Chapter 9

ENERGY & ENVIRONMENT



ENERGY & ENVIRONMENT—Chapter 9

ENERGY INTRODUCTION

One of the foundations of planning for a sustainable future is to work towards alternative forms of energy that reduce dependency on fossil fuels, to increase efficiency in utilization of renewable sources of energy, and to promote energy conservation. Sequim's obligations to the future include enabling energy-efficient private development, exercising public leadership in energy efficiency, and planning the transportation network around energy-efficient mobility.

Based on its location within the rain shadow of the Olympic Mountains, Sequim has an advantage over most Western Washington communities because it can use solar energy for heating spaces. Sequim averages 250 precipitation free days a year, but many of those days are likely to be overcast. Steady technological improvements in active solar efficiency now allow energy generation on cloudy days, too, helping to reduce the time to amortize the investment.



The Holiday Inn Express in Sequim uses solar energy to power its meeting rooms.

To those wishing to reduce their energy costs through on-site solar energy production, the public interest involves a balance between allowing active solar (roof or ground-mounted panels) as well as passive designs in property development and the potential impact to neighboring properties and community aesthetics. If solar access is declared a "right" in city codes, adjacent properties may argue that their "right to grow tall trees" or to add the extra building height allowed in the zone district is infringed upon by the neighbor's desire to reduce energy costs. Sequim's initial foray into making specific provision for solar rather than just *encouraging* it in codes is presented more as an opportunity for homeowners rather than a restriction on surrounding properties.

Alternative energy includes more sources than the sun. Among these are biomass-fueled generation, geothermal and other heat extraction technologies, and wind and ocean turbine generators. These are all beyond the capacity of a city of Sequim's size and location, but they may be relevant regionally as areas for research and development or pilot projects. One example is the potential to extract heat from the City's reclaimed water system.

Sequim has an advantage because it can use solar energy for heating spaces.

The City exercises leadership in energy conservation in the energy performance of new city facilities – the Civic Center achieved Leadership in Energy and Environmental Design (LEED) certification – and in managing ongoing energy costs. The conversion of city street lights to LED bulbs and the acquisition of hybrid staff vehicles are other examples of City conservation practices. On a larger scale, the City pursues energy efficiency in its growth framework by establishing a land use pattern and transportation network that provide capacity for substantial residential development within the UGA and reduce travel distance and costs, including energy.

The desire to have cost predictability and lower costs in transportation is a constant in society. However, the finite nature and disparate distribution of fossil fuels makes their pricing inherently volatile. Population centers of all sizes are also places where vehicles powered by energy other than fossil fuel – electricity, hydrogen, and natural gas – have an increasing presence. In Sequim, the high percentage of seniors (mostly, still active ones) and the convenience inherent in the community's size offer good reason to design the mobility network for energy-efficient vehicles.

ENERGY VISION

The Sequim 120 Vision Statement directions most related to ENERGY include the following:

- growth will occur mostly within the current urban growth area rather than continuing to push outward;
- a more compact pattern of growth will create a future that is affordable in all ways – physically, environmentally, socially, and economically; and
- Sequim's role as a major steward and purveyor of finite natural resources in the Valley will be reflected in a pattern of growth that promotes efficiency in resource utilization and sustainable resource management..

CHEAPER ENERGY

EE GOAL 9.1 ALTERNATIVE ENERGY: Reduce the energy costs for residents, businesses, and employers by supporting utilization of alternative sources of energy.

POLICIES

EE 91.1 ACTIVE SOLAR GENERATION

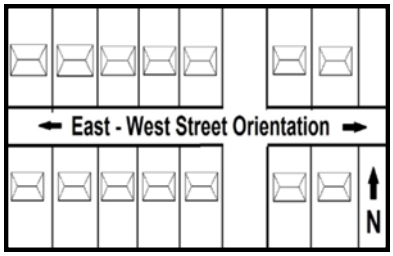
Accommodate active solar installations on roofs and ground-mounted on site when there is no direct impact to surrounding properties.



Discussion: Sequim's "Blue Hole" – the absence of clouds in the rain-shadow of the Olympics – produces more economic feasibility for solar panels than other locals in the greater Puget Sound region. As panel technology continues to evolve, installations are likely to become more common. Roof-mounted panels that conform to the roof have less impact on the design and appearance of structures, making these more "friendly" to the eyes of neighbors. Ground-mounted panels provide another option to add solar generation and do not detract from neighborhood visual quality if kept to rear yards and no higher than an 8-foot fence.

