



SAN JUAN COUNTY DEPARTMENT OF COMMUNITY DEVELOPMENT

135 Rhone Street, PO Box 947, Friday Harbor, WA 98250
(360) 378-2354 | (360) 378-2116 | Fax (360) 378-3922
dcd@sanjuanco.com | www.sanjuanco.com

MEMO

DATE: February 6, 2020
TO: San Juan County Planning Commission and County Council
FROM: Sophia Cassam, Planner I *SC*
SUBJECT: Comprehensive Plan (*Plan*) Update:
Preliminary Draft Element B.8, Utilities
BRIEFING: February 21, 2020 – Planning Commission
March 24, 2020 – County Council
ATTACHMENTS: A. Preliminary Draft Element B.8, Utilities Element
B. Utilities Code Sections (4)

PURPOSE: To brief the Planning Commission and County Council on the preliminary draft of Element B.8, Utilities.

ACTION REQUESTED: Your suggested revisions and additions to the attached preliminary draft will be requested at the briefing.

BACKGROUND: The County last updated Element B.8 Utilities Element (Utilities Element) in 2005 with Ordinance 15-2005. The attached draft shows proposed amendments in strikeout/underline format. The major changes proposed in this draft are:

- An expanded introduction including new information on current conditions and expected challenges;
- Amendments to existing goals and policies to address new information from Appendix 8: Utilities Inventory;
- Amendments to better reflect current regulations and permanent processes;
- Combination of the rural character and environment goal and policy sections; and
- Addition of a new goal and policies for energy efficiency.

The Growth Management Act (GMA) requires:

“A utilities element consisting of the general location, proposed location, and capacity of all existing and proposed utilities, including, but not limited to, electrical lines, telecommunication lines, and natural gas lines (RCW 36.70A.070 (4)).”

Together, Element B.8, Utilities and Appendix 8: Utilities Inventory fulfil this requirement.

HOW TO COMMENT: Public comments are requested on the draft by **February 19, 2020**. Please submit your comments to compplancomments@sanjuanco.com subject line: RE: Utilities Element. Please provide your contact information for the record and identify the page and line number pertaining to the comment. If possible, provide specific alternative language. Comments may also be submitted to the SJC Department of Community Development at PO Box 947 935 Rhone Street, Friday Harbor, 98250, c/o Sophia Cassam, Planner I.

**COMPREHENSIVE PLAN
SECTION B, ELEMENT 8**

**UTILITIES ELEMENT
~~November 2005~~
February 06, 2020**

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ELEMENT 8

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UTILITIES ELEMENT

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8.1 INTRODUCTION

8.1.A Purpose

~~The purpose of the Utilities Element is to set goals and policies which provide guidelines for the provision of utility services in San Juan County, and to facilitate coordinated, cost-effective planning and construction by the County and by individual utility service providers in a manner consistent with the goals and policies set forth in this *Plan*. This element consists of General Goals and Policies, Utility-Specific Goals and Policies, and a Utilities Inventory in Appendix 8.~~

The Utilities Element includes the current and projected conditions of utilities in San Juan County. Utility services included in this Element are electricity, propane, telecommunications, internet and cable. San Juan County does not provide utility services; therefore, this Element relies on information shared by utility providers.

This Element establishes goals and policies to guide the provision of utility services. Goals and policies aim to facilitate coordinated, cost-effective provision of services, planning and construction by utility service providers in a manner consistent with the goals and policies of other elements of the *Comprehensive Plan (Plan)*. This document also identifies opportunities and challenges for utility services through the 2036 planning period. These opportunities and challenges stem from projected population increases, new technologies, and climate change.

The Utilities Element reflects certain key assumptions:

1. Utility providers are the best identifiers of utility problems and the solutions needed to overcome them;
2. Level of service (LOS) standards, concurrency, and capacity requirements do not apply to utility services addressed in this element;
3. Privately owned utilities are not public facilities although they provide a public service. Each utility bears the responsibility for providing services to San Juan County residents within the guidelines of their own policies and in a manner consistent with the regulatory bodies having jurisdiction over them; and
4. County residents ultimately bear the majority of the costs associated with the provision of utility services through utility rates, taxes, land development costs, and impacts to environmental and aesthetic values.

This Element supports the *Plan* Vision and fulfils the requirements of the Growth Management Act (GMA) for utilities planning. Regarding energy, the Vision states, “Our community strives for energy independence...we use renewable energy.” Regarding communication systems, the Vision affirms that “Advanced communication infrastructure is encouraged...we encourage new ideas and new technology... [and] communication systems support our economy.”

The Utilities Element is oriented toward meeting the needs of the people of the County in the midst of growth, climate change, and ever-advancing technologies. The GMA calls for comprehensive plans to include “the general location, proposed location, and capacity of all existing and proposed utilities” in

RCW 36.70A.070(4). By fulfilling the GMA requirement, the County positions itself to make effective use of existing utilities infrastructure, and to be responsive to inevitable change. Together, this Element and Appendix 8, Utilities Inventory meet this requirement. Appendix 8 contains the in-depth inventory of utilities.

