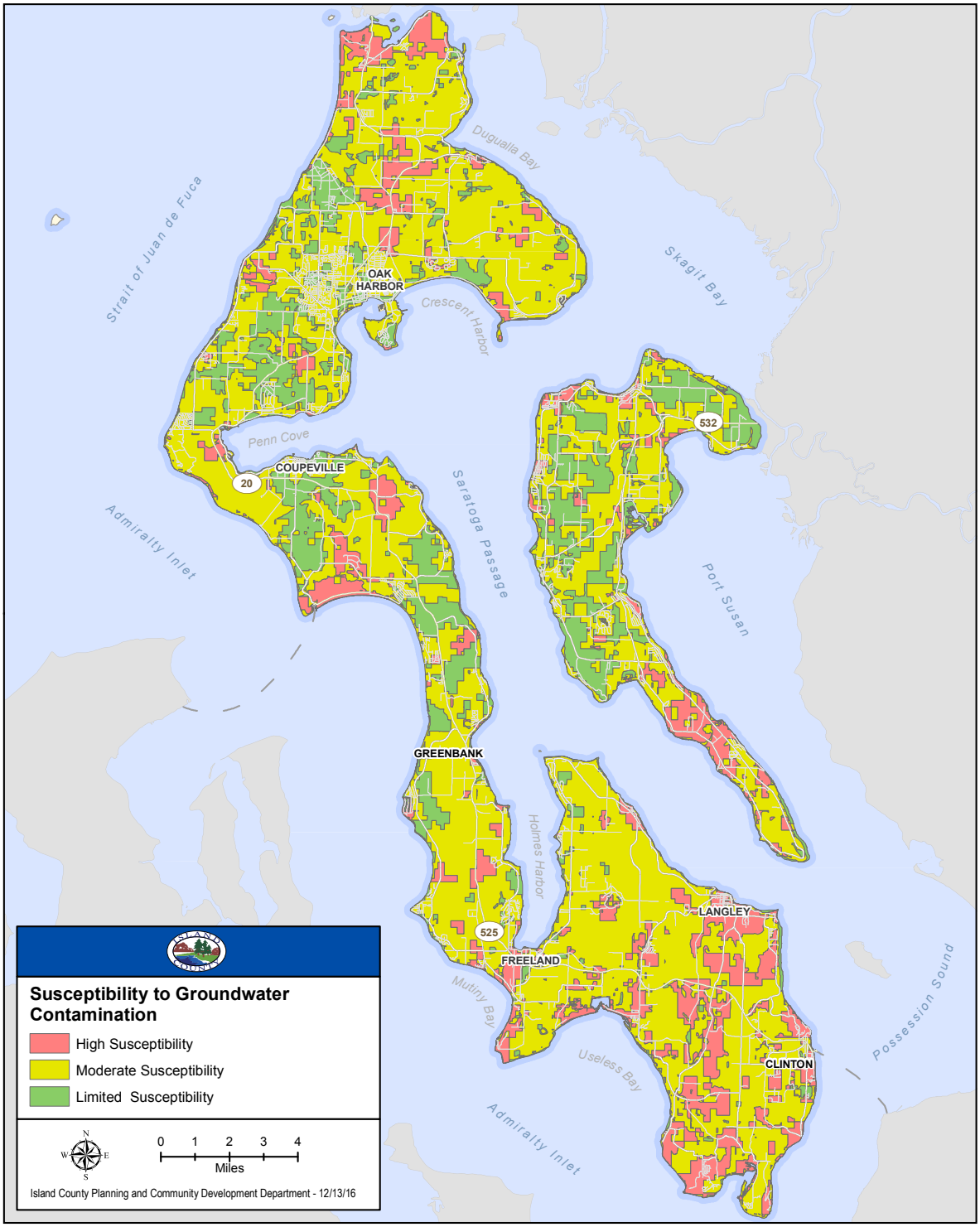
MAP 6D. Critical Aquifer Recharge Areas



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6.2.1 WETLANDS

Island County contains a wide variety of wetlands, from salmonberry and alder swamps to lush bogs, thriving estuarine marshes, and broad wet meadows. Often these wetlands are fragile ecosystems that may serve important and beneficial functions. Wetlands can assist in reducing flooding, erosion, siltation, and ground and surface water pollution; help maintain ground water recharge and surface water flows; and provide wildlife, plant and fisheries habitats. Wetlands harbor plant and animal species with recreational, economic, and cultural importance. Many wetlands are essential components of the highly-valued visual landscape of Island County.

Wetlands historically have been treated as wasted land, to be reclaimed through draining and filling. Wetlands destruction, or impairment of wetland functions, may result in increased public and private costs or property losses, through effects such as increased flooding or water quality degradation. Only in recent decades has the economic, environmental, and cultural impacts of wetlands destruction been recognized and efforts made to reduce the loss of wetland functions and values.

Designation of wetlands and regulation of wetlands are separate issues. The economic, environmental, and cultural values that communities place on wetlands should be used to determine wetlands policy and regulation. Wetlands classification or ratings systems are used to define what regulatory standards apply and to establish priorities for non-regulatory mechanisms, such as acquisition and restoration.

Wetland functions typically refer to physical, chemical, and biological processes. Some functions, such as water quality and purification, flood attenuation, sediment trapping, and wildlife habitat, can be quantified accurately depending on level of study. Wetland values (aesthetic, cultural, educational, or recreational) generally refer to the importance or worth that society places on wetlands. As values by nature are subjective, they are difficult to measure.

Some wetlands have greater economic, environmental, or cultural value than others. In some instances, wetland alterations may be preferable to available alternatives. For example, a valuable mature forest may also have high habitat value. Altering or developing it may have greater environmental costs than altering a highly degraded, adjacent wetland with minimal function and value.

Island County has had wetland regulations in place since 1984. During public review, these regulations were determined to have met the GMA's substantive and procedural requirements. Wetlands within the shoreline jurisdiction are regulated by the Shoreline Master Program (SMP), rather than the Critical Areas Ordinance. In addition, the County should require the use of best management practices for existing agricultural uses and should not exempt new agricultural uses. The County may also wish to allow certain low impact uses within wetland buffers and allow installation of infrastructure where there is no practical alternative location.

6.2.2 CRITICAL AQUIFER RECHARGE AREAS

The natural history of Island County, from the region's volcanic origins to its repeated glacial advances and retreats punctuated by massive post-glacial flooding, has left a geologic hodgepodge of sands, gravels, fine silts and sediments; cemented till ("hardpan"); clays; and metamorphic rock formations.

Many of these formations bear accessible groundwater and can supply groundwater for the County's domestic, agricultural, recreational, and commercial/industrial needs.

Most of Island County depends on groundwater. Some areas rely on surface water, such as the City of Oak Harbor, the Whidbey Island Naval Air Station, and an outlying community near Deception Pass, which all rely on Skagit River water piped to the City via the Anacortes treatment plant.

General areas of low, medium, and high recharge potential have been mapped based on surficial geology county-wide (Map 6D). While providing useful and valuable information about recharge potential over wide areas, the mapping scale and complexity of the underlying geology make it impractical to apply the information to site-specific land uses.

Rainfall infiltration from the surface to water-bearing layers is currently the only source for renewing the County's groundwater supplies. There is no evidence of any naturally-occurring underground hydraulic connection to mainland sources of groundwater. Continued infiltration of fresh water can exclude intruding sea water from subsurface water-bearing layers, literally keeping the sea water at bay.

(This topic is discussed in-depth below, see section 6.3)

6.2.2.1 Groundwater Recharge Study

In February 1997, the Board of Commissioners contracted with the USGS to cooperate in a Water Recharge Study in Island County. The objectives of the study were:

1. Estimate the total amount and aerial distribution of recharge entering the groundwater system on each Whidbey and Camano Islands.
2. Identify potential areas for using runoff to artificially recharge the groundwater system.

This study compliments earlier USGS studies in Island County completed in the mid 1980s.

6.2.3 FISH & WILDLIFE HABITAT CONSERVATION AREAS

Island County supports a variety of plant and animal species and contains several species listed by the federal or state government as endangered, threatened or sensitive.

The GMA explains that fish and wildlife habitat conservation involves managing land to maintain species in suitable habitats within their natural geographic distributions, so that isolated sub populations are not created. This does not mean maintaining all individuals of all species at all times. Cooperative and coordinated land use planning for habitat conservation is critically important among County and adjacent jurisdictions.

Current County regulations fulfill the overall intent of GMA Fish and Wildlife Conservation Areas by: 1) designating protected species and critical areas, (i.e., those areas where designated species reside, including wetlands, deepwater habitats, and tributary streams to wetlands); 2) providing a process for protection; and 3) providing buffers for regulated wetlands and tributary streams.