EE 9.1.2 SUBDIVISION SOLOR GENERATION

Encourage new subdivisions to accommodate use of passive and active solar energy systems with special attention given to street, lot and building orientation.



Discussion: Passive and active solar use in homes significantly lowers a households power use. To gain the most benefit from solar access, the house is oriented on the lot to provide the maximum exposure of the south face of the home to solar radiation. In the subdivision process, street and lot configuration are planned to provide this orientation. An east / west layout of streets – the most traditional form of grid platting in the northern hemisphere – provides the greatest opportunity to maximize solar access to homes. For the most effective passive system, landscaping on the south side of the home is designed to avoid shading the solar features of the structure.

EE 9.1.3 SOLOR ENERGY–ACCESS PROTECTION

Include the impact on solar access for all properties when considering revisions to building height and bulk regulations for all zone classifications.

Discussion: The Land Use Chapter reorganizes and simplifies the land use districts to meet changing market demand and direct density and use intensity to districts where they serve broader community purposes. This re-design of the city's land use settings creates inherent ability to make gentle gradations in both height and building bulk. This is a particularly sensitive consideration where the Downtown District is adjacent to Low Density Residential (LDR) uses to the N, E, and W and at edges of the Lifestyle District that are against LDR uses to the N, E, and W. These more intense districts allow structures from 35-45' high that could impact solar access to surrounding residences, but each of these districts provides for height gradations to protect the solar interests of adjacent LDR properties.

EE 9.1.4 NEIGHBORHOOD ELECTRIC VEHICLES (NEVS)

Promote alternative transportation methods where layout the of the development is conducive to alternative transportation modes such as Neighborhood Electric Vehicles (NEV'S).



Discussion: In Washington State "Neighborhood Electric Vehicles" (NEVs) are allowed on public streets with a maximum speed limit of 35 MPH, provided that local regulations do not mandate a stricter standard (RCW 46.61.725). With a large senior population in Sequim, a NEV provides a good alternative transportation source. These vehicles have a maximum speed of between 25 to 45 miles per hour and can be easily recharged on a standard home current. Such vehicles have a range of approximately 40 miles.



Creating an updated street / pathway plan for the Living District provides an opportunity to consider the operational characteristics of NEVs in the context of daily mobility needs of residents. Among the potential design considerations are: 1) a reduced speed limit within the district to lessen the chance and severity of accidents, 2) local streets that are designated for the exclusive use of NEVs and bicyclists, designed for the smaller scale of NEVs and bikes, and 3) mandatory fast-charge stations at major centers of care services and neighborhood shopping.



SAVING ENERGY BY DESIGN

EE GOAL 9.2 ENERGY CONSERVATION AND EFFICIENCY: Reduce the amount and expense of non-renewable energy consumed by exercising City leadership in development practices and utilization.

POLICIES

EE 9.2.1 SMART DEVELOPMENT DESIGN

Encourage energy-smart site design in new residential subdivisions, commercial complexes, and other major developments.



Good urban planning establishes a pattern that is energy-efficient by reducing the number and distance of car trips by having neighborhood housing close to services.

Discussion: The city's main ability to influence project design to reduce energy use is by establishing an urban pattern that is energy-efficient and by instilling development standards that lower energy consumption. Prime among these actions is just planning the community to reduce the number and distance of car trips. This is achieved through traditional neighborhood design (TND) with the planned density range of three to six units per acre set within a street grid. While this low-density residential form is not "compact" relative to modern urban planning practices, it is greatly more efficient than the subdivisions that became the exclusive form of residential development after 1980 – with TND, more people live close to goods and services needed daily, and the connected grid produces more direct trips. As the city matures, the Plan provides an opportunity to meet some retail and service needs within neighbor centers (see Policy LU 3.5.1), further decreasing the length of vehicle trips and the number of trips for those within walking / cycling distance.

Connecting to places more directly is also relevant to the design of commercial developments. If connectivity to adjacent development is not designed into each project, a shopping trip may entail circuitous travel between businesses, requiring exit to an arterial to access an adjacent property. Development that has depth to accommodate cross-circulation alleviates this extra distance when the connection is inherent to site design.