8.2 RELATIONSHIP TO OTHER PLAN ELEMENTS

The siting and provision of utility services interacts with other topics in the *Plan*. Utilities information can be found in both the Utilities and Capital Facilities Elements and Inventories. Water and sewer utilities are discussed in the Capital Facilities Element and Inventory, and are subject to concurrency requirements and Level of Service (LOS) standards. Services discussed in the Utilities Element and Inventory are not subject to concurrency requirements or LOS standards. The siting of utilities facilities, such as propane storage, electrical substations, and telecommunication towers, is a land use issue. Telecommunication services are closely tied to issues discussed in the Economic Development Element. The Utilities Element must be consistent with other *Plan* elements. No element can be enacted independently without consideration of other elements.

8.3 CURRENT CONDITIONS AND FUTURE OUTLOOK

The following subsections summarize existing utilities conditions and provide a look at what the future may hold for the provision of those services. The outlook is based on the assumption that the County will grow according to the population projections in *Plan* Appendix 1. Both existing and future utility services are and will be operating in the context of climate change and the development of new energy and communication technologies.

8.3.1 Electricity

Current Conditions

Orcas Power and Light Co-operative (OPALCO) provides electricity in the County. The majority of electricity is sourced from hydropower on the mainland. Bonneville Power Administration and Puget Power generates and distributes it. Local alternative energy sources, such as solar power, currently generate about one percent of electricity. In 2019, OPALCO served 14,913 accounts on 21 islands. OPALCO estimates an annual increase of 0.5 percent for the number of residential accounts and 2.0 percent for commercial accounts.

Energy Outlook

Globally, we face a climate crisis induced by human-generated greenhouse gas emissions. In the Pacific Northwest, we have observed wildfires, drought, lack of snowpack, and increased ocean acidification in recent years¹. Governor Inslee's Executive Order 14-04 includes key areas for addressing climate change, including reducing carbon emissions and improving energy efficiency². San Juan County can reduce carbon emissions by increasing reliance on electricity if it comes from clean, renewable sources, and is

¹ <https://fortress.wa.gov/ecy/publications/documents/1902031.pdf>, pg. x.

² https://www.governor.wa.gov/sites/default/files/exe_order/eo_14-04.pdf

used as efficiently as possible. Transportation and home heating/cooling are two major sources of energy expenditure in the County (and anywhere else).

Transportation will add a load to electricity demands due to an increase in the use of electric vehicles (EVs) as they become less expensive and allow for longer ranges. The State has reinstated tax breaks for non-luxury electric vehicles in an effort to increase their prevalence and reduce transportation emissions. In 2019, Washington State Ferries (WSF) announced that it would begin transitioning its diesel ferry fleet to hybrid-electric, with the addition of at least one new all-electric ferry. The anticipated 2030 ferry electrification will add load as well. Ferry electrification is an effort to drastically reduce greenhouse gas emissions. Currently, WSF generates fifty percent of greenhouse gas emission from working boats in Puget Sound (220,000 metric tons annually), despite only making up only six percent of such boats³.

While power in Washington may be cleaner than in other states that rely heavily on fossil fuels to generate electricity, hydropower is not without environmental impact. Dams that generate hydropower are harmful to Chinook Salmon populations, which Orca Whales in the Salish Sea rely on as a food source.

There is a push toward energy independence from the mainland. Renewable energy resource costs have been falling, while mainland pricing has been slowly rising. The point at which they cross is called *grid parity*. In other words, grid parity is the point at which an emerging technology becomes economically viable. At that point, the emerging technology has increasing cost savings compared to the legacy technology. Once a resource is at grid parity or better, it can be added into OPALCO's energy portfolio to replace or moderate the cost of legacy energy sources. OPALCO expects that local renewable energy resources will become competitive with mainland power wholesale electric rates and reach grid parity around 2025. OPALCO is transitioning to a more locally generated energy mix, which could include member-generated energy (solar, wind, micro-hydro), Community Solar, utility-scale solar, tidal energy, and other new technologies.

More information about the future of electricity in San Juan County can be found in OPALCO's planning documents. OPALCO's long-range plan contains an analysis of capacity development needed to meet future demands. Additionally, their four-year Construction Work Plan contains load forecasts and information on construction projects.

8.3.2 Propane

There are no natural gas lines in San Juan County. The population relies heavily on propane. Propane tanks are not allowed on Washington State Ferries. Propane utility providers barge propane from the mainland to their distribution centers on San Juan, Orcas, and Lopez islands. The two propane providers in San Juan County are Inter-Island Propane and San Juan Propane. Inter-Island Propane recently established a facility on Orcas Island, which is subject to County inspection prior to starting operations.

The demand for propane will likely increase as the County's population increases. However, alternative renewable energy sources, such as home solar energy installations, and changes in State building code requirements to meet WA State Greenhouse Gas targets for energy efficiency may reduce the per capita demand for propane in the future.

³ <https://medium.com/wagovernor/clean-transportation-advances-with-hybrid-electric-ferries-85d2db1f902b>

8.3.3 Communications

San Juan County encourages the development of advanced communication infrastructure. Reliable, up-to-date communication services support everything from healthcare and public safety, to economic opportunity and modern lifestyles. Geographic isolation and relatively small resident populations have historically inhibited the extension of telecommunication services to some islands in the County. Today, Fiber and LTE are providing faster and more expansive communication services.

