

ENVIRONMENTAL ELEMENT

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ENVIRONMENTAL INTRODUCTION

This element addresses the natural environment of Bainbridge Island. The Environmental Element includes *goals* and *policies* for all lands considered *critical areas* under the *Growth Management Act* (GMA), such as *wetlands*, *streams*, *aquifer recharge areas*, *fish and wildlife habitat*, *frequently flooded areas* and *geologically hazardous areas*.

This element also addresses natural resources such as forests, *agricultural lands* and *mineral resources* and provides *goals* and *policies* concerning air quality and the retention and development of the ~~Greenways~~ trails and *open space* systems.

Preserving and protecting the environmental resources and natural amenities of the Island is an important component for the vision of our city. Bainbridge Island contains interconnected forests, meadows, *wetlands* and *stream* systems, and saltwater shorelines, all of which provide wildlife habitat and scenic value, and some of which are protected as public parkland. The Island also contains *agricultural lands* and land areas that are sensitive due to geological conditions, slope and/or soil types.

As our Island grows and develops continued protection of varied *open space* areas and environmentally sensitive landscape is necessary to maintain the quality of life that is currently enjoyed on Bainbridge Island. Additionally, the unpredictable cumulative impacts of *climate change* in our region justify appeals to the *precautionary principle*. *Climate change* may require that the areas we protect and approaches we use to achieve our *goals* and *policies* will change.

Citizens of Bainbridge Island enjoy and value the Island's natural environment. The public parklands, *open spaces*, and other natural areas contribute to the quality of life on the Island. ~~The 2013 and 2014 National Citizen Surveys indicate that the citizens' support for preservation of environmentally sensitive areas and agricultural lands remains is high. It also indicates that~~ The community is supportive of providing pedestrian and bicycle trails and increased public access to shorelines.

Understanding the functions of the Island's valuable natural systems and what types of activities may impact these functions now and in the future as conditions change, is key to protecting these lands and natural resource areas. Retaining the viability and ecological functions of our natural systems and protecting those areas that are sensitive to development is paramount to maintaining a healthy natural environment and a high quality of life.

The goals and policies of the Environmental Element attempt to guide future action such that the quality of the Island's natural environment is protected and maintained and when possible, restored and improved. Future actions will incorporate the *best available science* as required by RCW 36.70A.172.

ENVIRONMENTAL VISION 2036

It is well understood that the integrity of our environment – the foundation of our quality of life – sets limits on the growth of our population and our economic life. We have faced some distressing events within the changing natural order and have survived as a stronger community.

A culture of stewardship has preserved and even improved the varied landscapes, forests and views that contribute so much to the sense of place that is valued here. Monitoring and regulation of the impacts of human activities on the Island's natural resources has been successful in maintaining their resilience. Public policies and many initiatives of citizens and businesses have been proactive in response to the anticipated effects of climate change, such as sea level rise, adapting where necessary and mitigating impacts to the extent possible.

GOALS & POLICIES

ENVIRONMENT

GOAL EN-1

Preserve and enhance Bainbridge Island's natural systems, natural beauty and environmental quality.

Policy EN 1.1

A primary goal of the *Comprehensive Plan* is protecting the Island's natural environment. When making land use decisions implement this goal. seriously consider the overall goal of the *Comprehensive Plan* in protecting the Island's natural environment.

Policy EN 1.2

Taking into account the present and future need to reduce the potential for personal injury, loss of life, or property damage due to flooding, erosion, landslides, seismic events, *climate change* or soil subsidence, properties adjoining or adjacent to *critical areas* must be developed in observance of the following principles in descending order:

- Avoid the impact if possible.
- Minimize or limit the degree or magnitude of the action and its implementation by using appropriate technology to avoid or reduce impacts.
- Reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action.
- Rectify by repair, rehabilitation or restoration of the affected environment.
- Compensate for unavoidable impacts by replacing, enhancing or providing substitute resources or environments.

Critical areas are identified in order to flag concerns during the review process and to make applicants aware of potential hazards or areas where development may be constrained. Compatible development will be allowed which avoids designated *critical areas*, minimizes the impact or mitigates potential problems through engineering, siting or design. Proposals will be examined on a case-by-case basis to allow for creative solutions and to assure that the special combinations of factors in a particular case are addressed.

Policy EN 1.3

Protect and enhance the natural systems and environmental quality of Bainbridge Island by continuing to build cooperative relationships between the City, citizens, landowners and other public, non-profit and private organizations.

Policy EN 1.4

~~Land use plans and development patterns should to the extent possible~~ Maintain and enhance natural systems and protect wildlife, fish resources and *open spaces* through *land use* plans and development patterns including tree retention and planting.

Policy EN 1.5

Create and maintain overlay maps that show the location of *agricultural lands*, *critical aquifer recharge areas*, *geologically hazardous areas*, floodplains, *streams*, *wetlands* and *fish and wildlife habitat*. ~~Additionally, the City shall utilize~~ Integrate the maps from the Bainbridge Island Climate Impact Assessment (2016).