EE 9.2.2 ENERGY CONSERVATION—NEW DEVELOPMENT

Encourage energy conservation measures in development projects to achieve energy efficient development through a combination of site planning, landscaping, building design, and construction practices.

Discussion: The city's development review process is diligent in insuring that all new development meets current state and federal energy codes. Energy codes that are administered at the local level are periodically updated to meet revised standards.

EE 9.2.3 CITY LEADERSHIP IN ENERGY EFFICIENCY

Provide civic leadership in reducing long-term energy costs by making cost-effective decisions on investments and operations of City facilities.

Discussion: City leadership in reducing energy consumption sets an example of the benefits to all when practices and technologies demonstrate life-span cost-effectiveness. City initiatives to reduce energy costs include conversion of street lights to low-energy LED fixtures, building a new Civic Center to LEED Silver standards, and replacing city fleet cars with very fuel-efficient vehicles.

ENVIRONMENT INTRODUCTION

Protecting natural environmental systems and critical areas within the City of Sequim and its Urban Growth Area is an essential component of maintaining a high quality of life for the community. How the City and its residents tend to that environment has a great deal to do with the quality of life for all of us who live now and in the future in this greater community of the Sequim-Dungeness Valley.



Volunteers join staff to clean out Bell Creek during the National Day of Service and Remembrance.

A City that requires development practices to preserve and protect its natural and water resources, local ecosystems and native habitats will enhance the health and well-being of that community. Carefully-crafted environmental and land use regulations can actually enhance development opportunities while protecting the small-town, rural character of the City. These goals are not mutually exclusive or even incompatible with the development interests of land-owners and business owners.

The preservation of wetlands, streams, native vegetation, and vegetative buffers can be marketed as amenities for new development. Protection of these critical areas as well as critical aquifer recharge areas provides the following benefits:

• Reduce costs to the community when stormwater management systems incorporate low impact development (LID) techniques and project designs are sensitive to the natural landscape.

• Reduce future utilities costs by protecting groundwater supplies and ensuring clean and plentiful water for the future.

• Provide greenbelts and interconnected open space, preserving habitat and maintain a natural diversity in the Sequim area through the provision of streamside and wetland buffers, and ensuring the protection of unstable slopes and ravines.

ENVIRONMENT VISION

The Sequim 120 Vision Statement directions most related to ENVIRONMENT include the following:

- rural lands will be preserved for the agro-tourism, food production, visual qualities, environmental values, and open space they afford city residents
- a more compact pattern of growth will create a future that is affordable in all ways – physically, environmentally, socially and economically
- Sequim's role as a major steward and purveyor of finite natural resources in the Valley will be reflected in a pattern of growth that promotes efficiency in resource utilization
- the community's image and identity will be promoted by active management and responsible stewardship of both the human-built and natural environments

WATER RESOURCE

EE GOAL 9.3 SURFACE WATER RESOURCES: Insure a sustainable future for the Valley's water resources and the benefits they provide both to urban and residents, and to the environment.

POLICIES

EE 9.3.1 WETLANDS—PRESERVATION

Preserve or enhance wetlands which are important for flood control, drainage, water quality, aquifer recharge, visual or cultural values or habitat functions.