- **Fiber:** The availability of fiber optic based services has grown extensively throughout the County in the past decade, meeting the growing needs of the electric grid, emergency communications, and residential and business broadband and cell phone service. Approximately half of County addresses are located within a serviceable distance of existing fiber optic facilities. As demand for higher bandwidth and additional improvements are made to public infrastructure, the availability of fiber optic services are expected to continue to grow.
- **Voice over Internet Protocol (VoIP):** Anyone with a reliable internet connection can purchase VoIP service, which is becoming more common as internet access and speed increases. It is the predominant method for non-wireless voice communications around the nation, particularly for businesses.
- **Fixed Wireless - Long-Term Evolution (LTE):** LTE is a standard for wireless broadband communication for mobile devices and data terminals. It increases the capacity and speed using a different radio interface together with core network improvements. LTE utilizes cellular technology to provide high-speed data and voice service has been deployed throughout the County. It provides access to phone and internet where fiber is currently unavailable, including eighteen non ferry-served islands.
- **Fixed Wireless - Cellular:** All major cellular carriers have coverage to an extent in the County; however, the geography currently limits coverage in some areas. For some residents and visitors, lack of cell service poses a safety concern because it would be difficult to call for help in the case of an emergency.
- **Plain Old Telephone Service (POTS):** The main provider of POTS is CenturyLink. Use of POTS has decreased in the recent years as consumers discontinue landline service or switch to VoIP.
- **Cable:** Cable internet and television services are available from CenturyLink, Zito Media, and POGO Zone in parts of Friday Harbor and Orcas Island. Use of cable services is declining as fiber and wireless broadband becomes more popular.

8.4 KEY CHALLENGES

The key challenges for utilities provided below are based on the utilities inventory in *Plan* Appendix 8 and the energy outlook. Considering the assessment of electricity, propane, and communications services, the utilities goals and policies in the following section put an emphasis on:

- Preparing to serve the County's 2036 forecasted population in *Plan* Appendix 1;

- Meeting energy and telecommunications needs within and outside of population centers;
- Reducing greenhouse gas emissions;
- Reducing environmental impacts of generating the electricity we use;
- Increasing energy efficiency; and
- Working with the challenges presented by the islands' unique geography.

8.5 GOALS AND POLICIES

Utilities goals and policies guide San Juan County's actions affecting the provision of utility services. This section aims to result in meeting San Juan County's current and projected needs for energy and communications in a way that is cost-effective, efficient, appropriate for the character of the islands, and responsive to climate change. These goals and policies are informed by the 2005 Utilities Element, other Plan elements, information from utilities providers, community feedback, and by state climate directives.

8.5.A General Goals and Policies

The ~~G~~general ~~G~~goals and ~~P~~policies in this Element address the planning, location and siting of utilities; services to new development; and environmental protection. These issues are common among all utility services.

~~8.2.A~~ Long-range Planning

~~Goal 1. Goal: To e~~ Coordinate planning efforts between San Juan the County and utility service providers and encourage the regular exchange of information plans, maps, and other pertinent information; to aid utility service providers in anticipating and responding to growth by establishing land use policies and regulations to direct and manage future growth; and to maintain consistency between utility service plans and San Juan County plans.

CLEAN Read: Coordinate planning efforts between the County and utility service providers and encourage the regular exchange of information to aid utility service providers in anticipating and responding to growth and to maintain consistency between utility service plans and County plans.

Policies (8.2.A.1-6): (8.5.A.1.1 – 6):

1. Provide utility service providers with appropriate plans and mapped information to help establish a common eCounty-wide base map for utilities planning.
2. Obtain Mmaps and facility inventories, with text designating the approximate location of existing facilities and the general location of proposed new facilities, ~~will be obtained~~ from utility service providers and integrated them into the eCounty's Geographic Information System (GIS).
- ~~3. Review the utility facilities inventory annually and provide updates on a biennial basis or as necessary.~~
3. 4-Provide utility service providers with annual updates and status reports for the six year capital improvement financing plan to aid in their ability to coordinate necessary system improvements.

4. ~~5.~~ Cooperate with utility providers in siting facilities for new and alternative technologies to save money and promote reliability of existing utilities by conserving existing energy resources, while promoting a feasible conversion to energy-saving technologies.
5. ~~6.~~ Cooperate with utility service providers in future comprehensive planning efforts, ~~and in to evaluate~~ ing actual patterns and rates of growth and comparing such patterns and rates them to demand forecasts.