Policy EN 1.6

Use the City's Shoreline Management Master Program to address and protect marine fish and marine shoreline habitat.

Policy EN 1.7

To protect the Island's ecosystems, prohibit the use of *neonicotinoid* pesticides.

Policy EN 1.8

Consider the potential impacts of *climate change* and its impacts in all decisions related to natural systems and environmental quality.

GOAL EN-2

Encourage sustainability in City Government operations.

Policy EN 2.1

In managing City government operations, take reasonable steps to reduce impacts to the environment and ecosystems upon which we depend. This ~~shall includes~~ recognizing and preparing for the impacts of *climate change*.

Policy EN 2.2

Seek to minimize the quantity and toxicity of materials used and waste generated for City facilities and operations through reduction, reuse and recycling. Use products made from recycled materials when available.

Policy EN 2.3

Where feasible, Use new technologies to reduce environmental impacts such as solar panels, electric and hybrid vehicles, high-efficiency lights and heating systems.

Policy EN 2.4

~~The City shall follow~~ Utilize integrated pest management practices.

Goal EN-3

Consider the impact on *critical areas* whenever land is subdivided.

Policy EN 3.1

~~The Design of lots shall be based on to protecting natural systems and avoiding or minimizing impact to *critical areas*.~~ In order to protect *critical areas*, the full *density* permitted under the zoning ordinance might not be achieved.

Policy EN 3.2

~~The Use of Transfer of Development Rights (TDRs) and Purchase of Development Rights (PDRs) to protect critical areas~~ should be explored.

Policy EN 3.3

Include in any lot created by *subdivision* of land ~~shall include~~ sufficient area to accommodate a building site outside of a *critical area* and its buffers.

Goal EN-4

Encourage sustainable development that maintains diversity of healthy, functioning ecosystems that are essential for maintaining our quality of life and economic viability into the future.

Policy EN 4.1

~~Planning and land development should~~ Employ conservation design methods and principles such as *low impact development* techniques for managing storm and waste water, *green building* materials, high-efficiency heating and lighting systems.

Policy EN 4.2

Create a program with effective mechanisms intended to offset development impacts to the Island's ecosystems.

FISH AND WILDLIFE**GOAL EN-5**

Protect and enhance wildlife, fish resources and ecosystems.

Policy EN 5.1

The protection and enhancement of *fish and wildlife habitat* and wildlife ~~networks~~ corridors, including Tribal Usual and Accustomed fishing areas, are ~~shall be an~~ integral components of the *land use* planning process.

Policy EN 5.2

The identification of *fish and wildlife habitat* ~~shall be is~~ based on an a current evaluation of the species of wildlife on the Island and the habitat requirements of these species now and in the future.

Policy EN 5.3

The protection and enhancement of mature trees, and fish and wildlife habitat ~~shall be among the~~ are important criteria used when evaluating the preservation of *open space* as part of development techniques such as clustering, *flexible lot design subdivisions* and *transfer of development rights* (TDRs).

Policy EN 5.4

Protect *fish and wildlife habitat* and limit fragmentation of habitat that physically and genetically isolates fish and wildlife populations by identifying an interconnected system of corridors that will provide continuous links east to west and north to south connecting larger tracts that are important habitat ~~identified as critical habitat~~.

Policy EN 5.5

Protect *wetlands* and riparian areas.

Policy EN 5.6

Undertake appropriate, adequate and timely actions to protect and recover state priority species, species listed under the federal *Endangered Species Act*, local species of concern and their habitats located within the City to 1) avoid *local extirpation* of such species from the lands or fresh waters or nearshore of the City and 2) contribute to the protection and recovery of such species throughout the greater region in cooperation with federal, state and other local agencies.

Policy EN 5.7

Work closely with Tribes, local conservation organizations and the Washington State Department of Fish and Wildlife (the agency with expertise to “preserve, protect, and perpetuate” wildlife resources of the state) in matters involving wildlife including identifying “priority *fish and wildlife habitat*.”

Policy EN 5.8

Develop in coordination with the Department of Fish and Wildlife, the Bainbridge Island Metropolitan Park and Recreation District and the Bainbridge Island Land Trust a program to educate the citizens of the Island, particularly those citizens who reside adjacent to priority wildlife habitat, on ways to utilize private property in a manner that will help protect and enhance wildlife habitat.

Policy EN 5.9

Consider *climate change* and its impacts in all decisions related to wildlife, fish resources and natural systems.

FREQUENTLY FLOODED AREAS

Regulation of *frequently flooded areas* is important for property and habitat protection. Floodplains are valuable natural resource areas that play a major role in the function of ecosystems. Floods are a natural process where rising water inundates otherwise dry land. Floodplains provide storage for floodwaters which reduces downstream erosion and improves downstream water quality. Floodplains allow infiltration for *aquifer recharge* and provide important habitat necessary for the survival of many invertebrate, fish and wildlife species. Flood courses can change naturally over time. As impervious development covers more land surface and encroaches on floodplains, damage increases to both the built and natural environments.