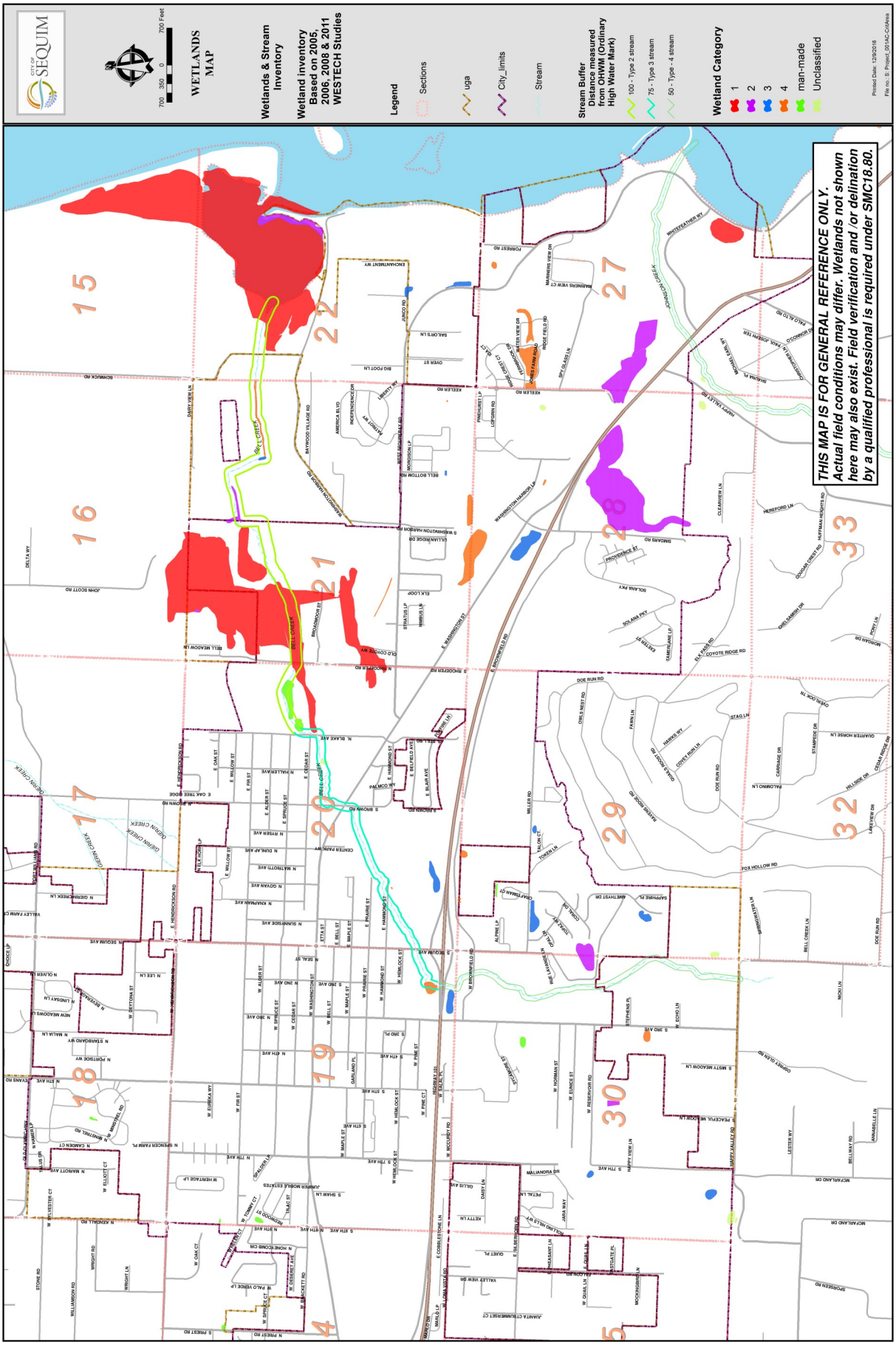
Discussion: Wetlands are a valuable amenity to the City, providing for stormwater cleaning and storage, water quality preservation, wildlife habitat, and preservation of fisheries resources. Wetlands can also be used as educational tools and can be used by schools to teach students the interaction of wildlife species in their natural habitat. Wetlands are required to be protected under State law. The City has worked collaboratively with the State to adopt wetland protection standards that protect wetlands while accounting for the urban environment of Sequim.



EE 9.3.2 WETLANDS– REASONABLE USE OF PROPERTY

Balance the public benefits of preserved wetlands with the opportunity of property owners to have reasonable use of their property.

Discussion: The standard application of "stock" critical area regulations in every situation creates the potential to preclude use of property that is largely characterized by environmental conditions. Based on court cases, if a reasonable use of the property is not allowed, a "takings" takes place and compensation is due. If some reasonable use such as a single-family residence is allowed, a "takings" does not necessarily arise. Regulations which provide for a low-impact use and prescribe measures to minimize impact on the critical area resource provide a good balance between public interest in protecting natural conditions and the property rights of the owner.


CITY OF SEQUIM
WETLANDS MAP
700 350 0 700 Feet
Wetlands & Stream Inventory
Wetland inventory Based on 2005, 2006, 2008 & 2011 WESTECH Studies
Legend
Sections
uga
City_limits
Stream
Stream Buffer Distance measured from OHWM (Ordinary High Water Mark)
100 - Type 2 stream
75 - Type 3 stream
50 - Type - 4 stream
Wetland Category
1
2
3
4
man-made
Unclassified
Printed Date: 12/9/2016
File no: S:\Project_001\AC-Crit\Area
THIS MAP IS FOR GENERAL REFERENCE ONLY. Actual field conditions may differ. Wetlands not shown here may also exist. Field verification and /or delination by a qualified professional is required under SMC18.80.