~~8.2.B~~ Project Coordination

Goal 2. ~~Goal: To a~~ Allow for the timely and cost-effective provision of utility services to County residents by enabling inter-agency joint project planning; ~~and to ensure the availability and use of utility corridors within public rights-of-way for the placement of utility service facilities.~~

Policies (8.2.B.1-4): (8.5.A.2.1 - 4):

1. Facilitate inter-agency coordination and planning for joint trenching, installation, upgrade, repair, maintenance, and construction of new utility facilities between the Public Works Department, the various utility service providers, and other agencies.
2. Provide timely notification of proposed projects in public rights-of-way to utility service providers and coordinate the placement of both above- and underground utility facilities, which are necessary to provide adequate service, including transformers, switch vaults, telephone pedestals, utility equipment cabinets, and other necessary utility equipment or structures.
3. Allow for utility services in N ~~new dedications for public rights-of-way should allow for utility services.~~
4. ~~Utility providers should be consulted~~ Encourage consultation between permit applicants and utility providers during the permitting process for installation of utility systems. [Moved from Goal 4]

~~8.2.C~~ Location and Siting

~~Goal 3. XX XXX~~

~~Goal: To Allow for the presence, continuing operation, maintenance, and expansion of the full range of utility services available as reflected in the facilities inventory.; to Accommodate future changes in conditions and technologies which may impact the character and operation of utility facilities. ; to recognize that the geographic character of San Juan County necessitates providing access and the ability to cross shorelines and waterways to utilities; and to recognize that utility facilities must occupy and traverse a broad range of areas and land use designations.~~

Policies (8.2.C.1):

1. ~~Recognize that the geographic character of San Juan County necessitates providing access and the ability to cross shorelines and waterways to utilities; and to and that recognize that utility facilities must occupy and traverse a broad range of areas and land use designations.~~ [Moved to Environment/Rural Character goal]

- ~~2. Locate and site utility facilities to minimize negative impacts to the rural character and natural environment of the county. New transmission facilities, substations and submarine transmission cable terminal facilities should be located and sited to minimize adverse impacts to the county's shorelines and rural character. [Moved to Environment/Rural Character goal]~~
- ~~3. New utility facilities should conform to the policies of the Land Use Element.~~

8.2.D Permitting

Goal 3. ~~Goal: To f~~ Foster predictability and timeliness in processing permit applications for utilities new utility facilities or utility service work; and to allow for necessary maintenance, repair, improvement, and expansion of utility facilities in a timely and efficient manner.

~~Policies (8.2.D.1-3): (8.5.A.3.1 – 2):~~

- ~~1. Priority should be given to maintenance and repair work required to restore utility service under emergency circumstances.
Provide provisions for emergency response for delayed permitting of activities necessary to prevent an imminent threat to public health, safety, or the environment; or to public or private property.~~
- ~~2. Identify utility installation, relocation and maintenance activities that are expected to have significant permanent or unmitigable impacts.~~
- ~~23. Identify utility installation, relocation and maintenance activities which are expected to have insignificant environmental impacts and will establish exemptions from permit requirements for those types of activities.
Continue to allow utility exemptions from critical area requirements for the installation and construction of utility lines and equipment, provided the conditions of exemption are met and documented.~~

8.2.E New Development

Goal 4. ~~Goal: To minimize adverse impacts of providing utility services to new development on the rural character of San Juan County ; to allow for the provision of the full range of utility services to county residents; and to provide for new utility facilities which are compatible with or can be mitigated to minimize adverse impacts to adjacent land uses. Protect rural character by minimizing the adverse impacts of utility services.~~

~~Policies (8.2.E.1-3): (8.5.A.4.1 – 5):~~

- ~~1. Require ~~N~~new utility installations ~~to serve for~~ new development ~~should to~~ be installed underground, ~~except that s~~Services for single-family residential construction on an existing parcel may connect with existing overhead utility facilities.~~
- ~~2. Require ~~N~~new development ~~should to~~ be designed so that utility easements are accessible and have sufficient capacity for installation of the full range of required utility services.~~
- ~~3. Utility providers should be consulted during the permitting process for installation of utility systems. [Moved to Goal 2]~~

- ~~4. New utility installations should provide vegetative screening or buffers for existing adjacent development.~~
- ~~5. New development approved adjacent to existing utility facilities should provide vegetative screening or buffers.~~
3. Require landscaping to buffer adjacent uses for new utility installations excluding aboveground utility facility development and distribution or transmission corridors when located outside a public right-of-way.
4. Locate and site utility facilities to minimize negative impacts to the rural character and natural environment of the county. [Moved from old goal 3]
5. New transmission facilities, substations and submarine transmission cable terminal facilities should be located and sited to minimize adverse impacts to the County's shorelines and rural character. [Moved from old goal 3]

8.2.F Environmental Protection

Goal 5. ~~Goal: To~~ Protect and preserve natural habitats and environments while also providing for the location and extension of necessary utility facilities.