6.2.4 FREQUENTLY FLOODED AREAS

While lacking major river systems that occur in mainland western Washington (where dramatic flooding has captured national attention), Island County is not immune to flood threats. Flooding generally occurs in the winter during intense storms, combined with high tides. Wind-generated waves frequently run up the beach and overtop many shore protection structures, damaging structures along the shoreline and flooding inland areas. Wave-tossed driftwood can threaten safety and property. Flooding that is less violent and severe, but perhaps more frequent, occurs around lakes and other low-lying areas during and following heavy precipitation. Increased rates of runoff have been caused by development, creation of impervious surfaces, channeling of surface water flows, and loss of wetlands and extensive forest vegetative cover, all of which decreases the capacity of upland areas to retain moisture and exacerbating flood problems.

Individual residents, community associations, and diking districts have undertaken local flood protection efforts, including drainage improvements, tide gates, holding ponds, and shore protection structures such as bulkheads and rip-rap. Some of these facilities are maintained by the County.

The County has adopted a Flood Damage Prevention Ordinance (Chapter 14.02A ICC) which provides construction standards for frequently flooded areas, and stormwater regulations with required detention (Chapter 11.01 ICC).

6.2.5 GEOLOGICALLY HAZARDOUS AREAS

Although Island County is characterized by a gentler landscape than much of the mountainous and river-torn Puget Sound mainland, the islands have been and continue to be buffeted by geological and climatological forces. Vertical bluffs, ancient landslides, slopes with groundwater seepage or springs can be found in Island County. Careless development in such areas can lead to loss of life and property, both on-site and to other properties. The County regulates grading and construction on all slopes greater than 15%.

6.3 GROUND WATER RESOURCES

6.3.1 GROUND WATER OVERVIEW

The geologic development of Island County has resulted in the reliance on limited sources of groundwater. The physical presence of saltwater surrounding the islands creates threats to groundwater quality which are not experienced in other areas. Typical measures to protect groundwater include ensuring adequate recharge of rainfall and other surface waters, and minimizing the threat of pollutants. In Island County, measures must also include careful monitoring of the level of groundwater extraction, in order to minimize the threat of saltwater intrusion into fresh water aquifers.

Beginning in 1979, Island County has been working to define the hydrogeology of the Islands; determine the chemical quality of groundwater; and identify areas of existing and potential sea water intrusion. These studies have provided detailed information on the hydrogeology of Island County.

In 1982, the Environmental Protection Agency (EPA) declared Island County a Sole Source Aquifer. The designation acknowledged the County's reliance on groundwater as a potable water source and requires federally funded projects be designed to ensure protection of groundwater resources. The County is in fact served by a multiple aquifer system. The sole source designation refers to the County's reliance on groundwater for drinking water rather than a singular aquifer.

Island County's aquifer system is the critically important water supply for people living outside the general Oak Harbor area. Approximately 72% of the county's population relies upon groundwater as a potable water resource. Population growth in rural areas has increased groundwater demand proportionally; this is expected to continue in the future. Studies completed to date, including hydrogeologic investigations conducted by local, state and federal agencies, conclude that groundwater supplies are a finite resource in Island County.

The Island County Health Department compiles water quality data to monitor seawater intrusion and regularly updates a map that delineates these intrusion regions.

6.3.2 GROUNDWATER RESOURCE AND RECHARGE PROTECTION

The Growth Management Act (GMA) requires the designation and protection of critical areas, such as aquifer recharge areas. Included in the adopted Ground Water Management Plan are areas identified as having a greater potential for recharge based upon soil type and surficial hydrology. In 1992, Island County Code 8.09 was amended to include measures to protect groundwater from surface activities in susceptible areas. All of Island County was considered a recharge area and specific protection measures were determined at the time of application and related to project impacts.

The amendments to Chapter 8.09 ICC in 1992 were based upon the entire county as a critical recharge area formulated from the sole source aquifer designation and adopted groundwater management areas pursuant to Chapter 90.44 RCW. The criteria established in Chapter 8.09 ICC provided the basis for the protection of groundwater resources in critical recharge areas.

A 2002 United States Geological Survey (USGS) Recharge Study provided Island County with invaluable information concerning the local conditions that affect the recharge of precipitation into our aquifer systems. Previously, these areas had not been specifically delineated other than through the application of potential recharge rates based upon superficial geology.

Through the Watershed Planning process Critical Aquifer Recharge Areas have been delineated using the "Guidance Document for the Establishment of CARA Ordinances", Department of Ecology, 2000.

The following four criteria were used to assess aquifer vulnerability, and maps of each parameter were developed.

1. Depth-to-Water parameter was used to develop the "Depth to Water Susceptibility Rating" map, using data from the Island County hydrogeology database;
2. Recharge parameter was used to develop the "Groundwater Recharge Rate" map, using information from the USGS Deep Percolation Model and DOE Scoring Options;
3. Soil Permeability parameter was used to develop the "Soil Percolation Rate" map, using information from the Island County Soil Survey; and
4. Surficial Geology parameter was used to develop the "Surficial Geology Susceptibility Rating" map, using data from the Island County hydrogeology database.

The Critical Aquifer Recharge Area Map shows the sum of the scores from the four individual maps and ranks the County into one of three zones: "limited," "moderate," and "high" risk for contamination. The specific risk associated with surface contaminants, then, is based upon the four criteria rather than just surficial geology as in the past. Project actions in areas identified as having an increased risk for groundwater contamination may require a hydrogeologic assessment, as determined by ICC 8.09.

Hydrogeologic evaluations are required prior to approval of projects identified by the Health Officer as having a potential for groundwater contamination. Appropriate mitigation measures are imposed as conditions of approval for projects with a potential for impacts to groundwater resources.

Pursuant to the ICC 8.09, Best Management Practices ("BMPs") have been adopted as part of ICC 8.09.097.C, Critical Aquifer Recharge Area Requirements, for projects which have a potential for groundwater contamination. BMPs are applied as conditions of approval for land-use projects in Island County.

Due to the complexity of the aquifer systems underlying Island County, it is difficult, if not impossible, to apply regional determinations of groundwater resource protection and water availability. Given these management limitations, site-specific, project specific evaluations are the best available option. As additional information is collected and analyzed, refinements can be made to the system of identifying critical areas for recharge and groundwater protection.

6.3.3 SEAWATER INTRUSION PROTECTION

Over ten years of experience in the application of the Saltwater Intrusion Policy has shed light on some limitations of the policy. The first limitation is that there are other sources of chloride in the environment other than seawater intrusion. Non-intrusion chloride sources include: connate (very old) groundwater, septic system effluent, very hard groundwater, windblown sea spray, and recharge from irrigation, agricultural practices, and well disinfection. Chloride from any of these sources can result in elevated levels of chloride concentrations in an aquifer, triggering the Saltwater Intrusion Policy when in fact the aquifer is not intruded. This erroneous interpretation of data is known as a false positive, where a test identifies a problem that does not in fact exist.

False positives are one potential problem for the Saltwater Intrusion Policy; a second involves the opposite effect, a false negative. False negatives occur when a test indicates a problem does not exist,

when in fact it does. The processes of groundwater recharge, flow, mixing, and discharge all combine to affect the movement of marine water inland into an aquifer. Only after the marine water influences well water quality do the existing aquifer protection standards apply. The existing tools utilized for protection do not take into account the identification of future problems through predictive strategies.

In order to prevent seawater from entering a freshwater aquifer, adequate freshwater pressure must be maintained. An aquifer's susceptibility for seawater intrusion can be evaluated by measuring the distribution of water level elevations. Thus, the relationship between an aquifer's water level elevation and its susceptibility to seawater intrusion can be utilized as a planning and resource management tool. If employed in the same manner as the current Seawater Intrusion Policy, as a method of flagging a proposal for more detailed review, it may overcome virtually all of the policy's current limitations.

An aquifer that has water level elevations (pressure) significantly above sea level is not at risk for seawater intrusion, while an aquifer that has near sea level water levels is at risk. A more sophisticated analysis would be required to answer the question of whether or not the low-pressure aquifer would actually intrude due to a proposed withdrawal, but the risk for intrusion is definitely present. If aquifer water level elevations can be accurately determined, incorrectly identifying an area as being at risk for intrusion (false positives) should not occur.

Through the Watershed Planning effort, Island County and the Water Resource Advisory Committee collected and analyzed water quality and groundwater elevation data for 378 wells. This information was used to develop county wide water level elevation criteria to define at what elevation is a well at risk to seawater intrusion. These elevations, coupled with chloride data, were then used to define risk categories for the purpose of reviewing land-use proposals to define impact to the resource.

Hydrogeologic evaluations are required prior to approval of projects identified by the Health Officer as having a potential for causing, inducing, or contributing to seawater intrusion (ICC 8.09.099). Appropriate mitigation measures are imposed as conditions of approval for projects with a potential for impacts to groundwater resources. Additionally, public water systems are required to collect groundwater chemistry and water level elevations in areas defined as being at increased risks to intrusion.

6.4 NATURAL LANDS

6.4.1 NATURAL LANDS OVERVIEW

Island County has chosen to include information on the protection of natural lands in its Comprehensive Plan as a result of strong interest in this issue expressed by County residents. The protection and conservation of natural lands is important for the environment and is aesthetically beneficial, and benefits the economy of Island County.