EE 9.3.3 STREAM PROTECTION

Preserve, protect and enhance natural stream channels for their hydraulic, ecological and aesthetic functions.

Discussion: Development regulations, land dedications, easements, incentives, acquisition, and other opportunities are among the available means to preserve the natural functions of stream channels and riparian zones, including but not limited to:

- Acquisition of stream channels.
- Buffering of streams.
- Clustering of development away from stream channels
- Control of peak storm flows into streams.
- Provision of properly-sized culverts at road and driveway crossings.
- Cooperating with other managers of surface water, including Clallam County and area irrigation entities.

EE 9.3.4 STREAM ENHANCEMENT—BELL CREEK

Enhance and rehabilitate Bell Creek's degraded riparian habitat.

Discussion: Bell Creek is a significant feature in Sequim's history as a settlement and its future as a city. Indeed, the creek channel was originally just another irrigation ditch at the turn of the 20th century. But with irrigation flow from the Dungeness River all summer and salmon straying off course it came to be known as Bell Creek. Now, where there was once a trout-bearing stream, there is a seasonal watercourse for stormwater that even when flowing is hard to find along many segments of its course through the community. Restoration of the stream's banks and floodplain to maintain high water quality and reduce flood damage is not only good environmental practice that also improves visibility, it creates new opportunities to attract wildlife into the community and, in places, adds recreational value. Restoration objectives for an ephemeral Bell Creek, such as managing stormwater, restoring fish and wildlife habitat, and improving water quality, could be achieved as integrated elements of new private development adjacent to the creek and/or directly

EE 9.3.5 STREAM CROSSINGS

Promote awareness and appreciation of the city's stream resources through the design of public right-of-way streams crossings.

Discussion: Stream and creek crossings should mitigate disruption to the function of stream and creek channels and their banks and provide opportunities for increasing the visibility and awareness of stream resources. Because the function of streams and the purpose of irrigation ditches are very different by design as well as by season, the City's assistance in making the public aware of these distinctions is important to expand public understanding of the resource.

EE 9.3.6 STREAM FLOWS

Manage water resources to provide for appropriate flows in streams and creeks to protect fisheries and recreational resources.

Discussion: Under natural conditions, stream flows are generally regulated by groundwater flows into the streams through seeps and springs. Ideally, rainwater percolates into the soil and then into the stream. Natural riparian zone conditions moderate peak storm flows, summer low flows and stream temperatures. When an area is developed, functions such as rainwater infiltration and natural riparian zone conditions need to be maintained in order to avoid a number of flow-related problems. These may include the following:

High peak storm flows that scour a stream bed.
Summer low flows due to lack of groundwater recharge.
High stream temperatures. (For example, stream temperatures greater than 68 degrees Fahrenheit can lower a salmonid's resistance to disease or kill fish resources.)



There are many ways to avoid and/or mitigate these problems with new or existing development, especially when natural sources of surface water, including stormwater runoff, can be supplemented with reuse water produced at the Water Reclamation Facility. One of the primary functions of stormwater management and critical areas regulations (among others) is to protect riparian zones and stream flow levels appropriate for City resources.

EE 9.3.7 WATER REUSE—CLASS "A" WATER

Encourage use of the City's Class "A" water generated through its water reclamation facility for irrigation and other non-potable uses.

Discussion: The City of Sequim is located within the Dungeness Watershed, one of 16 fish-critical basins in Washington due to shortages of water. In January 2013, the State Dept. of Ecology put into effect a water management and instream flow rule within the Dungeness River basin (East Water Resource Inventory Area 18 [East WRIA 18]). WAC 173.518 regulates water use to help protect stream and river flows within the basin to protect senior water rights, fisheries and other instream resources. The use of Class "A" water for irrigation or other non-potable purposes lessens the need for potable water and may help maintain stream flows for habitat purposes.



Purple pipe is used for reclaimed water at the Civic Center.

A pipeline system ("purple pipe") is established to provide Class "A" reuse water into the City. As new development occurs, such as new subdivisions and commercial operations, purple piping for reuse water is a necessary element of development approval in order to optimize the management of all regional water resources.