Policies (8.2.F.1-4): (8.5.A.5.1 – 4):

- ~~1. View Environmental protection and a quality environment are viewed as one product of, and not a constraint on, good utility service, and are important components of operation in the public interest. Regulations for environmental protection should recognize both the significance and permanence of potential environmental damage and the cost to mitigate or avoid potential damage for proposed utility projects.~~
- ~~2. Locate New utility facilities should be located away from, or constructed them in a manner compatible with, critical areas, Resource Lands, and Shorelines. Recognize that physical and service constraints may not allow relocation away from or full compatibility with such areas and resources.~~
- ~~2. 3-Condition the approval of new utility facilities ~~so as~~ to avoid or mitigate any significant adverse impacts, and to develop appropriate compensating measures where mitigation is not feasible.~~
- ~~3. 4Ensure that utility service providers are responsible for costs such as those associated with damage caused to the environment and public rights-of-way so that utilities providers will seek to minimize those costs in their planning, decision-making, and project execution.~~
- ~~4. 5-Recognize that the geographic character of San Juan the County necessitates requires providing access to and the ability to cross shorelines and waterways to connect utilities; ~~and to~~ and that ~~recognize~~ that utility facilities must occupy and traverse a broad range of areas and land use designations. [Moved from old goal 3]~~

8.5.B Utility-Specific Goals and Policies

ELECTRICITY

8.3.A5.B Electricity

Goal 6. Minimize the environmental impacts of electricity production and use.

Goal: ~~Encourage the exploration of innovative and alternative technologies regarding energy conservation.~~

~~Policies (8.2.G.1)-(8.5.B.6.1 – 6)~~

1. Encourage utility service providers to explore innovative and alternative methods of producing energy.
2. Support the transition toward energy independence from the mainland by working with the San Juan County Conservation District and OPALCO to promote community solar projects and provide technical assistance and incentives to increase individual home solar installations.
3. Encourage utility providers, WASDOT, and the public to reduce greenhouse gas emissions.
4. Adopt regulations that allow facilities that support the distribution of electricity for cleaner transportation including electric vehicles and electric ferries.
5. Provide electric vehicle chargers at key destinations throughout the County.
6. Increase energy efficiency of buildings and systems on the islands by:
 - Providing educational materials and supporting education on energy efficiency in buildings, beyond State energy efficiency requirements; and
 - Updating and building new County buildings beyond State energy efficiency requirements and generating some electricity with solar arrays when feasible alternatives are available.

Goal 7. Goal: ~~To Assist Collaborate with the Orcas Power and Light Company (OPALCO) in achieving its goals for energy resiliency. as stated in the Cooperative's Bylaws and Articles of Incorporation: "to make electric energy available to its members at the lowest cost consistent with sound economy, good management, and the public interest."~~

~~Policies (8.3.A.1-6)-(8.5.B.7.1 – 5):~~

1. Assist OPALCO when necessary to respond to new, unforeseen conditions and technologies that may affect utility operations and facilities.
2. Coordinate planning to allow for the appropriate location and siting of all necessary existing and future facilities including overhead, underground, and submarine transmission and distribution systems, substations, cable terminals, standby generation, and any other necessary equipment or structures. ~~Existing facilities are shown in Figure 1, below.~~

3. Consider electric power facilities to be essential public facilities.
4. Locate and site ~~New~~ upland power transmission facilities, substations and submarine transmission cable terminal facilities ~~should be located and sited~~ to minimize adverse impacts to the rural character, shorelines and natural environment of the County.
5. ~~Allow the testing of~~ pilot programs to evaluate new alternative energy sources ~~which are consistent with the goals and policies of this Plan and that which~~ comply with all ~~attendant~~ regulations.
6. ~~Develop a process for locating sites deemed appropriate for the location of alternative power generation facilities.~~

TELECOMMUNICATIONS

8.3.B Telecommunications

Goal 8. ~~Goal:~~ Promote the widespread availability of communication systems to facilitate communication among members of the public, public institutions, government agencies businesses, and to promote the public service and safety advantages and economic opportunities afforded to the community due to the availability of state-of-the-art telecommunications technology.

Policies (8.3.B.1)-(8.5.B.8.1 – 2):

1. Consider ~~Telecommunications facilities which are developed and operated expressly to carry out emergency services should be considered~~ as essential public facilities.
2. ~~In keeping with the County's goal to promote the public service, safety advantages and economic opportunities of widespread availability of state of the art telecommunications technology, potentially suitable personal wireless facility locations identified on the Official County Map, per SJCC 16.80.040, as (1) preferred, (2) potentially suitable and (3) conditionally suitable locations, should be reviewed and updated every five years.~~

Coordinate with Rock Island, Emergency Services, Public Works, and the County's Fire Districts to upgrade the County's emergency radio communications.

PROPANE

Goal 9: Recognize propane as an important heating source in the County.

Policies (8.5.B.9.1 – 2)

1. Identify appropriate land use designations for the siting of bulk fuel storage.
2. Support the use of historic barge landings that have served as landing sites for transporting bulk fuels.