The conservation or protection of natural lands is an important strategy that can also help to maintain the rural character of much of Island County. Generally, large expanses of open spaces, interspersed with forest lands and working agricultural landscapes, are important elements of rural character.

State law directs that certain tracts be designated as critical areas, and open space corridors, and some tracts be identified as lands useful for public purposes. Outside of these specific mandates, the decision to preserve tracts of natural lands is not mandated by the GMA or any other state or federal regulation. Rather, the decision lies with the determination of the citizens of Island County to preserve their quality of life by identifying and protecting those natural elements of the landscape which contribute to the scenic and open character of the community.

Many agencies are involved in the protection of natural lands throughout the County, including the federal government,the State of Washington, Island County, the Town of Coupeville, the City of Oak Harbor and the City of Langley, as well as non-profits, private citizens and the Tribes. The conservation of natural lands can be accomplished in many ways, from regulation through land use ordinances to purchase of the property. In all cases, the preferred method of conservation should include the voluntary participation of the property owner. When conservation occurs through land use regulation, efforts must be made to ensure that the owner is left with a reasonable use of the property.

The development and implementation of protection strategies for natural lands rely heavily upon community values, which were developed through public meetings and other means of public outreach. Sites within the County that are considered to be worthy of conservation or protection efforts have been identified.

The protection of these natural assets is essential to the continued high quality of life of County residents. These assets are also important to the quality of the experience enjoyed by visitors to this special place.

6.4.2 DEFINITION OF NATURAL LANDS

Natural lands include any land area whose preservation in its natural or existing state would conserve or enhance natural, scenic or cultural resources; protect surface waters or groundwater supplies; promote the conservation of soils, wetlands, beaches or tidal marshes; enhance the value to the public of abutting or neighboring parks, forests, wildlife preserves, nature reservations or other open spaces; enhance recreation opportunities; preserve historic sites; preserve working agricultural landscapes; or preserve visual quality or scenic vistas along transportation corridors.

Examples of natural lands may include, but are not limited to, forests and watersheds, agricultural lands, wetlands, significant wildlife habitats (including corridors important for wildlife movement or migration), complex shoreline systems (including lagoons, saltwater tidal flats, marshes and accretion beaches), and conservation areas or reserves which have the capacity to support complex biological communities or ecosystems.

The terms ‘natural lands’ and ‘open space’ are often used interchangeably by the public. While ‘open space’ is a generic term which may be applied to any parcel of undeveloped land, ‘natural lands’ may also include lands which may contain some development activity or are “worked” (such as agricultural and forestry uses), but which promote values consistent with environmental conservation. Definitions of different types of natural lands can and quite often overlap, and should not be confused with the definition of Natural Resource lands which the state clearly defines as based on soil types.

6.4.3 NATURAL LANDS TYPOLOGY

Not all natural lands will have equal value or serve the same functions. Different types of natural lands will benefit from varying types of conservation or protection. Policies reflecting the values of the community will help to determine the types of sites to be protected or conserved, and the level of protection desired.

6.4.3.1 Agriculture

These land types have high visual value as they create a sense of 'openness.' Unlike the more traditional definition of natural lands, these areas experience a higher degree of human intrusion as crops are harvested. However, these lands are recognized as an important and limited resource which can provide a community with both environmental and economic value. Today's land use decisions can greatly affect future production capabilities. The need to preserve productive farmland is extremely important for future generations.

In addition to agriculture's historic and economic role, vast expanses of farm land provide scenic open spaces which contribute to the overall health and welfare of residents, and which also help to promote tourism.

As development occurs, the pressure to convert agricultural land to other, more intensive land uses increases significantly. Displacement can occur as agricultural areas become more urbanized, and as uses change. Loss of agricultural lands affects the whole community. Many strategies may be employed to promote the goal of agricultural land preservation. Among those strategies are:

- 'Right-to-farm' regulations which discourage the infringement of non-agricultural land uses in agricultural areas;
- Land use policies and related strategies which promote value-added activities such as the processing of agricultural products, and which recognize the diverse nature of land uses necessary for agriculture to succeed;
- Property tax policies which do not penalize farmers when land values rise.

6.4.3.2 Forestry

Unlike agricultural pursuits, the harvesting of timber crops is perceived to have a greater impact upon the community. Some if the reasons for the differing impacts are the following:

- The life cycle of a timber harvest can take more than a generation, people come to view wooded areas as a more permanent part of the local landscape;
- The harvesting of timber can create significantly more noise than the harvest of more traditional crops;
- The weight of logging trucks can significantly degrade pavements;
- Wooded areas can provide significant and sometimes critical habitat for wildlife;
- Trees improve air quality by absorbing carbon dioxide and releasing oxygen in significant quantities;

- The root systems of trees stabilize soils, and thus help to prevent or minimize soil erosion; and
- Wooded areas can promote groundwater recharge.

However, there are several reasons forestry should be protected in Island County. It is important to the economy of Island County and can offer a local source of lumber to residents thereby reducing transportation impacts on the environment of obtaining lumber elsewhere. Timber lands, although they may be too disruptive for permanent wildlife habitat, may provide corridors for wildlife travel and migration. Preserving timber lands also prevents further development which has larger environmental impacts.

6.4.3.3 Wetland Protection

Wetlands provide a variety of functions which are important such as flood prevention, ground water recharge and filtering, and they provide critical habitat for plants and wildlife. However, wetlands vary significantly from site to site in terms of their values, functions and quality. The quality of a wetland must be taken into consideration in determining its priority status for conservation or protection. More detailed information regarding wetlands as critical areas, is contained within section 6.2.1.

6.4.3.4 Open Space Corridors

Open space corridors serve important functions for humans, providing walking, jogging or cycling paths, or scenic vistas. Additionally, they are useful as migratory corridors for wildlife.

The identification of open space corridors between cities and Urban Growth Areas is of particular importance in meeting the requirements of the GMA. MAP6E identifies existing open and natural areas which can serve as open space corridors. This map identifies the following open space components.

- Parks lands
- Designated forest lands
- Open space lands
- Whidbey Camano Land Trust lands
- Natural shoreline areas
- Documented Prairie and Oak Woodland Communities
- Critical areas (including streams, wetlands and unstable slopes
- Mapped trails

Island County will utilize this map to help identify priority areas for future acquisition that will continue to build important open space connections. Map 7L also addresses Habitat Conservation Priorities for Parks Acquisition which will be a key component of establishing connections between existing open space (identified in map 6E).

6.4.4 SIGNIFICANCE OF NATURAL LANDS IN ISLAND COUNTY

In 1997, the Trust for Public Lands retained the services of a national public opinion research company to assess the attitudes of Island County voters on the issue of natural land preservation. The survey revealed strong support for increasing local taxes to pay for many types of open space preservation. Voters also gave high priority to protecting watersheds and drinking water sources, natural lands, farmland, and forests threatened by development. Protection of the remaining Natural Lands appears to be an increasingly important issue for Island County residents.

Table 6-1. Natural Lands/Open Space Summary

	Acres	Percent	Parcels	Percent
Some Form of Development	64,912	49.7 %	37,448	73.8 %
Open Space	65,614	50.3 %	13,295	26.2 %
Temporary Status	64,319	98 %	13,098	98.5 %
Undeveloped	39,587	61.6 %	11,459	87.5 %
Permanent	1,295	2%	197	1.5 %

Although both agriculture and forestry have become a much smaller part of the Island County economy in their own right, the overall importance of natural resource lands to the economic and cultural character of Island County is not easily measured. Rolling farmlands and extensive forested tracts are important components of Island County's rural atmosphere. The rural "feel" that will attract more residents and tourists may depend on the continued existence and maintenance of these lands. In addition to their aesthetic values, these lands also play important roles in air and water quality and wildlife habitat.