EE 9.3.8 STREAM WATER QUALITY

Provide protection for surface water quality to allow beneficial uses in and downstream of the City, including but not limited to fish, shellfish and wildlife use; recreation; swimming and aesthetics.

Discussion: The City holds a primary duty to protect surface water resources from contamination resulting from stormwater runoff, industrial/commercial/ municipal operations, construction activities, and residential activities such as gardening and onsite septic systems. Protection methods include stormwater management and other regulations as well as education and outreach, since contamination is most often from diffuse ("non-point") sources and many polluters are unaware that their personal actions cause (or prevent) water pollution.

Stormwater runoff in an urban area typically contains many pollutants resulting from streets, parking lots and other surfaces; in fact, runoff from landscaping and small crops or gardens can even cause contamination. Depending on the source, the pollutants in runoff may include heavy metals such as lead, chromium, and zinc; oil, grease or coolant; pathogens (bacteria); nutrients; pesticides; and petroleum by-products. Other pollutant sources include improperly maintained or failing septic systems, leaking underground storage tanks, agricultural activities, hazardous material storage or dry wells if contaminants are introduced. Educational programs offered by the Clallam Conservation District (CCD) and Clallam County Environmental Health (CCEH) may be available to help minimize pollutant sources from agricultural and residential activities, respectively. In addition, state agencies have many resources regarding avoidance of stormwater pollution.

GROUND AND STORM WATER

EE GOAL 9.4 GROUNDWATER RESOURCES: Insure the quality and quantity of groundwater to sustain a healthy future for the City and Valley.

POLICIES

EE 9.4.1 GROUNDWATER QUANTITY

Preclude or mitigate the adverse impacts of land uses which pose a potential significant impact on groundwater quantity, especially within potential aquifer recharge areas.

Discussion: The majority of Sequim's water supply is provided from the Port Williams and Silberhorn Wellfields, both of which tap underground aquifers at varying depths. The long-term viability of these resources is important for public water supplies as well as for base flow to streams. Protections are needed for the sources of water that recharge groundwater aquifers and the land areas with high potential for aquifer recharge; in addition, withdrawals must be tracked and managed. Adding new sources of supply, such as treated stormwater and reuse water produced by the Water Reclamation Facility – through artificial recharge, for example – helps optimize the City's available supplies of surface and groundwater over time. Continuation of regional groundwater level monitoring and water use monitoring creates the opportunity for periodic assessment of regional supplies for long-range capacity planning.

EE 9.4.2 GROUNDWATER QUALITY

Provide for the protection of groundwater quality for beneficial uses including public water supply.

Discussion: Groundwater resources are negatively impacted by a variety of potential pollution sources – once groundwater is contaminated, it is extremely difficult or impossible to repair. Stormwater runoff can contain many pollutants resulting from streets, parking lots and other surfaces; in fact, runoff from landscaping and small crops or gardens can even cause contamination—as described above. In Sequim, where coarse soils absorb runoff very well, stormwater management regulations are particularly important along with outreach and education. Educational programs offered by the Clallam Conservation District (CCD) or the Clallam County Environmental Health (CCEH) may be available to help minimize pollutant sources from agricultural and residential activities, respectively.

EE 9.4.3 STORMWATER

Implement a storm and surface water management plan to reduce water quantity and quality impacts from runoff.

Discussion: Type, location and design of development can reduce the impact of destructive erosion and flooding, reduce risk, and protect water quality and habitat. Through implementation of a stormwater management plan, drainage plans for construction projects use best management practices to show how runoff and stormwater are collected on-site, and in some cases off-site, to reduce the impact on natural drainage systems and on the community; in Sequim, this is often accomplished through infiltration of runoff into soils with naturally-high percolation rates. Surface water and groundwater quality and supplies are protected, and the impacts on fish and wildlife are decreased when best management practices are followed. Less runoff ends up in the sanitary sewer system reducing the environmental and economic impacts on the community.

FLORA AND FAUNA

EE GOAL 9.5 HABITAT: Maintain the diversity and presence of wildlife and native species in the Valley to enhance its ecological sustainability.

POLICIES

EE 9.5.1 PRESERVATION OF WILDLIFE HABITAT

Maintain wildlife through the preservation and enhancement of its habitat.