The Federal Emergency Management Agency (FEMA) has designated frequently flooded areas as areas that have a 1% or greater chance of flooding in any given year. Also known as the 100-year flood, this level was chosen to manage flooding as a compromise between an economic use of the land and an understanding of the natural benefits of flooding. *Frequently flooded areas* are *Critical Areas*.

GOAL EN-6

Protect the natural functions of frequently flooded areas.

Policy EN 6.1

Minimize public and private losses due to flood conditions by limiting development in *frequently flooded areas* as shown on the Flood Insurance Rate Maps. Educate property owners and residents in proximity to *frequently flooded areas* about vulnerability over time.

Frequently flooded areas can and do migrate over time. Increased development may affect the level of occurrence and location of frequently flooded areas. The Flood Insurance Rate Maps adopted by the City were originally produced in 1975 and updated in 1977. ~~Flood hazard maps~~ should and need to be kept current.

Policy EN 6.2

Limit the alteration of natural floodplains, *stream* channels and natural protective barriers that help accommodate, dissipate, or channel floodwaters.

Policy EN 6.3

Emphasize nonstructural methods such as setbacks and vegetation, to prevent or minimize flood damage.

Policy EN 6.4

Locate public facilities such as sewer and water lines ~~should be located~~ outside of *frequently flooded areas* and with consideration of future sea level rise in order to minimize damage to both the *public facility* and the natural environment. *Public facilities* may be located within *frequently flooded areas* only if no environmentally preferable alternative exists to mitigate environmental concerns. Additional development is not encouraged in *frequently flooded areas*.

SEA LEVEL RISE**GOAL EN-7**

Anticipate and prepare for the consequences of sea level rise.

Sea level rise may happen as the result of natural or human activity such as geologic subduction or *climate change*. Here in the Puget Sound we experience the effects of both the geologic and climatological forces. Cumulative sea level rise has serious implications for the shorelines and lowland areas of the Island such as beach and bluff erosion and loss of intertidal zones. These areas serve such purposes as nursery habitat, feeding grounds for fish and fowl, stormwater collection and water filtration.

Policy EN 7.1

Consider the implications of sea level rise in all relevant decision-making by using regional sea level rise projections and shoreline instability maps (as provided by the WA Department of Ecology and utilized and interpreted with the Bainbridge Island Climate Impact Assessment).

Policy EN 7.2

Coordinate with Tribal, Federal, State and local agencies to address issues related to sea level rise.

GEOLOGICALLY HAZARDOUS AREAS**GOAL-EN-8**

Protect *landslide hazard areas* and *erosion hazard areas* from the impacts of use and development for the protection of public safety, property and the environment.

Policy EN 8.1

Avoid land uses on *landslide hazard areas* and *erosion hazard areas* ~~should be avoided~~. If the hazard caused by development can be mitigated, then design land use ~~should be designed~~ to prevent damage to persons or property and environmental degradation and to preserve and enhance existing vegetation to the maximum extent possible.

Policy EN 8.2

As the degree of slope increases, decrease development intensity, site coverage, and vegetation removal ~~should decrease~~ to mitigate problems of drainage, erosion, siltation and landslides.

Policy EN 8.3

In order to protect *landslide and erosion hazard areas* from damage during construction and from intrusion following construction, an analysis by a geotechnical engineer and a certified arborist may be required.

Policy EN 8.4

Construct roads, driveways and utility corridors ~~should be constructed~~ to preserve the integrity of the existing land forms, drainage ways, and natural systems minimizing impact to the *landslide and erosion hazard areas*. Utilize common access drives and utility corridors ~~should be utilized~~ where feasible.

Policy EN 8.5

Allow clearing, grading or filling on sloped areas containing *landslide hazard areas and erosion hazard areas* ~~shall only be allowed~~ only when other alternatives are not feasible. Such activity ~~should be~~ is limited to the dry period of the year.

Policy EN 8.6

Any alteration of a *landslide hazard area* or *erosion hazard area* may not increase the rate of surface water discharge or sedimentation and may not decrease slope stability on adjacent property. Landscape the altered area ~~shall be landscaped~~ to provide erosion control.

GOAL EN-9

Identify and map areas that are at risk due to seismic activity and regulate activities in these areas for public safety and property protection.

Policy EN 9.1

Consider the best available science ~~shall be considered~~ in mapping these high-risk areas and in regulating and permitting *land use* activities in areas that have a heightened risk from earthquakes such as liquefaction areas and fault rupture zones, tsunami or other geological hazards.

Policy EN 9.2

Consider tsunami hazards in regulating *land use* activities on Bainbridge Island.