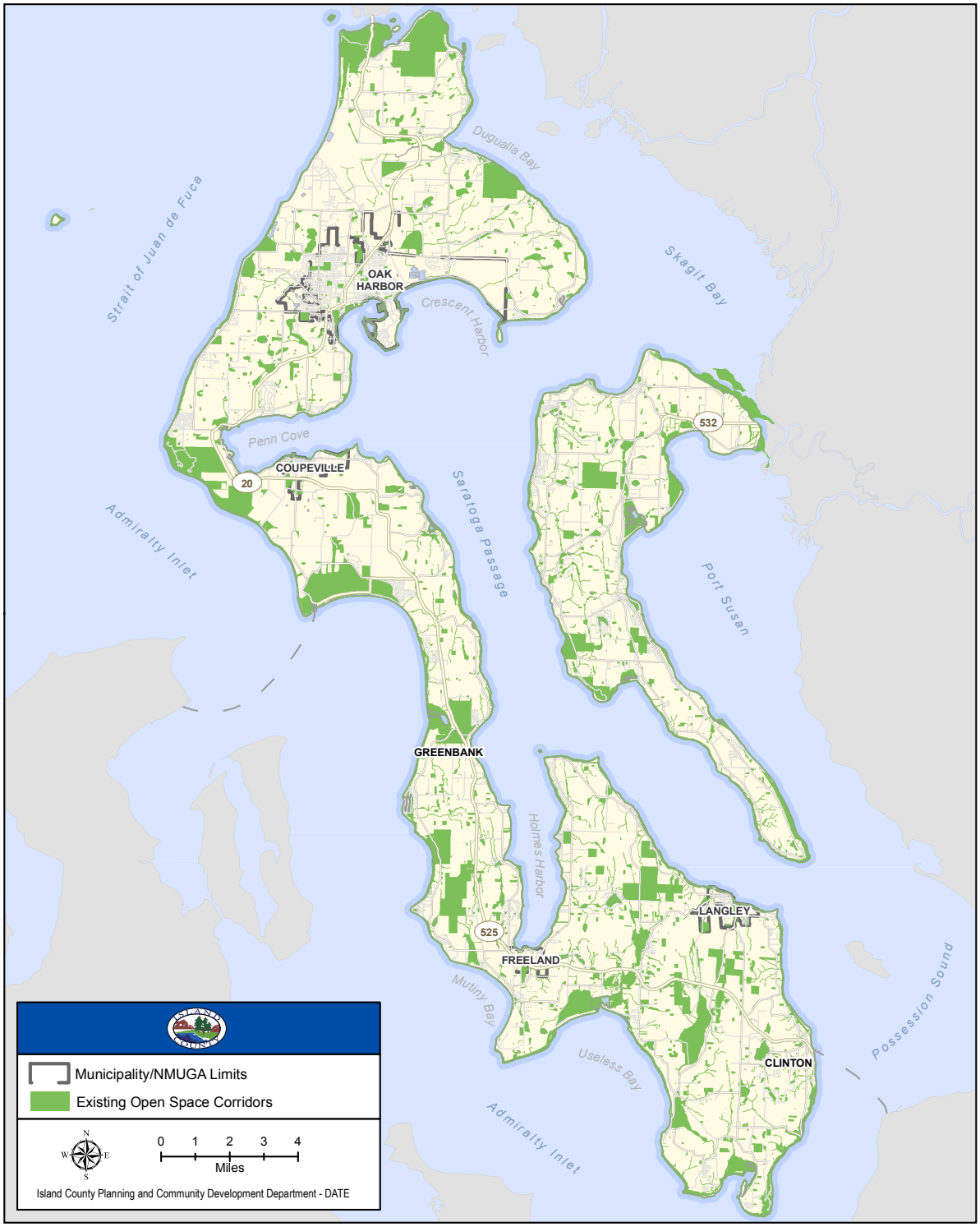
While the aesthetic and environmental benefits of mineral resource lands (such as gravel pits) are not on a level with agricultural and forested lands, extraction of mineral resources is important to the County's economic stability and diversity.

6.4.4.1 Agricultural Land Conservation

Conserving productive agricultural soils and encouraging farming operations as economically viable activity (and as an accepted way of life) is a major challenge in Island County.

Significant efforts have been made to preserve agricultural lands of key aesthetic and historical significance, and where viable farming is continuing, through public purchase of easements or of the land itself. Outside of those areas, farming activities are scattered and in comparatively small blocks. Much of the area which remains in production is not underlain by significant amounts of prime (Class II or III) soils. There are no unique soils in Island County as defined by the USDA Natural Resource Conservation Service. Farming which occurs on blocks under one ownership of 40 acres or more typically includes dairy, beef raising, vegetable and berry production and commercial seed production.

MAP 6E. Open Space Corridors



This map is intended to be used as a GUIDE. Island County is providing this information as a general geographic representation that should not be used for precise measurements or calculations. Some of the features on this map are not accurately depicted. Any user of this map assumes all responsibility for use and agrees to hold Island County harmless for liability, damages, or loss incurred by use of this information. Specific questions should be directed to Island County's Department of Planning and Community Development.

There is also a "micro-farming" industry which is growing up in Island County, where individuals conduct farming on parcels smaller than 20 acres in size, usually not deriving the majority of their income from that activity. Although the County wants to encourage such micro-farming activities, the scattered tracts on which it is occurring are not critical to its growth or continuance, since new entrants will select from the full range of rural parcels within the county, not simply from parcels currently in use for micro-farming. In light of the existing pattern of rural development in Island County and the remaining agricultural activities which continue in the County, the focus of agricultural protection must be on blocks within one ownership or management of 20 acres or larger. Of those lands, the issue becomes which lands are of long-term commercial significance and which are more appropriate for a rural agriculture designation, which will encourage agriculture to continue, but provide more long-term flexibility in the use of the land.

Table 6-2. Agricultural Lands

	Acres	Percent	Parcels	Percent
Commercial Agriculture Lands	4,094	3.3 %	184	0.4 %
Rural Agriculture Lands	6,379	5.1 %	413	1 %
In the Agricultural Tax Program	10,099	8.1 %	537	1.3 %

Table 6-3. Agricultural Economy

	Average Number of People
Employed in Crop Production (2013)	57
Employed in Animal Production & Aquaculture (2013)	105

Of the commercial products produced by Island County farms, dairy and livestock operations tend to be in significantly larger blocks of land under single ownership or management than are vegetable, berry and seed production areas. In examining the minimum block size under a single management which is feasible for dairy or livestock, however, it appears that as small as 40 acres may be economically feasible. Similarly, vegetable, berry or seed production on blocks of 40 acres or more appears to be economically viable. (Micro-farming of vegetables or flowers may occur on significantly smaller tracts, but preserving those tracts as a land base for the industry does not appear to have any significant bearing on the future viability of such operations.) Given the existing parcelization of the rural areas of the county, there is a long-term need to preserve blocks of 40 acres or more which are in active commercial production and which have soil quality to give them long-term commercial significance for agricultural production.

Reviewing the blocks of land being actively farmed under single management in Island County disclosed that many of those farms are not underlain by 50% or more prime soils. Some commercial farms with relatively little prime soil have been in operation in Island County for many years. It is assumed, however, that where the farm does not have prime soils, the current status of the farm as a commercial operation may be more a result of the skill or commitment of the current operator than the

long-term value of the land as a land base for commercial agriculture. As a result, the only farms that should be put in Commercial Agriculture designation automatically are those which meet three criteria: 1. The farm is a block of at least 40 acres in size, owned by a single farmer. 2. Fifty percent or more of the block is underlain by prime soils. 3. The block is in active commercial agricultural use. Farms which do not qualify for designation as Commercial Agriculture because of soil quality may volunteer to be put in that classification. All other parcels of 20 acres or more, within the agricultural tax program should be treated as agricultural lands of local importance and designated Rural Agriculture.

Small farms are gaining increased importance in the County. Specialty crops may be cultivated on lands of a size and with underlying soils not normally associated with larger scale farming. It is important that the County recognize the changing trends of farming in the County and provide for the appropriate land use regulations to allow them to prosper.

Incompatible development adjacent to agricultural lands increases pressures to convert these properties. Pressure comes from demands to suppress the "nuisance" factors created by farms, such as prohibiting livestock raising or limiting the storage and use of fertilizers. Right-to-farm measures must be adopted to enhance the farm economy. Under GMA, the County must ensure that uses on lands adjacent to resource lands do not interfere with continuing well-managed agricultural activities on resource lands. This may be accomplished by establishing a rural zoning density surrounding the resource lands; and, as required per RCW 36.70A.060, adopting regulations requiring that all users of new development within 300 feet of the property be notified of the proximity and impacts of the ongoing agricultural activities.

Rising taxation on adjacent land further accelerates conversion pressures. Farm land can be preserved as agricultural open space by implementing an array of programs, such as agricultural land zoning and placing the property in current use-tax programs.

6.4.4.2 Forest Lands Conservation

Forests in Island County are an important natural resource to land owners and local citizens. Forest lands contribute to the rural character, protect watershed functions, and provide wildlife habitat. Management of forest lands for timber production constitutes a valued element in the County's renewable natural and economic resource base, although it forms a small part of the local economy. Development pressure and widespread antipathy to commercial forest practices threatens the viability of forestry as a self-sustaining local industry.

The remaining timber land in Island County is in small and scattered blocks. The largest contiguous blocks of timber are found in South Whidbey Island, and the largest block is only 1,230 acres. That is significantly smaller than the minimum block sizes established by several Western Washington counties for forest lands of long-term commercial significance, and is much smaller than the blocks of commercial significance which exist in the counties of Western Washington where the forest industry is active.

Although the most prevalent site index (the measure of productivity for forest lands) in Island County is DF 111 (the average dominant or co-dominant Douglas fir at age 50 is 111 feet tall), that is not a high

site index in the Puget Sound basin. Forest lands are typically distinguished by Land Grade. Land Grades are established based upon timber species and site index. Site index is the productive quality of forest land, determined by the total height reached by the dominant and codominant trees on a particular site at a given age. Island County has no lands designated as Land Grade 1 or Land Grade 2. Only 70.9% of the county's lands are even Land Grade 3.