Discussion: Wetlands, riparian vegetation, streams, and steep slope areas generally provide habitat for wildlife. When such areas are identified as supporting endangered or threatened species, measures such as acquisition or additional buffers should be considered. Incentives tied to development are another technique to protect habitat.



The Roosevelt Elk in Sequim are a popular tourist attraction.

EE 9.5.2 WILDLIFE HABITAT CORRIDORS

Establish fish and wildlife habitat corridors where steep slopes, wetlands, stream ravines, or stream corridors provide a continuous corridor that provides food, shelter, water and/or minimal impacts due to human intrusion.

Discussion: Continuous undisturbed areas provide the best wildlife habitat functions.
The best wildlife habitat areas are where there is a combination of a water source (wetland), food source (wetlands, forests), and areas of shelter (forested areas) that have minimal intrusion by people. In Sequim, these corridors are located along the steep slopes and stream canyons of Bell and Johnson Creeks and bluffs along the marine shoreline and lower terraces of Happy Valley and Bell Hill. These are generally the areas where only lower-density development is appropriate.

EE 9.5.3 WILDLIFE HABITAT AREAS—BELL CREEK WILDLIFE HABITAT AREA

Expand the Bell Creek Wildlife area to complement ecological functions, natural habitat, and passive recreation of the State-owned refuge.

Discussion: The Washington Dept. of Fisheries & Wildlife (WDFW) manages the 89-acre Bell Creek Wildlife area north of the Water Reuse Park between N. Blake and Rhodefer Road. The WDFW manages the area for the conservation, restoration and enhancement of Garry Oak forest and associated prairie habitat as well as stream and riparian restoration. Habitat types include deciduous dominant riparian forest, marsh wetland, forested wetland, wet upland meadows and oak-woodland prairie. The prairie habitat supports many butterfly species such as the Propertius duskywing butterfly whose larvae feed only on Garry Oak leaves. The wildlife area supports animals and plants that are significant or indigenous to the Sequim area. One mechanism to expand the Bell Creek Wildlife area is through the dedication of open space to the Bell Creek Wildlife area by new development adjacent to the area.

EE 9.5.4 PRESERVE NATIVE SPECIES



The Garry Oak is considered a "legacy tree."

Preserve "legacy trees," Garry Oaks, cactus, and other plants and animals designated and identified as being significant and indigenous to Sequim's distinctive climate.

Discussion: A "legacy tree" is one that is recognized as a community landmark due to its species, age, size and location. One legacy tree is the Garry Oak at Sequim Avenue and Spruce Street. The Garry Oak (Quercus garryana) is the only oak native to Washington State. In Washington, this oak primarily occurs in grassy savannah like settings in dryer locations with gravelly dry soils associated with glacial out wash. These settings shared by the Garry Oak provide greater habitat diversity than the Douglas fir forests typically found in western Washington.

Habitat enhancement for 21 rare and/or declining species that reside in these areas, including the Bell Creek Wildlife Area, helps to maintain this diversity. One such species is the Propertius duskywing butterfly (Erynnis propertius). Propertius duskywing butterfly larvae feed only on Garry Oak leaves.



Propertius duskywing butterfly larvae feed only on Garry Oak leaves.

The only cactus native to western Washington is found in the Sequim area. This cactus is the Brittle Prickly Pear (Opuntia fragilis) and only occurs in the rain shadow of the Olympics.



The Brittle Pickly Pear is the only cactus native to western Washington.

EE 9.5.5 STREAM CULVERTS

Improve the continuity of significant stream channel habitat and the ease of fish migration.

Discussion: Stream crossings should mitigate disruption to the stream channel and its banks. Putting stream channels into conventional pipe culverts compromises salmonid spawning habitat and food sources. Further, pipe culverts impact the natural conditions and aesthetics of a stream channel. When a crossing is necessary, a bridge or culvert design with gravel bottom ("bottomless culvert") maintains the floodplain's width and grade to better replicate natural conditions.



A gravel bottom culvert better replicates natural conditions.

SUSTAINABILITY

EE GOAL 9.6 SUSTAINABLE DEVELOPMENT: Sustain growth without degradation of the natural environment and ecosystems by utilizing "green" development and best management practices.