Policy EN 9.3

Consider seismic activity and the potential for earthquake-induced landslides ~~should be considered~~ in the determination of *geologically hazardous areas*. Areas that are stable under normal conditions can become landslides during earthquake events.

Policy EN 9.4

The City should Provide information and educational opportunities to the citizens of Bainbridge Island on the hazards posed by seismic events.

AIR QUALITY**GOAL EN-10****Protect and promote clean air.****Policy EN 10.1**

These policies address the need for clean air to protect the Island's residents and ecosystems, under current and future climatological conditions. For example, increasing regional air temperatures are increasing air pollution components such as ground level ozone and smog.

Policy EN 10.2

Promote *land use* patterns and transportation policies that ensure that the Island's contribution to regional air quality is consistent with or better than State and Federal standards.

Policy EN 10.3

Encourage the retention of existing trees and vegetation and the planting of new trees and vegetation that provides natural filtration of suspended particulate matter, removes carbon dioxide and improves air quality.

Policy EN 10.4

~~Consider~~ **Address** the impacts of new development on air quality as a part of the environmental review process and require mitigation when appropriate.

Policy EN 10.5

Cooperate with the Puget Sound Clean Air Agency in providing information to the community about available and innovative emission controls for residential, commercial, vehicular and light industrial use.

Policy EN 10.6

~~Strive to~~ **Ensure** beneficial indoor air quality in all renovations and new construction of City-owned facilities and promote design choices that enhance beneficial indoor air quality in private construction.

Policy EN 10.7

Reduce the quantity of airborne particulates through regulations for dust abatement of construction sites and street sweeping programs in areas with concentrations of both vehicular and pedestrian traffic.

Policy EN 10.8

Maintain nuisance regulations to minimize offensive odors generated by commercial or industrial uses in proximity to *residential uses*.

Policy EN 10.9

Encourage the retrofit or replacement of non-certified wood stoves with certified appliances.

Policy EN 10.10

Transportation and energy production diminish air quality when power is produced with fossil fuel combustion, therefore to Maintain and improve Island air quality, the City ~~should consider and by promoting~~ the development of carbon free *infrastructure*.

NOISE**GOAL EN-11**

Promote the reduction of cumulative invasive noise impacts.

Policy EN 11.1

Review the effectiveness of current noise standards and modify these standards as necessary to ensure acceptable noise levels.

Policy EN 11.2

Promote actions such as equipment modifications and operational requirements that reduce noise from transportation modes, construction sites, industrial uses and commercial business establishments.

Policy EN 11.3

The City ~~should~~ Work with the Federal Aviation Administration to design flight paths and schedules that minimize the airplane noise over Bainbridge Island.

GREENHOUSE GASES**GOAL EN-12**

Reduce *greenhouse gas* emissions through compliance with federal, state and regional policies while developing local strategies to reduce emissions further.

Policy EN 12.1

Support and implement climate pledges and commitments undertaken by the City and other multi-jurisdictional efforts to reduce *greenhouse gas* emissions, address *climate change*, sea-level rise, ocean acidification and other impacts of changing global conditions.

Policy EN 12.2

Facilitate the improvement and convenience of low carbon mass transit and increased car-sharing, cycling, walking and the development of alternative vehicle infrastructure (e.g., charging stations) to reduce *greenhouse gas* emissions.

Policy EN 12.3

Strive for reduced *greenhouse gas* emissions through coordinated *land use* and transportation planning and management including assessment and mitigation for air quality impacts.

Policy EN 12.4

Establish benchmarks, metrics and targets for reduction of *greenhouse gas* emissions, assess current conditions and progress in reducing *greenhouse gas* emissions from municipal, commercial, residential and transportation-related land uses, projects and programs.

Policy EN 12.5

Promote energy conservation measures by all government entities including:

- Retrofitting offices, shops and garages with high-efficiency lighting;
- Converting vehicles to hybrid fuel vehicles as replacement or new vehicles are acquired;
- Converting traffic signals and lighting to LED; and
- Adopting incentive programs and design standards that encourage the employment of renewable energy sources and energy efficient appliances on the Island.

Policy EN 12.6

Promote the installation of residential solar panels and the adoption of other energy saving technologies such as LED lights, heat pumps and insulation.

DARK SKIES**Goal EN-13**

Preserve and enhance the view of the dark sky by controlling glare and light trespass.

Policy EN 13.1

Enforce *development regulations* that provide standards for appropriate lighting practices and systems that will curtail the degradation of the nighttime visual environment.

INVASIVE SPECIES**Goal EN-14**

Collaborate with the Kitsap County Noxious Weed Board and other relevant agencies and organizations to develop and maintain a plan to remove and control invasive plant and animal species, as well as prepare for vulnerability to future invasive plant and animal species resulting from climate change and international commerce.

Policy EN 14.1

Coordinate with public agencies and nonprofit organizations to remove-control and where feasible, eradicate invasive plant species from public lands.