There are few industrial foresters left in Island County. The remaining forest landowners in Island County are non-industrial private forest owners (NIPF). Although a few of those owners actively manage their lands to increase growth and for continuous production, much of the land is subject to minimal management. There are currently no timber converting facilities on Island County. All timber which is harvested in the County is trucked off the islands for processing.

Table 6-4. Forestry Lands and Timber Production

	Acres	Percent	Parcels	Percent
In the Timber Tax Program	13,430	10.8 %	987	2.35 %
Owned by DNR	8	.000064 %	6	.00014 %

While not all of these lands are being actively managed for industrial timber production, it is likely that all forest lands which do meet the definition are in a timber tax program.

One of the greatest obstacles to timber lands management is pressure from adjacent land uses. There are very few, if any, forest lands that are not adjacent to or within sight of existing plats, urban areas, or major transportation routes, some of which are scenic highways. Changing attitudes towards resource use have brought intense political pressure on elected officials to limit the aesthetic and environmental consequences of timber management practices.

6.4.5 IDENTIFICATION AND MANAGEMENT OF NATURAL LANDS

Early identification of important natural land areas, and the use of proven management and environmental protection techniques can help to maintain and improve environmental quality by preventing unwanted environmental consequences. This approach is both environmentally and fiscally responsible, as the costs associated with remediation or correction of environmental problems can be significantly higher than costs for prevention.

Identification of natural lands should also include land within urban areas, such as towns, cities, Urban Growth Areas (UGAs) and Rural Areas of More Intensive Development (RAIDs). Efforts should be made to designate natural lands in sizes and patterns which will maximize their benefit to the community and environment. Natural lands, within urban areas may also perform the valuable function of acting as a buffer between differing land uses.

The ownership and extent of protection afforded to natural lands within the County is as varied as the many different types of natural lands which exist. Publicly-owned lands which may qualify as natural

lands may be owned or managed by State or Federal agencies, local governments, special purpose districts, or a combination of interest groups. Most recently, lands acquired through "joint venture" arrangements have protected significant sites by combining the resources of both public and private entities. The success of these efforts will determine the model for many future acquisitions.

6.4.6 ANALYSIS

6.4.6.1 Incentives

6.4.6.1.1 Tax Benefit Programs

State law permits counties to offer reductions in property taxes as an incentive in exchange for agreements to conserve or protect farm lands, forest lands, or open space.

On a countywide scale this occurs as tax shift, rather than a reduction, because the same total amount of taxes are collected, but the burden is instead shifted to other property owners. Island County has offered these incentives for many years, and the County Assessor's office has developed a record of success in implementing these programs. Currently, the County implements a Public Benefit Rating System (PBRS) program to incentivize private property owners to conserve natural lands (ICC 3.40). It is implemented by evaluating an applicant's property based on guidelines established by the County. A larger reduction is offered depending on the type of land conserved and its relative benefit to the public and the environment. When it comes to the tax reduction programs offered to forestry, the reduction is based on soil type (RCW 84.33 and WAC 458-40-540). The reduction for agriculture is a bit more complicated; while most counties use a Farm Advisory Board to value the land, Island County does not have a Farm Advisory Board (RCW 84.34). Instead the County uses long established values based on which region of the County the property is located.

The advantage to tax benefit programs is that they do not require the appropriation of new funds by the County to protect unique or desirable natural lands. In addition, the PBRS approach permits the County to focus on the protection of their identified priorities, without providing a larger benefit than needed to a less important property.

One of the most important benefits to a PBRS program is that it reflects the values and priorities established by County residents.

6.4.6.1.2 Purchase or donation of easements or other rights

In some cases, a valuable portion or characteristic of a site can be protected without limiting the use or development of the remainder of the parcel. In these instances, the purchase or acquisition of an easement, a conservation restriction or a development right may provide the full level of protection needed or desired by the public. Because the conveyance of an easement or any other interest in a parcel of land will affect the value of the property, the property owner is likely to also experience a

reduction in property taxes. Also, the conveyance of an interest in land by donation may result in an income tax deduction for the property owner.

The advantage to this approach is that only a portion of the value of a property is acquired, thus resulting in a lower public cost than the outright purchase of a complete interest in the property. Advantages to the property owner are that he or she is left with a valuable remainder of the property that can still be used, as well as possible property or income tax reductions.

6.4.6.2 Funding Strategies

Many approaches to conserve or protect natural lands will require the expenditure of public funds. Traditionally, grants from State or Federal agencies have been sought and utilized for this purpose. However, with increasing competition for these scarce resources, exclusive reliance on this type of funding sources will not succeed. In an era of limited public resources, Island County will need creative approaches to locating the needed funds. Among the sources that may be considered are:

6.4.6.2.1 Impact or mitigation fees

The authority to impose fees to mitigate the impact of development is discussed under regulatory approaches. Once collected, such funds may only be used in a manner which will mitigate the identified impact. If funds are collected to replace lost open space or recreational opportunities, they may then be used as part of an overall funding strategy to acquire, preserve or protect natural lands.

6.4.6.2.2 Grants or loans from foundations

Many foundations are dedicated to environmental stewardship, including the conservation of natural lands. Foundations may be established as independent organizations, or as a charitable extension of a corporation. In addition to foundations or charitable trusts, corporations will often provide direct funding for specific projects if such projects can benefit them or the communities in which they do business.

6.4.6.2.3 Dedicated revenues from local taxes

Subject to the approval of voters, the County may authorize the use of local real estate taxes to pay for the costs associated with acquiring or conserving natural lands. Some examples of uses of local taxes for this purpose are:

- Conservation Futures Fund
- Real Estate Excise Tax (REET)
- The Real Estate Environmental Endowment (TREE)
- Bonds
- Voter-approved Property Tax Levy

6.4.6.3 Collaborative Approaches

Island County benefits from the presence of a diverse array of citizens, organizations and agencies who are dedicated to the conservation, preservation or protection of natural lands. These organizations include park districts, port districts, private land trusts, and government agencies on all levels. It is often the case that no single agency or organization has the resources to protect important natural lands. It is thus becoming increasingly important for individuals and groups with similar interests to work together, to pool their resources to protect those qualities that they determine to be important.

6.4.7 CONTINUED PUBLIC INVOLVEMENT AND EDUCATION

To implement this plan, support from the public is essential. Public involvement should be encouraged throughout this plan's implementation. The County should encourage dialogue among its citizens, and it should make every effort to enhance communication between individuals, interest groups, special districts, and governments at all levels.

Public involvement and support begins with education. In order for these strategies to succeed, they must be accepted and actively supported by the citizens of the County. Experience in many jurisdictions throughout the country has shown that such support will be given only when the public understands the issues.

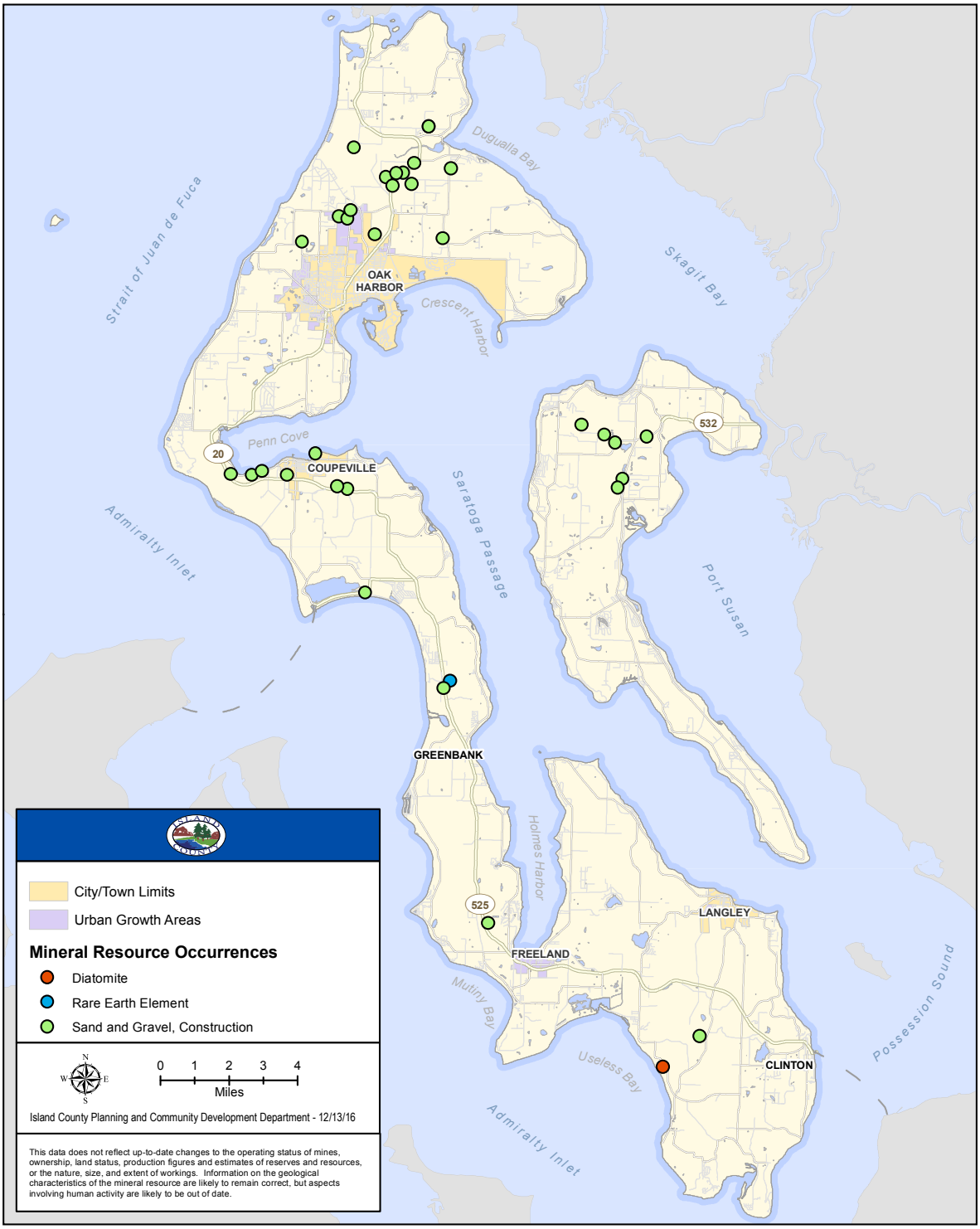
The most traditional form of public involvement has been through formal public hearings. Such hearings serve a useful purpose, but they are most helpful in educating and informing the public. One major drawback to the use of public hearings is that the format of the hearing often results in a rigid setting between citizens and public officials which doesn't allow for adequate dialogue. Less formal meetings that encourage a cooperative exchange of information are almost always more productive. Other educational methods includes speaking before interest groups and local service clubs, disseminating information through the internet, and providing informational materials to the public in easily-understood formats.