18.35.030 Critical areas – General exemptions.

When conducted in accordance with the provisions of this section, and other applicable requirements, the following uses and activities are exempt from standard critical area regulations:

- A. Emergency Response. Those activities necessary to prevent an imminent threat to public health, safety, or the environment; or to public or private property, and that require remedial or preventive action in a time frame too short to allow for review and approval in accordance with critical area requirements. Within seven days of the emergency, the person or agency undertaking the action shall report to the director the extent of the action taken and any adverse impacts to critical area functions and values caused by the action. Any mitigation and/or restoration necessary to bring the action into compliance with these critical area requirements shall be undertaken pursuant to a mitigation plan or other plan that is consistent with the critical area requirements of this chapter. The director shall be the decision maker for these plans.
- B. The operation, maintenance, repair, remodel, or replacement of existing structures, facilities, infrastructure systems, development areas and uses, provided there is no further intrusion into geologically hazardous areas, frequently flooded areas, wetlands, or fish and wildlife habitat conservation areas or their buffers; soil erosion is controlled; disturbed areas are promptly stabilized; and actions do not have an additional adverse effect on the functions and values of critical areas. Existing structures, uses and activities located within shorelines of the state are addressed separately as described in SJCC [18.35.025](#) and [18.35.110](#) through [18.35.140](#).
- C. 1. Installation and construction of: electrical, telecommunications, cable, water, sewer, and other utility lines and equipment within existing structures, facilities, infrastructure systems, development areas and uses, utility easements, and public and private rights-of-way, provided:
- There is no further intrusion into geologically hazardous areas, frequently flooded areas, wetlands, or fish and wildlife habitat conservation areas or their buffers;
 - Soil erosion is controlled;
 - Disturbed areas are promptly stabilized; and
 - Any adverse impacts to critical areas are mitigated in accordance with SJCC [18.35.040](#).
2. Installation and construction of utility lines and equipment not previously covered in subsections (B) and (C)(1) of this section; provided, that reasonable efforts are made to avoid impacts to critical area functions and values, and:
- BMPs are used to minimize clearing, erosion, sedimentation and other soil disturbance;
 - Disturbed areas are promptly stabilized and revegetated; and
 - Any adverse impacts to critical areas are mitigated in accordance with SJCC [18.35.040](#).
- D. Removal of hazard trees as defined in SJCC [18.20.080](#). In addition, to allow for defensible space for fire protection purposes, 30 feet of vegetation may be cleared around buildings lawfully existing on the effective date of the ordinance codified in this section.
- E. The divisions of land specified in SJCC [18.70.010](#)(C) are exempt from critical area compliance review. Parcels created via SJCC [18.70.010](#)(C) are, however, subject to compliance with critical area protection requirements, and if created subsequent to the effective date of the ordinance codified in this section, they are not eligible for reasonable use exceptions.
- F. Forest practices regulated under the provisions of Chapter [76.09](#) RCW and WAC Title [222](#).

G. Installation of navigation aids and survey markers.

H. Site investigative work associated with land use applications, such as surveys, soil borings, and test holes; provided, that critical area functions and values are protected and disturbed areas are immediately restored. (Ord. 1-2015 § 1; Ord. 2-2014 § 6; Ord. 26-2012 § 21; Ord. 15-2005 § 3; Ord. 2-1998 Exh. B § 3.6.4. Formerly 18.30.110(C))

18.40.430 Utility (electrical, sewerage, and other) distribution and transmission lines and substations.

“Wired utility distribution lines” operate at voltages of 15 kV and lower, and distribute power from a substation to the end user (connecting via a service line; see SJCC [18.60.150](#)). “Wired utility transmission lines” operate at voltages of 24.9 kV and above. They move bulk power between substations and do not directly serve the end consumer.

The following standards apply to all utility distribution and transmission lines:

A. New utility distribution lines shall be placed underground wherever reasonable and practicable. Undergrounding of existing lines in the course of routine maintenance and replacement is encouraged where practicable, particularly where such undergrounding would enhance recognized scenic and open space areas and resources.

B. Environmental impacts resulting from installation or maintenance of utilities and utility facilities shall be avoided or minimized. Where no feasible alternative to the impact exists, and mitigation is not feasible, appropriate compensating measures should be developed.

C. Where revegetation of areas disturbed during construction is required by this code in order to mitigate erosion, surface water runoff, habitat, aesthetic or other impacts, such areas shall be replanted with native vegetation and maintained until firmly established. Clearing shall be confined to that necessary to allow installation and to prevent interference by vegetation once the system is in operation.

D. Utilities and transportation facilities shall be installed in the same rights-of-way when the effect will be to reduce the adverse impacts on the physical environment.

E. Applications for utility substations shall include baseline and projected electromagnetic field (EMF) density in accordance with the protocols in Table 4.2. Test measurements and results shall be shown on the permit application site plan. Post-construction and any operational testing shall also be done in accordance with Table 4.2. Post-construction test results shall be submitted to the director within 90 days to complete the file record, and copies will be made available to the public upon request.

F. Extension of community sewerage system lines outside of activity centers shall be allowed only if:

- 1. The extension is demonstrated to be necessary to remedy existing or potential groundwater contamination problems or to correct existing or impending health hazards, as determined by the County sanitarian; or
- 2. The extension is to provide sewage collection and treatment services to a public elementary or secondary school.

G. Routine maintenance and replacement of wired utility transmission and distribution lines and poles within existing rights-of-way, where frequently flooded areas, geologically hazardous areas, wetlands, and fish and wildlife habitat conservation areas are not present and where exempt from SEPA and Shoreline Master Program review (see SJCC [18.80.050](#) and [18.80.110](#)), are authorized without further permit application and approval; provided, that such construction and activities must comply with applicable development and performance standards of this chapter and Chapter [18.60](#) SJCC.