Policy EN 14.2

Improve public outreach to encourage residents to remove and control and where feasible, eradicate invasive plant species on private property.

Policy EN 14.3

Tree clearing permits may require a surety bond for larger-scale tree clearing to cover the costs of invasive species removal in the eventuality that land is not properly managed and result in invasive weed infestation.

AGRICULTURAL LANDS

NOTE: Consider deleting this introductory section

~~The protection and support of existing farms and the preservation of prime agricultural lands and farms of local significance are important goals of the residents of Bainbridge Island. Agricultural lands provide open space, habitat, groundwater recharge, local food production with fewer transportation impacts and cultural value. Their protection can augment sustainability goals.~~

~~Farming on the Island provides economic, social, aesthetic and nutritional benefit to the community. Equally important, protection of *agricultural lands* will enhance the cultural and economic diversity and help retain the Island's rural character. *Open space* dedicated to agriculture also conserves environmental resources.~~

~~Farm operations on the Island are unique. 40 small *farms* ranging in size from 1 acre to 40+ acres, are mostly dispersed throughout the Island with some clustering in a few locations. The specialty, high-intensity, small *farms* will continue to be an important adjunct to farming in the future.~~

~~The City currently owns sixty acres of public farmland managed under contract by a non-profit organization. That organization also works with private landowners, seeking ways to increase the amount of land used for food production, and to conserve the land for agricultural uses over the long term. In order to preserve public farmland, the City is designating its public farmland properties as *Agricultural Resource Land (ARL)*. Other non-profits are also involved in promoting agriculture on Bainbridge.~~

~~Agriculture is a vulnerable enterprise in any rapidly growing area. As land values continue to rise the economic viability of farms on Bainbridge Island depends on the farmers' industry and ingenuity and on public policies that provide incentives and tax relief.~~

GOAL EN-1519

Conserve and protect the Island's existing agricultural uses and increase the acreage of permanently protected and productive farmland by using preservation methods including incentive-based programs.

Policy EN 15.1 19.1

Provide owners of farms should have the option of participating in the *transfer of development rights (TDRs)/purchase of development rights (PDRs) program*.

Policy EN 15.2 19.2

Inventory land currently used and/or potentially available for agriculture, including community gardens.

Creating a specific area or areas for future *agricultural operations* aims to limit conflicts with *residential uses* and would provide an opportunity for *farm* operations within the area to share resources such as *farm* equipment, processing facilities, retail sales area and road access.

Policy EN 15.3 ~~19.3~~

Where land that had historically been used for agriculture is being subdivided for residential development, a portion *should* be reserved for agricultural use or community gardens. Existing traditional *agricultural lands* *should* be included in the *open space* of clustered development.

Policy EN 15.4 ~~19.4~~

Develop a procedure to allow other public and private property owners to designate their properties *Agricultural Resource Land*.

Policy EN 15.5 ~~19.5~~

Utilize the Floor Area Ratio (FAR) Farmland/Agriculture fund for viable farmland preservation projects.

Policy EN 15.6 ~~19.6~~

Prioritize food production on public farmland to address long-term food security for Island residents.

Policy EN 15.7 ~~19.7~~

Encourage the use of native and/or regionally produced edible plants for use in required landscape and roadside vegetation buffers.

Policy EN 15.8 ~~19.8~~

Ensure protection of the Island's *aquifers* and streams by promoting agricultural uses that are not water intensive, and agriculture practices that protect water quality.

Policy EN 15.9 ~~19.9~~

Work with the Conservation District and nonprofits to encourage farming that accounts for changing Island conditions with regard to hydrology, temperature and other climatologically influenced factors. Select Promote crops and commodities that are adapted to future conditions and do not rely on chemical amendments that may adversely impact future water availability.

GOAL EN-16 ~~20~~

Minimize conflict between agricultural and non-agricultural uses.

Policy EN 16.1 ~~20.1~~

Design and locate development adjacent to areas designated or registered as agricultural land ~~should be designed and located so as~~ to avoid or minimize potential conflicts with agricultural activities.

Policy EN 16.2 ~~20.2~~

Require notification on all plats, development permits and building permits of the existence of any registered agricultural lands within 300 feet of the development.

Policy EN ~~16.3~~ 20.3

Maintain the Right to Farm Ordinance.

Policy EN ~~16.4~~ 20.4

Cooperate with the Kitsap Conservation District to promote use of Best Management Practices.

GOAL EN-~~17~~ 21

Encourage and support farming as an economically viable option for *land use* and as a means to providing diversity of lifestyle.

Policy EN ~~17.1~~ 21.1

~~Encourage small-scale farming should be encouraged.~~

Policy EN ~~17.2~~ 21.2

~~The City should~~ Work with the Kitsap County Assessor's office to educate the farming community about the availability of the Tax Reduction Program.