6.5 MINERAL LANDS

The GMA calls for long-term conservation of mineral resource lands to ensure current and future supplies of sand, gravel, and non-renewable minerals. These lands must be protected from urban encroachment while ensuring environmental protection through appropriate siting, operation, and reclamation standards. Mineral resource lands include those lands devoted primarily to mineral extraction or that have a known potential for long-term commercial extraction of minerals. Map 6F shows both existing sites and areas with known potential mineral deposits based on USGS information. Minerals are defined as sand, gravel, and valuable metallic substances.

Surface mining is considered a zoning overlay, applicable within Agricultural, Forestry and Rural Lands. This precludes unnecessary rezoning of land for mining and related mine activities and maintains the Comprehensive Plan's long-term land use vision beyond surface mining. However, as with agricultural

MAP 6F. Mineral Resources



and forest lands, GMA requires the County to establish designation and protective criteria for these lands.

6.5.1 EXISTING MINERAL LANDS

While designation of these sites is fairly straightforward, the issue of protecting them is more difficult. Existing sites have, however, already been permitted. Thus the conditions under which they operate have been established and are vested. Surrounding uses which grow up around existing sites can be assumed to have had fair warning of the existence of the site. Therefore, it is not clear that additional restrictions on surrounding lands are necessary. The County will require that all plats, short plats, development permits, and building permits issued for development activities on, or within three hundred feet of existing mineral lands contain a notice that the subject property is within or near designated mineral resource lands on which a variety of commercial activities may occur that are not compatible with residential development for certain periods of limited duration.

6.5.2 POTENTIAL MINERAL LANDS

Although the U.S. Geological Survey (USGS) has identified broad areas of potential gravel deposits in Island County (shown on Map 6F), it is unreasonable to designate those entire areas. They are in large part already developed with small lot sizes and incompatible land uses for any new mineral extraction. The USGS designation also provides no assurance that the land in fact has gravel under it, how deep such gravel deposits may be, or whether any gravel, if it exists, is present in commercial quantities. Thus restricting the use of land which may be in large enough undeveloped parcels to provide the ability to permit a new mineral extraction site, based on the USGS study, is unreasonable, because it is little more than speculative to suggest that the land has "potential" for mineral development. The County will revisit the issue of designation of potential mineral sites at such time as it has information upon which to make a reasonable judgment about designation of potential sites. For now, a permitting system and land use standards for surface mining that allows new proposals to be considered, on a case by case basis, is the best interim course of action available to the County.

6.6 GOALS AND POLICIES

GENERAL ENVIRONMENTAL QUALITY

Goal 1. Safeguard the natural environment as an integrated system where the land, water, and air resources interact creating a balanced environment for all life on the islands.

NR 1.1. Include the best available science in developing policies and development regulations to protect the functions and values of critical areas and give special consideration to conservation or protection measures necessary to preserve or enhance anadromous fisheries.

NR 1.2. Preserve Island County's environmental quality through the careful use of land, water and air resources.

NR 1.2.1. Extraction of mineral resources must minimize detrimental effects to the environment. (Other policies related to the siting and conservation of mineral lands are located in the Land Use Element.)

NR 1.2.2. Infilling of developed lands, Urban Growth Areas and areas of more intensive rural development will be encouraged in order to provide public facilities and services in the most efficient manner, as laid out in the Land Use Element.

NR 1.2.3. Island County encourages low-impact development practices.

NR 1.3. Conserve energy by encouraging efficient consumption and proper land use management.

NR 1.3.1. Government must provide leadership and education in employing energy conservation practices and the use of renewable energy technologies.

NR 1.3.1.1. Recycling of wastes and use of recycled or reused materials will be encouraged.

NR 1.3.1.2. Use of gray and treated black water will be encouraged, provided treatment design meets public health standards.

NR 1.3.2. Transportation systems and land use patterns must be designed to consider conservation of energy. Primary employers, commercial users and population centers will be clustered where possible to minimize worker, service and consumer travel, as laid out in the Transportation Element.

2016 UPDATES

NEW **New goals and policies are indicated with *red italicized* numbering**

REVISED **Goals and policies that have been revised (more than minor text edits) are indicated with *blue italicized* numbering**

NR 1.3.3. Government services will be sited to minimize consumer travel, as laid out in the Capital Facilities Element.

NR 1.3.4. Island County will encourage developments and structures with energy conservation technologies.

NR 1.4. High intensity lighting is discouraged, but where necessary will require that it must be shielded from adjacent properties and roads and shielded and directed down to reduce impacts to the dark sky.

AIR QUALITY

Goal 2. Preserve a high level of air quality.

NR 2.1. Emphasis will be given to alternative forms of transportation (public transit, car pools, bicycle and pedestrian trails) decreasing dependency on the single occupant automobile.

NR 2.2. Promote non-polluting alternatives to wood burning, such as solar heating and chipping instead of burning slash.

WETLANDS

Goal 3. Protect wetlands from a net loss in functions.

NR 3.1. Protect, preserve, and enhance wetlands to achieve no net loss of wetland functions.

NR 3.1.1. Avoid land development that causes loss of wetland functions. When there is no reasonable alternative, minimize and mitigate adverse impacts to wetland functions.

NR 3.1.2. Mitigation projects that add to existing wetlands or increase functions and values of degraded wetlands are preferred over efforts to create wetlands from non-wetland areas and should remain subject to wetlands protection regulations.

NR 3.1.3. Prohibit alteration of land that results in degradation of Category A wetlands, except for maintenance of existing public use or road or utility crossings that are the least environmentally damaging practical alternative or if necessary to permit reasonable use of the land. In such cases, minimize and mitigate the degradation.

NR 3.1.4. Implement non-regulatory wetlands protection measures such as acquisition and incentive programs and the public benefit ratings system.

NR 3.1.5. Provide continuity of natural systems by establishing protected corridors of native vegetation between wetlands systems using buffer averaging, density incentives, land acquisition, site design and other techniques.

NR 3.2. Consider economic, environmental, and cultural costs when evaluating proposals for wetland alterations, and recognize instances where development or alteration within or adjacent to wetlands is acceptable.

NR 3.2.1. Allow reasonable use of a property, provided all wetlands functions are evaluated, the least harmful alternative is pursued, and degraded functions are mitigated, on site as far as possible.

NR 3.3. Development will be located away from regulated wetlands by use of buffers and Planned Residential Developments.

NR 3.4. Maps, site-specific studies, and information collected by other agencies available for public review will be made readily accessible to potential and existing landowners, interested citizens, and development interests to aid in the protection of these areas.

NR 3.5. Alteration will occur only after careful consideration of the function of the area, the potential environmental costs of alterations, the sensitivity of the area to disturbance, and the intensity and potential risks associated with a proposed land use.

NR 3.6. When a violation of the policies and regulations of this area is identified, the enforcement action and severity of any penalty will be proportional to the nature and circumstances of the violation and the damage or risk to private and public resources.

NR 3.7. Overlay policies and development regulations shall be implemented in addition to those associated with the underlying land use designation. When there is a conflict in policy statements or development regulations, the more restrictive shall apply.