Table 4.2. Protocol for Testing of Electromagnetic Fields (EMF) at Utility Substations.

1, 2

Test Parameter	Test Equipment	Testing Method
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Field Density of EMF produced by 60 Hz AC Power Equipment	ELF ³ monitor with three-axis sampling capability.	1) Record EMF levels at 50-foot intervals along property lines of the subject property (site). 2) Record EMF levels at 20-foot intervals along the fenceline of substation equipment. Measurements shall be made at waist height.
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Notes:

1. A charged object produces an electric field in the space around it; an object that carries current or which is a magnet produces a magnetic field in the nearby area. Energy is transferred via these “electromagnetic fields” (EMF) to people and other living organisms that pass through the fields. “Field density” or “flux density” is a measure of the strength of the fields. Unit of measurement of flux density: milli-Gauss.
2. Reporting requirements for this testing: see SJCC 18.40.430(E).
3. Abbreviations used:

ELF	=	Extremely low frequency radiation, 30 to 300 Hz	Hz	=	Hertz, a unit of frequency equal to one cycle of an electromagnetic wave per second	Gauss	=	A unit of magnetic flux density, $10^{-4} \text{ Wb/m}^2 = 10^{-4} \text{ Volt-seconds/square meter}$
EMF	=	Electromagnetic field						
AC	=	Alternating current						

(Ord. 52-2008 § 10; Ord. 2-1998 Exh. B § 4.32)

18.60.150 Utility service lines and facilities – General regulations.

- A. Utility service lines and secondary connections shall be placed underground, unless otherwise approved by the permitting agency.
- B. Environmental impacts resulting from installation or maintenance of utilities shall be minimized. Areas disturbed during construction shall be replanted with native vegetation and maintained until firmly established. Clearing shall be confined to that necessary to allow installation and to prevent interference by vegetation once the system is in operation.
- C. Utilities and transportation facilities shall be installed in the same rights-of-way when the effect will be to reduce the adverse impacts on the physical environment.
- D. Solid waste transfer and disposal facilities shall be located and designed in accordance with Chapter 173-301WAC, Department of Ecology Minimum Functional Standards for Solid Waste Handling, the San Juan County Comprehensive Solid Waste Management Plan, and applicable local health, safety, and fire protection codes.
- E. Utility lines within agricultural resource lands shall be designed and located to minimize disruption of existing and potential agricultural uses. (Ord. 2-1998 Exh. B § 6.13)

18.60.160 Landscaping.

A. Application. All development for which this code requires landscaping or screening is subject to the landscaping provisions of this section. Water systems for landscaping shall meet the requirements of 18.60.020, and all structural or operational measures included for the conservation of water shall be indicated in the landscaping plan or descriptions.

B. General Provisions. The administrator may authorize variations to the landscaping requirements of this section to:

1. Provide consideration of topography and soils on the site.
2. Allow alternative plant mixes that accomplish the purposes of the type of landscape screening required.
3. Conserve water through the concept of xeriscaping.
4. Provide flexibility in the size of initial plantings.

C. Land Use Grouping. In order to facilitate the application of landscaping standards, the categories of land uses listed in Tables 18.30.030 and 18.30.040 will be used to determine landscaping requirements in this section. The administrator will determine which category a land use falls within. The categories of uses are:

1. Commercial uses;
2. Industrial uses;
3. Institutional uses;
4. Recreational uses;
5. Residential uses (other than single-family residences);
6. Transportation uses;
7. Utilities uses; and
8. Agricultural uses.

D. Landscape Screening. The three types of landscaping screens are described and applied as follows.

1. "Screen-A" landscaping:

- a. Is a "full screen" that functions as a visual barrier. This landscaping is typically found between residential and nonresidential areas.
- b. Shall at a minimum consist of:
 - i. A mix of primarily evergreen trees and shrubs generally interspersed throughout the landscape strip and spaced to form a continuous screen;
 - ii. Seventy percent evergreen trees;
 - iii. Trees provided at the rate of one per 10 linear feet of landscape strip and spaced no more than 30 feet apart on center; and
 - iv. Evergreen shrubs provided at the rate of one per four linear feet of landscape strip and spaced no more than eight feet apart on center.

2. "Screen-B" landscaping:

- a. Is a "filtered screen" that functions as a visual separator. This landscaping is typically found between commercial and industrial uses; between differing types of residential development; and to screen industrial uses from the street.
- b. Shall at a minimum consist of:
 - i. A mix of evergreen and deciduous trees and shrubs generally interspersed throughout the landscape strip spaced to create a filtered screen;
 - ii. Fifty percent deciduous trees and 30 percent evergreen trees;
 - iii. Trees provided at the rate of one per 20 linear feet of landscape strip and spaced no more than 30 feet apart on center; and
 - iv. Shrubs provided at the rate of one per four linear feet of landscape strip and spaced no more than eight feet apart on center.