Policy EN ~~17.3~~ 21.3

Elevate and encourage public appreciation and awareness of *farms* by allowing tours of *farms* and farming facilities.

Policy EN ~~17.4~~ 21.4

Permit the production, processing and marketing of *farm* products from Island *farms*.

Policy EN ~~17.5~~ 21.5

Support the Farmers' Market and promote the sale of local *farm* products in other locations.

Policy EN ~~17.6~~ 21.6

~~Minimize the~~ parking requirements for agricultural uses ~~should be minimized~~ (i.e., number of parking spaces, paved parking and landscaping requirements), due to the seasonal nature of the marketing of *farm* products.

Policy EN ~~17.7~~ 21.7

Support agricultural tourism that ensures compatibility with surrounding uses.

Policy EN ~~17.8~~ 21.8

~~Consider Establishing~~ a Citizen Advisory Group on Agriculture comprised of citizens representing farmers, non-profit organizations involved with local agriculture and businesses with an interest in local *farm* produce.

FOREST LANDS

Few large tracts of second-growth timber remain on the Island and some of these could be converted to other uses in the near future. As of August 2015, there were approximately 529.34 acres classified as timberlands by the Kitsap County Tax Assessor. Forty-six parcels are classified as *Forest Land* including the 42-acre Port Madison watershed. These *forest lands*, together with tracts that are protected by conservancy agreements and other privately owned forested acres that may not be classified as timberlands, have immeasurable value within the Island-wide conservation strategy.

GOAL EN-18 22

Encourage the retention of *forest land* and multiple-aged forests since healthy forests provide many ecological benefits to all forms of life on the Island and help mitigate climate change.

Policy EN 18.1 22.1

Encourage stewardship of forests, to promote forest health, provide for selective harvest of merchantable timber and protect *critical areas*. Department of Natural Resources and City regulations apply when converting *forest land* to agricultural, residential or other uses.

Policy EN 18.2 22.2

When acreage classified as timberlands or *forest land* is being converted to residential or agricultural use promote protection of the most valuable trees and forested area and compact development to limit the extent of clearing and soil disturbance.

FORESTS & TREES

GOAL EN-19 23

Retain, conserve and improve portions of the community forests where people live, work and learn through public education and through management and protection measures that will help to conserve these resources.

The community forests on Bainbridge Island are comprised of the street tree system in the urban center, trees in parks and on other public lands, and trees and forested areas on private properties throughout the Island. Bainbridge Island's urban and rural forests have historically been a source of community identity and civic pride. Trees and forested areas are essential to the Island's conservation strategy.

It is recognized that in addition to biological benefits a community forest provides a significant return by creating appealing streets and *neighborhoods* with resulting higher property values in the built environment. In addition, trees and forests provide buffering and screening between differing *land uses*, reduce surface water *runoff*, improve air and water quality, help maintain soil and slope stability, provide wildlife habitat, reduce energy consumption by providing shade and functioning as windbreaks, and sequester carbon dioxide.

Policy EN 19.1 ~~23.1~~

Encourage protection, restoration and maintenance of existing vegetation that has environmental, wildlife habitat and aesthetic qualities including tree groves, significant tree stands, forested hillsides and vegetation associated with *wetlands, stream corridors, and riparian areas, steep slopes and areas subject to erosion.*

Policy EN 19.2 ~~23.2~~

Utilize various tools to understand and monitor existing conditions and changes of Island-wide tree cover, significant tree groves and significant individual trees over time. ~~The City should Undertake~~ periodic tree inventories to assess canopy cover and health of forested areas and significant trees.

Policy EN 19.3 ~~23.3~~

In pre-application conferences and as part of the review of development applications, encourage property owners to maximize the preservation of trees and to maintain and enhance the cohesive quality of tree groves through appropriate site design and construction methods as well as *open space* dedication of areas that contain these resources.

Incentives such as a building height bonus could be used to encourage tree preservation during site design. ~~Update~~ Guidelines for Commercial and Mixed Use Projects including Guidelines for Lynwood Center, Island Center and Rolling Bay ~~should be updated~~ to incorporate tree preservation practices and policies.

Policy EN 19.4 ~~23.4~~

~~Implement a~~ community-wide program to educate Island residents about the functions and values of trees ~~should be put into effect.~~

Policy EN 19.5

Consider partnering with the Bainbridge Island Land Trust ~~and other organizations and re-establishing a Community Forestry Commission. The Community Forest Management Plan (2006) and the Community Forest Best Management Practices Manual (2007, 2010), with appropriate revisions, could form the basis for an ongoing program of outreach and education.~~

Policy EN 19.6 ~~23.5~~

Encourage Best Management Practices to protect and enhance community forests.