NR 3.8. Wetlands regulations are contained in ICC 17.02B and where applicable, ICC 17.05A.

FISH AND WILDLIFE HABITAT CONSERVATION AREAS OVERLAY

Goal 4. Protect Fish and Wildlife Habitat Conservation Areas.

NR 4.1. Develop specific criteria and processes to nominate, designate and classify habitats and species of local importance.

NR 4.2. Periodically review and update designations as new information on species viability and habitat needs becomes available.

NR 4.3. Conserve habitats necessary for continued reproductive success of designated species.

NR 4.3.1. Protect elements necessary to the survival of designated species, including habitat areas such as nests, breeding areas, nurseries from disturbance during critical life cycle periods.

NR 4.3.2. Encourage enhancement of degraded habitat areas.

NR 4.3.3. Based on the recommendations of Biological Site Assessment or Habitat Management Plan, provide physical buffers or timing restrictions around specific habitat areas used by designated species commensurate to the seasonal use of the area (where that is the case), the sensitivity of the species and habitat, the relative importance of the species and habitat, and the intensity of proposed and actual uses.

NR 4.3.4. Landscaping, screening, or vegetated buffers required through development review should retain, salvage, or re-establish native vegetation.

NR 4.3.5. Limit the use of non-native and prohibit the use of invasive plant species in Fish and Wildlife Habitat Conservation Areas.

NR 4.3.6. Encourage the provision of corridors and networks of native vegetation between protected habitat areas to minimize isolating and fragmenting designated wildlife habitat. Incorporate natural resource lands supporting uses such as forestry and agriculture into wildlife corridors and networks.

NR 4.3.7. Consult with State and Federal agencies when making wildlife management and protection decisions.

NR 4.3.8. Develop and implement programs to restore, rehabilitate, and acquire important habitat areas.

NR 4.4. Protect all streams.

NR 4.5. Protect near shore habitats, including commercial and recreational shellfish areas; kelp and eelgrass beds; herring, sand lance and smelt spawning areas.

NR 4.5.1. The design of new and replacement on site sewage systems shall meet the minimum requirements outlined in ICC 8.07C and where applicable, meet the siting requirements in ICC 17.05A

NR 4.5.2. Require buffers for new development adjacent to streams and marine habitats.

NR 4.5.3. Require preparation of farm plans for new agriculture uses in the Commercial Agriculture land use district.

NR 4.5.4. Require implementation of best management practices for new and existing agricultural activities.

NR 4.6. Maps, site-specific studies, and information collected by other agencies available for public review will be made readily accessible to potential and existing landowners, interested citizens, and development interests to aid in the protection of these areas.

NR 4.7. Regulation of these areas will take into consideration the function of the area, the potential environmental costs of alterations, the sensitivity of the area to disturbance, and the intensity and potential risks associated with a proposed land use.

NR 4.8. When a violation of the policies and regulations of this area is identified, the enforcement action and severity of any penalty will be proportional to the nature and circumstances of the violation and the damage or risk to private and public resources.

NR 4.9. Overlay policies and development regulations shall be implemented in addition to those associated with the underlying land use designation. When there is a conflict in policy statements or development regulations, the more restrictive shall apply.

NR 4.10. Fish and Wildlife Habitat Conservation Areas regulations are contained in ICC 17.02B and where applicable, 17.05A.

FREQUENTLY FLOODED AREAS

Goal 5. Protect public health, safety, and welfare, to minimize public and private losses due to flood conditions in frequently flooded areas.

NR 5.1. Reduce the potential for physical injury and damage to public and private property from flooding by minimizing impacts of upstream land uses.

NR 5.1.1. Protect natural water storage areas and drainage systems, including wetlands, streams and lakes, to reduce downstream flooding.

NR 5.1.2. Ensure new development above identified thresholds minimizes additional runoff by limiting impervious surfaces, unnecessary grading and compaction of soils, and preserving areas of undisturbed vegetation.

NR 5.1.3. Ensure new development above identified thresholds is accompanied by appropriate stormwater facilities, such as detention ponds, infiltration facilities, and other measures to maintain rates of runoff at pre-development levels.

NR 5.1.4. Impose standards for construction in frequently flooded areas to minimize the potential for physical injury and property damage.

NR 5.2. Maps, site-specific studies, and information collected by other agencies available for public review will be made readily accessible to potential and existing landowners, interested citizens, and development interests to aid in the protection of these areas.

NR 5.3. When a violation of the policies and regulations of this area is identified, the enforcement action and severity of any penalty will be proportional to the nature and circumstances of the violation and the damage or risk to private and public resources.

NR 5.4. Development regulations shall be implemented in addition to those associated with the underlying land use designation.

NR 5.5. The County's Surface Water Program will continue to work to review drainage, flooding, and stormwater run-off in the area and nearby jurisdictions to provide guidance for corrective actions to mitigate or cleanse those discharges that pollute waters of the state

NR 5.6. Regulations for frequently flooded areas are contained in the ICC 17.02B, as well as ICC 17.05A for the FEMA designated 1% flood zone.

GEOLOGICALLY HAZARDOUS AREAS (STEEP/UNSTABLE SLOPES)

Goal 6. Protect the public health, safety, and welfare from threats resulting from incompatible development being sited on or near steep and/or unstable slopes.

NR 6.1. Minimize damage to life, health, property, and natural resources caused by geological processes.

NR 6.1.1. Require thorough geotechnical investigation of localized conditions during the review of proposed development within areas of steep/unstable slopes. The amount of information required will be proportionate to the severity of the geologic hazard and the susceptibility of the proposed development.

NR 6.1.2. Encourage, and where appropriate, require use of special engineering, site design, and modified construction practices.

NR 6.1.3. Prohibit activities and land uses which cause or exacerbate existing hazardous geological conditions.

NR 6.2. Maps, site-specific studies, and information collected by other agencies available for public review will be made readily accessible to potential and existing landowners, interested citizens, and development interests to aid in the protection of these areas.

NR 6.3. Regulation of these areas will take into consideration the sensitivity of the area to disturbance, and the intensity and potential risks associated with a proposed land use.

NR 6.4. When a violation of the policies and regulations of this area is identified, the enforcement action and severity of any penalty will be proportional to the nature and circumstances of the violation and the damage or risk to private and public resources.

NR 6.5. Overlay policies and development regulations shall be implemented in addition to those associated with the underlying land use designation. When there is a conflict in policy statements or development regulations, the more restrictive shall apply.

NR 6.6. Steep and unstable slope regulations are contained in ICC 17.02B.

WATER RESOURCES

Goal 7. Manage and protect ground water and provide for resource protection through a common goal of non-degradation for existing and future residents of Island County.

NR 7.1. Protect the quantity and quality of groundwater resources for existing and future residents of Island County.

NR 7.1.1. Provide incentive programs to encourage participation in water conservation and aquifer recharge area protection programs.

NR 7.1.2. No development shall be allowed in areas of known ground water limitations as determined by the Health Department, unless it can be proven through objective well tests not to diminish water supplies or reduce water quality for existing users, per ICC 8.09 and related policies.

NR 7.1.3. Continue to carefully evaluate the hydrogeologic setting when making decisions on potentially contaminating land uses, and require use of Best Management Practices, hazardous material management plans, and other tools to help prevent contamination of ground water.

NR 7.2. The County will promote the retention and reuse of stormwater when it is the best and environmentally correct option.

NR 7.3. Public education concerning water conservation will be a continuing high priority.

NR 7.4. Reuse of water, recharge of aquifers and alternative storage systems will be encouraged.

Goal 8. Protect aquifer recharge areas from contamination and insure long term recharge potential.

NR 8.1. Consider acquisition of areas with particular value to ground water recharge.

NR 8.2. Continue efforts to identify areas with ground water problems such as seawater intrusion, groundwater depletion, and contamination from surface activities.

NR 8.2.1. Continue implementing data collection and analysis efforts as recommended in the Ground Water Management Program.

NR 8.2.2. Work with the Island County Health Department, Washington Departments of Health and Ecology to make best use of available data and new technology.

NR 8.2.3. Use site-specific data as it becomes available to determine locations of important recharge areas, areas of limited ground water availability, and areas of particular vulnerability to contamination from surface activities. Maintain, update, and coordinate this data to make the most effective use of the available information.

Goal 9. Ensure that Island County plans and develops in a manner that utilizes the best available information regarding water resources so that the resource will be preserved for current and future use.

NR 9.1. Maps, site-specific studies, and information collected by other agencies available for public review will be made readily accessible to potential and existing landowners, interested citizens, and development interests to aid in the protection of these areas.

NR 9.2. Watershed management planning will be cognizant of the need to preserve water supply while providing drainage facilities to protect the welfare and safety of the community.

NR 9.3. Development plans will contain plans for facilities to mitigate the impacts of increased runoff, stormwater drainage and flooding.

NR 9.4. The location and design of development will be carefully guided in order to minimize potential adverse impacts on the quality of ground and surface waters.

NR 9.5. Land use patterns and practices conserving the integrity of the natural watershed system will be encouraged.