3. "Screen-C" landscaping:

- a. Is a "see-through screen" that functions as a partial visual separator to soften the appearance of parking areas and building elevations. This landscaping is typically found along street frontage or between multiple-family developments.
- b. Shall at a minimum consist of:
 - i. A mix of evergreen and deciduous trees generally interspersed throughout the landscape strip and spaced to create a continuous canopy;
 - ii. Seventy percent deciduous trees;
 - iii. Trees provided at the rate of one per 25 linear feet of landscape strip and spaced no more than 30 feet apart on center; and
 - iv. Shrubs provided at the rate of one per four linear feet of landscape strip and spaced no more than eight feet apart on center.

E. Landscaping Street Frontages. The average width or depth of perimeter landscaping along street frontages and required locations on private property shall be provided as follows:

1. Twenty feet of Screen-B landscaping shall be provided for all institutional and recreational uses, excluding campgrounds, playgrounds, play fields and indoor recreational facilities.
2. Ten feet of Screen-B landscaping shall be provided for an industrial development.
3. Ten feet of Screen-B landscaping shall be provided for all above-ground utility facilities or development, excluding distribution and transmission corridors, located outside a public right-of way.
4. Ten feet of Screen-C landscaping shall be provided for all commercial or multiple-family residential and mobile home parks.
5. For all activity center and urban growth area land use districts, except residential:

- a. Trees shall be planted at the rate of one tree for every 40 feet of frontage along a neighborhood collector road.
- b. Trees shall be no more than 20 feet from the street right-of-way line.
- c. Trees may be spaced at irregular intervals in order to accommodate safe sight lines for driveways and intersections.

F. Landscaping of Interior Lot Lines. The average width or depth of perimeter landscaping along interior lot lines shall be provided as follows:

1. Fifteen feet of Screen-A landscaping shall be included in all commercial or industrial development along any portion adjacent to a residential development.
2. Five feet of Screen-B landscaping shall be included in multiple-family, mobile home parks, and group home developments. Boundaries adjacent to property developed with single-family residences or vacant property that is designated residential, the requirement shall increase to 10 feet.
3. Ten feet of Screen-B landscaping shall be included in an industrial development along any portion adjacent to a nonindustrial development.
4. Ten feet of Screen-B landscaping shall be included in all utility, institutional, and recreational uses, excluding above-ground utility facility development and distribution or transmission corridors, when located outside a public right-of-way.

G. Landscaping for Parking Lots. Parking area landscaping shall be provided within surface parking areas with five or more parking stalls to provide shade and diminish the visual impacts as follows:

1. Residential developments with common parking areas shall provide planting areas at the rate of 20 square feet per parking stall.
2. Commercial, industrial, or institutional developments, shall include:
 - a. Twenty square feet per parking stall when five to 15 parking stalls are provided; and
 - b. Twenty-five square feet per parking stall when 16 or more parking stalls are provided.
3. Trees shall be provided and distributed throughout the parking area at a rate of:
 - a. One tree for every five parking stalls for a commercial or industrial development; and
 - b. One tree for every 10 parking stalls for residential or institutional development.
4. The maximum distance between any parking stall and landscaping shall be 75 feet.
5. Permanent curbs or structural barriers shall be provided to protect the plantings from vehicle overhang.
6. Parking area landscaping shall consist of:
 - a. Canopy-type deciduous trees, evergreen trees, evergreen shrubs, and ground covers planted in islands or strips;
 - b. Shrubs that do not exceed a maintained height of 42 inches;

- c. Plantings contained in planting islands or strips having an area of at least 100 square feet and with a narrow dimension of no less than five feet; and
- d. 70 percent deciduous trees.

H. Landscape Plan. When screening is required, a landscaping plan shall be submitted with the project application to indicate how the minimum screening requirements are met. The plan must meet the following requirements:

1. The landscape plan shall be drawn on the same base map as the development plans and shall identify the following:

- a. Total landscape area and separate hydro zones;
- b. Landscape materials, botanical and common names, and applicable size;
- c. Property lines;
- d. Impervious surfaces;
- e. Natural or manmade water features or bodies;
- f. Existing or proposed structures, fences, and retaining walls;
- g. Natural features or vegetation left in natural state; and
- h. Designated recreational open space areas.

2. The required landscaping shall be installed no later than three months after issuance of a certificate of occupancy for the project or project phase. However, the time limit for compliance may be extended to allow installation of such required landscaping during the next appropriate planting season. A financial guarantee shall be required prior to issuance of the certificate of occupancy, if landscaping is not installed and inspected prior to occupancy.

I. Maintenance.

1. All landscaping and necessary support systems shall be maintained for the life of the project.
2. All landscape materials shall be pruned and trimmed as necessary to maintain a healthy growing condition or to prevent primary limb failure.
3. With the exception of dead, diseased, or damaged trees specifically retained to provide wildlife habitat, dead, diseased, damaged, or missing plantings shall be replaced within three months or during the next planting season if the loss does not occur in a planting season.
4. Landscape areas shall be kept free of trash.

J. Bonds or Other Security. Performance bonds or other appropriate security shall be required for a period of no less than six months after the planting or transplanting of vegetation to insure proper installation, establishment, and maintenance. This time period may be extended to one year by the administrator, if necessary to cover a planting and growing season. (Ord. 26-2002 § 4; Ord. 2-1998 Exh. B § 6.14)