Policy EN 19.7 ~~23.6~~

~~Encourage activities~~ that enhance the community's awareness of the value of trees ~~and the a-~~ community forest ~~should be encouraged.~~

~~Focused activities might include celebration of Arbor Day; developing a volunteer tree protection program that identifies and conserves trees that are significant due to size, species, or historical or cultural importance; and provision of expert arborist resources where necessary.~~

~~A program, such as a "Heritage Tree Program" would be voluntary on the part of the property owner and would include criteria that must be met to be considered as a resource important for recognition and protection. A Heritage Tree Program might for example, require that special consideration be given to preservation of Heritage Trees during site development.~~

Policy EN 19.8 23.7

The City *should* **Develop** street tree programs for the commercial and mixed-use zones, and the more densely developed residential zones.

MINING**GOAL EN-20 24**

Manage the remaining mining operations on the Island.

Bainbridge Island has had a history of mining, predominantly sand and gravel. While multiple sites have been reclaimed there are still two active mining operations on the Island. One operation functions as a recycling/mulching facility and another as a sand mining operation.

Policy EN-20.1 24.1

Rigorously control the excavation of sand and gravel and other minerals.

ENVIRONMENTAL IMPLEMENTATION

To implement the goals and policies in this Element, the City must take a number of actions, including adopting or amending regulations, creating outreach and educational programs, and staffing or other budgetary decisions. Listed following each action are several of the comprehensive plans policies that support that action.

HIGH PRIORITY ACTIONS

EN Action #1 When updating the City's Critical Areas Ordinance, integrate the precautionary principle and mitigation sequencing to protect and preserve natural resources

Policy EN 1.2

Taking into account the present and future need to reduce the potential for personal injury, loss of life or property damage due to flooding, erosion, landslides, seismic events, *climate change* or soil subsidence, properties adjoining or adjacent to *critical areas* must be developed in observance of the following principles in descending order:

- Avoid the impact if possible.
- Minimize or limit the degree or magnitude of the action and its implementation by using appropriate technology to avoid or reduce impacts.
- Reduce or eliminate the impact over time by preservation and maintenance operations during the life of the action.
- Rectify by repair, rehabilitation or restoration of the affected environment.
- Compensate for unavoidable impacts by replacing, enhancing or providing substitute resources or environments.

Critical areas are identified in order to flag concerns during the review process and to make applicants aware of potential hazards or areas where development may be constrained. Compatible development will be allowed which avoids designated *critical areas*, minimizes the impact, or mitigates potential problems through engineering, siting, or design. Proposals will be examined on a case-by-case basis to allow for creative solutions and to assure that the special combinations of factors in a particular case are addressed.

Policy EN 5.6

Undertake appropriate, adequate and timely actions to protect and recover state priority species, species listed under the federal *Endangered Species Act*, local species of concern and their habitats located within the City to 1) avoid *local extirpation* of such species from the lands or fresh waters or nearshore and 2) contribute to the protection and recovery of such species throughout the greater region in cooperation with federal, state and other local agencies.

Policy EN 6.1

Minimize public and private losses due to flood conditions by limiting development in *frequently flooded areas* as shown on the Flood Insurance Rate Maps. Educate property owners and residents in proximity to *frequently flooded areas* about vulnerability over time.

Frequently flooded areas can and do migrate over time. Increased development may affect the level of occurrence and location of frequently flooded areas. City Flood Insurance Rate Maps originally produced in 1975 and updated in 1977, and need to should be kept current.

Policy EN 8.1

~~Avoid land uses on landslide hazard areas and erosion hazard areas should be avoided.~~ If the hazard caused by development can be mitigated, then design land use should be designed to prevent damage to persons or property and environmental degradation and to preserve and enhance existing vegetation to the maximum extent possible.

EN Action #2 Integrate sustainability and conservation into regulations.

Goal EN-4 Encourage sustainable development that maintains diversity of healthy, functioning ecosystems which are essential for maintaining our quality of life and economic viability into the future.

Policy EN 4.1

~~Planning and land development should~~ Employ conservation methods and principles such as *low impact development* techniques for managing storm and waste water, *green building* materials, high-efficiency heating and lighting systems.

EN Action #3 Consider *climate change* in all relevant City decisions, including capital projects, budgeting, staffing, and program creation.

GOAL EN-2 Encourage sustainability in City Government operations.

Policy EN 1.8

The City will consider the potential impacts of *climate changes* and its impacts in all decisions related to natural systems and environmental quality.

Policy EN 2.1

In managing City government operations, take reasonable steps to reduce impacts to the environment and ecosystems upon which we depend. This ~~shall include~~ recognizing and preparing for the impacts of *climate change*.

Policy EN 6.4

Locate public facilities such as sewer and water lines ~~should be located~~ outside of *frequently flooded areas* and with consideration of future sea level rise, in order to minimize damage to both the *public facility* and the natural environment. *Public facilities* may be located within *frequently flooded areas* only if no environmentally preferable alternative exists to mitigate existing environmental concerns. Additional development is not encouraged in *frequently flooded areas*.