Goal 10. Natural Lands Conserve a variety of natural lands, in both public and private ownership, for the enjoyment and economic benefit of current and future residents of Island County.

NR 10.1. Balance public and private interests in land.

NR 10.1.1. Correct any imbalance in public policies between open space protection and land development incentives through sound incentives for land conservation and careful analysis of the equity and real costs, both financial and environmental, of subsidizing development.

NR 10.1.2. Only consider divestment in publically owned open lands and resources if careful analysis shows that they contain little value as public conservation or recreational land.

NR 10.1.3. The proceeds from the selling or trading of publicly owned open lands and resources should be reinvested in conservation of land and resources, either directly or through a dedicated fund that yields continuing income streams devoted to land conservation.

NR 10.1.4. Respect property rights when developing regulations and policies around land conservation.

NR 10.1.4.1. Ensure that the designation of natural lands does not infringe on individual property rights.

NR 10.1.5. Develop objective criteria to prioritize public expenditures for the acquisition of fee simple or other interests in natural lands.

NR 10.2. Identify funding sources for the acquisition or protection of natural lands in accordance with the Parks and Recreation Element

Goal 11. Prioritize the protection of natural lands that coincide with other valuable resources, including ecological, historical, agricultural, recreational, and cultural lands.

NR 11.1. Maintain the important ecological functions and values of natural landscapes such as wetlands, stream corridors, shoreline systems and forests.

NR 11.1.1. Develop land use regulations and strategies such as cluster development and wetlands buffer requirements to identify and preserve important natural lands areas located on sites proposed for development.

NR 11.1.2. Prioritize the protection of natural lands that contain historic or archaeological sites, structures and landscapes which are important to local culture and retain the county's rural quality and character.

NR 11.2. Conserve agricultural lands for the continued profitable production of crops, timber and livestock.

NR 11.2.1. Discourage the conversion of properties identified as having prime farmland soils to non-agricultural uses.

NR 11.2.2. Look into possible strategies for protecting agricultural uses and maintaining the economic viability and sustainability of existing farms.

NR 11.3. Enhance recreational opportunities for County residents.

Goal 12. Protect natural, scenic, cultural, and historic lands as community assets.

NR 12.1. Maintain Island County's natural lands and open space to protect health and welfare, enhance the quality of life, preserve heritage, promote economic vitality and reduce the burden on government resources.

NR 12.2. When converting land to a use that requires water availability, Island County will prohibit major alterations to the land beyond the minimum necessary to do soil and water testing

prior to the issuance of a water right or other state or local authorized evidence of adequate potable water.

NR 12.3. Ensure residents have adequate access to open space areas, including land that contains natural areas, habitat lands, natural drainage features, and/or other environmental, cultural, and scenic resources.

Goal 13. Continue to promote active public involvement in the conservation or protection of important natural lands.

NR 13.1. Foster enduring voluntary land conservation through government assistance such as income and estate tax benefits, technical assistance grants and programs to purchase partial land interests.

NR 13.1.1. Continue implementing the Public Benefit Rating System as a property tax reduction incentive program for property owners to conserve open space.

NR 13.1.2. Maintain existing current use taxation programs for designated forest and agricultural lands.

Goal 14. Continue an open dialogue between Island County, incorporated jurisdictions, special purpose districts, non-profits, and other interested individuals and organizations working toward the conservation or protection of natural lands.

NR 14.1. Establish and maintain partnerships with State and Federal agencies, cities, towns, private non-profit conservation groups, port districts, school districts, tribes, foundations, corporations and individuals for the purpose of acquiring or protecting natural lands.

NR 14.2. Design and implement education programs to promote the benefits of conserving natural lands, and to introduce available and proposed current use taxation programs.

RESOURCE LANDS

Goal 15. Protect existing and ongoing resource management operations and preserving long-term commercial viability of those uses.

RURAL FOREST

NR 15.1. Measures shall be used to support silviculture industries.

NR 15.2. Encourage the conservation of lands suitable for forestry use and support forestry as an activity valued in the County.

NR 15.3. Cluster development or encourage low intensity uses to minimize site clearing and maintain future forestry use options

NR 15.4. Encourage forestry landowners to retain their lands in timber production and to utilize tax incentive programs.

NR 15.5. Support innovative public and private programs that provide foresters incentives to stay on the land.

NR 15.6. Encourage selective clearing and logging, as opposed to clearcutting, if forest harvesting is done in the Ebey's Landing National Historical Reserve.

COMMERCIAL AGRICULTURE

NR 15.7. Achieve agricultural preservation through:

NR 15.7.1. Right to farm and forest measures which protect the right to pursue farm and forestry activities.

NR 15.7.2. Support the continuation of preferential tax programs.

NR 15.8. Encourage an effective stewardship of the environment to conserve and protect Commercial Agriculture lands.

NR 15.8.1. Prevent or correct agricultural practices that produce non point source pollution of surface and groundwater.

NR 15.8.2. Take measures to minimize adverse impacts of agricultural activities.

NR 15.9. Protect agricultural operations from incompatible uses by using measures including, but not limited to:

NR 15.9.1. Ensuring that uses on adjacent lands do not interfere with continuing agricultural good management practices on resource lands;

NR 15.9.2. Setbacks and buffer strips should be on land within the development unless an alternative is mutually agreed on by adjacent landowners; and

NR 15.9.3. Public education concerning resource activities and the common benefits derived from them.

NR 15.10. Protect and promote related development such as farmers markets and roadside stands, cooperative marketing, and value added products, etc.

NR 15.11. Strengthen public disclosure of current adjacent agricultural activities by means of a "right to farm" notice on the deed, area maps, etc.

NR 15.12. Support the continued existence of agricultural lands by means of tax incentives or other appropriate financial aid or incentives.

NR 15.13. Coordinate agricultural land preservation policies with other jurisdictions, special districts and their respective programs.

NR 15.14. Coordinate agricultural land preservation policies with other County wide Planning Policies through:

NR 15.14.1. Correlating agricultural land preservation policies with Urban Growth Area policies and with public facility and service provision policies to prevent the extension of urban services to areas intended for continued agricultural use;

NR 15.14.2. Ensuring that public facility and service extension, even if not directly serving the agricultural lands, do not stimulate the conversion of agricultural land or make its preservation and protection more difficult.

NR 15.15. In order to assure the rights of agricultural land owners and to provide them reasonable flexibility to modify classification of their land, owners of agricultural land may request change of agricultural lands classification under certain circumstances.

NR 15.16. Cooperative agricultural production and marketing will be encouraged.

MINERAL LANDS

NR 15.17. Maintain and enhance natural resource based industries.

NR 15.17.1. Assure conservation of mineral resource lands.

NR 15.17.1.1. Assure that the use of lands adjacent to mineral resource lands do not interfere with the continued use, in accordance with best management practices, of lands designated for the extraction of minerals.

NR 15.17.1.2. Assure that the excavated land will have an ultimate economic use which will complement and preserve the value of adjoining land.

NR 15.17.1.3. Maintain the contribution of mining and processing operations to the Island County employment base.

NR 15.17.2. Island County will provide for title or plat notification for property owners within 300 feet of an existing approved mining operation.

NR 15.17.3. Regulate surface mining operations to minimize land use conflicts through the conditional use process.

NR 15.17.4. Apply standards which consider noise levels, light pollution, dust, visual screening, transportation impacts, hours of operation, water quality and groundwater protection and consumption, to new and expanding mine operations.

NR 15.17.5. Encourage the purchase of development rights, by the mine developer, of the area within 300 feet of the proposed mine, thus limiting use within that area to forestry, agricultural or designated open space, for the life of the mining operation.

NR 15.18. Allow extractive industries to locate where prime natural resource deposits exist, provided these sites are separated by buffers from existing residential areas and restored for appropriate reuse after removing the resource material.

NR 15.19. Discourage new residential uses from locating near active extractive sites, unless the residential developer provides adequate buffering.

NR 15.20. Operation of new and expanding sites will be regulated by land development standards to ensure proper siting and to minimize environmental impacts during operation.

NR 15.21. There is no minimum parcel size for existing operations. Future commercial sites generally should be 10 acres or greater to provide for adequate screening. Future small scale operations such as borrow pits may be less than 10 acres.

NR 15.22. On sites with disturbed areas of three acres or less, site reclamation will be carried out as soon as practical, as phased operations are completed, to prevent erosion and water quality degradation, and to return the site to a natural state. Reclaimed sites can be used for any of the uses permitted in the underlying land use designation.

NR 15.23. Surface mining is not considered to be a permanent use of the land. The land should be utilized consistent with the long term plans of the community, and mining allowed based upon performance standards.

NR 15.24. Overlay policies and development regulations shall be implemented in addition to those associated with the underlying land use designation. When there is a conflict in policy statements or development regulations, the more restrictive shall apply.

NR 15.25. Island County shall notify adjacent landowners of the existence of a surface mine and to the extent known, undeveloped mineral resources, acknowledging that surface mining is market dependent, and operations may be intermittent and more or less intense at times.

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