POLICIES

EE 9.6.1 SITE DESIGN

Continue to promote the use of "adaptive platting" to create lots that preserve existing vegetation and reduce impervious surfaces and associated impacts to critical areas, wetlands and groundwater resources.

Discussion: The City's topographic diversity and the intersection of the city by streams, irrigation lines, and wetlands mean that not every subdivision can confirm rigidly to an informal grid standard. Preservation of existing vegetation is among the most effective and economical ways to maintain drainage on a site and successfully achieve connected green belts and native-species landscaping goals.

The Sustainable Sites Initiative™ (SITES™) is an interdisciplinary partnership led by the American Society of Landscape Architects (ASLA), the Lady Bird Johnson Wildflower Center at The University of Texas at Austin and the United States Botanic Garden to transform land development and management practices through the nation's first voluntary guidelines and rating system for sustainable landscapes, with or without buildings. The guidelines and rating system . . . create this essential missing link in green design (Note: excerpted from American Society of Landscape Architects web site on SITE).

EE 9.6.2 LOT DESIGN

Promote "innovative lot design" and "low impact development" techniques which provide protection of critical areas and buffers while allowing for reasonable use and development of property.

Discussion: The City's 2012 Critical Areas Ordinance provides safeguards to protect property rights by insuring that all properties are allowed a reasonable use. One fair and equitable solution is to allow alternative setbacks that increase separation from the sensitive condition while reducing setbacks where less separation along boundaries does not undermine the public interest and still meets the code's intent.

EE 9.6.3 LOW IMPACT DEVELOPMENT

Promote "low impact development" (LID) to minimize impervious surfaces and hardscapes, recharge the aquifer, reduce runoff, and conserve natural resources.



Rain gardens are an effective LID technique.

Discussion: Current stormwater best management practices minimize impervious surfaces and, when runoff occurs, keeps it on site and preferably infiltrated to protect surface water resources and replenish groundwater supplies. These practices have been named "LID" or "green infrastructure," to distinguish them from traditional pipeline systems ("gray" infrastructure). Sequim's absorptive soils and underlying drinking water aquifer offer great opportunity for replenishment with infiltrated stormwater; however, groundwater quality must be protected to ensure the long-term viability of this water source for people as well as the environment.

EE 9.6.4 GREEN CONSTRUCTION PRACTICES

Promote "green construction" to balance development with a sustainable environment.

Discussion: The city's affordability and sustainability are enhanced by utilizing LEED (Leadership in Energy and Environmental Design) and other standards for green development with a priority on energy, cost and materials efficiency as well as low maintenance needs. The 2015 Civic Center – certified as a LEED Silver building – is an excellent demonstration of development that reflects the community value of sustainability. The city set a "lead by example" statement of what is expected of public and private projects in a community that seeks a sustainable future.

EE 9.6.5 DEVELOPMENT IMPACT AND BEST AVAILABLE SCIENCE METHODOLOGY

Consider the use of "best available science" methodologies when assessing the impacts of proposed development on the surrounding environment and ecosystems.

Discussion: The use of "best available science" while assessing environmental impacts is strongly recommended by the State Dept. of Ecology (DOE). The use of "best available science" provides the following benefits:

- Provide the most accurate information regarding the extent of a "critical area".
- Provide an accurate analysis of the impact of development on the critical area.
- Provide best management practices to mitigate impacts of development on critical areas.

- Reduce the possibility of appeals of City decisions regarding new development proposals.
- Provide added protection to the City should a lawsuit be initiated against the City or a prospective developer.

EE 9.6.6 REGIONAL COORDINATION

Ensure success of programs affecting sustainability in areas outside the city limits by coordinating and cooperating with adjacent and overlapping jurisdictions, including partnering with the Jamestown Tribe to promote an ethic of environmental stewardship.

Discussion: The State Department of Fish and Wildlife, Audubon Society, Tribes and other agencies and governmental entities are involved in water resource management, water quality, fish species and habitat preservation, and many other initiatives that touch on sustainability. The city's participation in regional coordination is tied to the inherent "blindness" of these natural features to jurisdictional distinctions and the need to share resources and commit to consistent strategies. For example, the City could support developers' and homeowners' efforts to implement the State's Fish and Wildlife Department "Backyard Wildlife Sanctuary Program" that provides voluntary wildlife habitats within new developments and existing neighborhoods. Coordination also includes cooperation with Tribal efforts to maintain and improve shared environmental resources.