Policy EN 10.10

Transportation and energy production diminish air quality when power is produced with fossil fuel combustion. ~~therefore to~~ Maintain and improve Island air quality, the city should consider and by promoting the development of carbon free *infrastructure*.

EN Action #4 Increase agriculture on Bainbridge Island by improving information and creating new programs while advocating for farming practices that protect water quality and quantity. Consider creating a new “Agricultural Resource Land” (ARL) designation, and consider designating City-owned farmland ARL.

Policy EN 15.2

Inventory land currently used and/or potentially available for agriculture, including community gardens.

Policy EN 15.4

Develop a procedure to ~~allow other~~ public and private property owners to designate their properties *Agricultural Resource Land*.

Policy EN 15.6

Prioritize food production on public farmland to address long-term food security for Island residents.

Policy EN 15.8

Ensure protection of the Island’s aquifers and streams by promoting agricultural uses that are not water intensive and agriculture practices that protect water quality.

Policy EN 17.7

Support agricultural tourism that ensures compatibility with surrounding uses.

Policy EN 17.8

Consider establishing a Citizen Advisory Group on Agriculture comprised of citizens representing farmers, non-profit organizations involved with local agriculture and businesses with an interest in local *farm* produce.

MEDIUM PRIORITY ACTIONS

EN Action #5 Improve City outreach programs to educate the public about how they can protect and enhance natural resources and respond to climate change.

Policy EN 1.3

Protect and enhance the natural systems and environmental quality of Bainbridge Island by continuing to build cooperative relationships between the City, citizens, landowners, and other public, non-profit and private organizations.

Policy EN 5.8

Develop in coordination with the Department of Fish and Wildlife, the Bainbridge Island Metropolitan Park and Recreation District and the Bainbridge Island Land Trust a program to educate the citizens of the Island, particularly those citizens who reside adjacent to priority wildlife habitat, on ways to utilize private property in a manner that will help protect and enhance wildlife habitat.

Policy EN 19.4

Implement a community-wide program to educate Island residents about the functions and values of trees ~~should be put into effect.~~

EN Action #6 Evaluate the reasons why the City's PDR and TDR programs have not been successful and explore ways to make them functional to meet City objectives.

NOTE: SAME ACTION IN LAND USE ELEMENT

Policy EN 3.2

~~The Use of TDRs and PDRs to protect critical areas should be explored.~~

Policy EN 5.3

The protection and enhancement of mature trees, fish and wildlife habitat ~~shall be among the~~ are important criteria used when evaluating the preservation of *open space* as part of development techniques such as clustering, *flexible lot design subdivisions* and *transfer of development rights* (TDRs).

Policy EN 15.1

Provide owners of farms ~~should have~~ the option of participating in the *(TDRs)/(PDRs) program*.

EN Action #7 Coordinate with other agencies to promote safe and sustainable pest and weed management.

Goal EN-14 Collaborate with the Kitsap County Noxious Weed Board and other relevant agencies and organizations to develop and maintain a plan to remove and control invasive plant and animal species, as well as prepare for vulnerability to future invasive plant and animal species resulting from climate change and international commerce.

Policy EN 1.7

To protect the island's ecosystems, prohibit the use of neo-nicotinoid pesticides.

Policy EN 14.1

Coordinate with public agencies and nonprofit organizations to control, and where feasible, eradicate remove invasive plant species from public lands.

Policy EN 14.2

Improve public outreach to encourage residents to remove and control and where feasible, eradicate invasive plant species on private property.

EN Action #8 Prepare an Island-wide Open Space Plan.

NOTE: SAME ACTION IN LAND USE ELEMENT

Policy EN 5.4

Protect *fish and wildlife habitat* and limit fragmentation of habitat that physically and genetically isolates fish and wildlife populations by identifying an interconnected system of corridors that will provide continuous links east to west and north to south connecting larger tracts identified as *critical habitat*.

EN Action #9 Review and update BIMC 16.22 Vegetation Management and other City tree regulations and programs.

Policy EN 18.2

When acreage classified as timberlands or *forest land* is being converted to residential or agricultural use promote protection of the most valuable trees and forested area and compact development to limit the extent of clearing and soil disturbance.

Policy EN 19.8

The City should Develop street tree programs for the commercial and mixed-use zones and the more densely developed residential zones.

OTHER ACTIONS

EN Action #10 Coordinate with organizations and governments at all levels to prepare for and respond to climate change.

GOAL EN-12 Reduce *greenhouse gas* emissions through compliance with federal, state and regional policies while developing local strategies to reduce emissions further.

Policy EN 7.1

Consider the implications of sea level rise in all relevant decision-making by using regional sea level rise projections and shoreline instability maps (as provided by the WA Department of Ecology and utilized and interpreted with the Bainbridge Island Climate Impact Assessment).

Policy EN 10.2

Promote *land use* patterns and transportation policies that ensure that the Island's contribution to regional air quality is consistent with or better than State and Federal standards.