

Camie Anderson

From: Mike Kaputa <Mike.Kaputa@CO.CHELAN.WA.US>
Sent: Thursday, April 29, 2021 10:19 AM
To: Camie Anderson
Subject: Fwd: RE: Mission Ridge Expansion Plan- County Agency Response April 2020.pptx
Attachments: Mission Ridge Expansion Plan- County Agency Response April 2020.pdf

Sent from my Verizon Motorola Smartphone

----- Forwarded message -----

From: Andy Wendell <andy.wendell@chelanpud.org>
Date: Apr 29, 2021 10:09 AM
Subject: RE: Mission Ridge Expansion Plan- County Agency Response April 2020.pptx
To: Mike Kaputa <Mike.Kaputa@CO.CHELAN.WA.US>
Cc: John Stoll <John.Stoll@chelanpud.org>, Justin Erickson <Justin.Erickson@chelanpud.org>, Ron Slabaugh <Ron.Slabaugh@chelanpud.org>

External Email Warning! This email originated from outside of Chelan County.

Hi Mike,

We understand the County will be posting to the County's website information from agency responses associated with the Mission Ridge expansion plans. The purpose is to solicit bidders for the environmental impact statement work. We support the EIS process looking at water and electric utilities over the full build out plan for the project however we want to emphasize that major capital electrical infrastructure such as a substation and transmission line are likely to be phased in overtime rather than constructed early in the projects. As we continue to study the demand for electricity over time relative to the project phases, we can better forecast when that large infrastructure would need to be built and put into service. That analysis is not complete at this time. Engineering studies and water demand analysis is also occurring on the water system and those studies are also not complete at this time. We want to be sure the EIS consultant is well aware of the phasing aspect of the project relative to electricity and water.

I'd like to add that while the County is soliciting consultants for the EIS, Ron Slabaugh- Water and myself- for electrical/fiber would be the District contacts for the County during the EIS recruitment process. Feel free to reach out if you need more information.

Thanks

Andy Wendell

Chelan County PUD- Director of Customer Service
Email: andy.wendell@chelanpud.org
Office: 509-661-4562

From: Wendell, Andy

Sent: Tuesday, April 21, 2020 1:40 PM

To: 'Mike Kaputa' <Mike.Kaputa@CO.CHELAN.WA.US>

Subject: Mission Ridge Expansion Plan- County Agency Response April 2020.pptx

Hello Mike

Attached you will find Chelan PUD's formal response to the County's agency request for the Mission Ridge Expansion Plan. We are very interested in a multi-stakeholder conversation about the content of this response and information herein. And we appreciate the County in reaching out to the PUD and allowing us more time to provide enough detail in the response to inform the processes moving forward. One point I would emphasize is that although we've had some informal conversations and information exchange with the County's Applicant we are positioned well to move into the formal application processes as a next step. These PUD application processes are the road map to attain specifics in facilities and infrastructure planning, locations, routes, timelines and costs. These processes will also go a long way to inform the extent of permitting, land use and Community support. We ask that the County further promote the Applicant to move into the formal application process with the PUD as soon as possible.

Please feel free to reach out directly to me if you have any questions, ideas or concerns.

Best regards and thank you,

Andy Wendell

Director of Customer Service

Chelan County PUD

Andy.Wendell@chelanpud.org

509-661-4562



Agency Comments Upper Squilchuck & Mission Ridge Expansion Planning

PUD

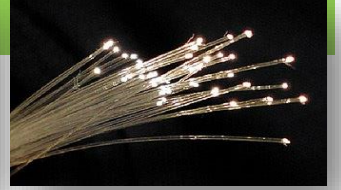
Water, Fiber, Electrical Substation & Transmission Infrastructure

April, 2020

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Upper Squilchuck Planning INTRODUCTION



Mission Ridge Expansion Planning:

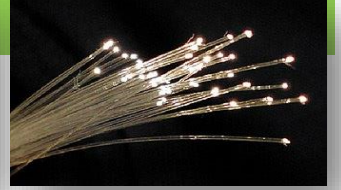
Electrical: Chelan County PUD serves electricity to the residences and businesses in the upper Squilchuck area. Electrical infrastructure currently provides services to the Mission Ridge Ski area however the infrastructure is limited in capacity and voltage quality under certain loading conditions. Significant upgrades to electrical Distribution lines, substation and transmission line infrastructure are necessary to service the Mission Ridge Expansion Plan.

Water: Chelan County PUD serves water to the residences and businesses in the upper Squilchuck area. The water system is part of a larger network (Wenatchee Water System) made up of various water reservoirs, pump stations, main lines and pressure zones. The water source is from the Regional Water System and the connection starts at the Hawley Street in North Wenatchee. The existing water system infrastructure in the upper Squilchuck can not support the additional estimated demand of water outlined in the Mission Ridge Expansion Plan. The existing water system stops delivery of potable water at the Forest Ridge residential development at its highest point. Note: significant water system improvements are required to serve the expansion plan.

Telecommunication (Fiber): Chelan County PUD provides whole sale fiber service to Telecom providers serving the residences and businesses in the upper Squilchuck area. Fiber-optic infrastructure currently provided services to the Forest Ridge development however the infrastructure is limited in capacity and some upgrades to the fiber network, distribution towers and nodes are necessary to service the planned Mission Ridge Expansion.



Upper Squilchuck Planning INTRODUCTION



Mission Ridge Expansion Planning:

Application & Load Studies: The Chelan County PUD is promoting formal application be made by the Mission Ridge Expansion Plan Applicant for utility services needed for the execution and completion of the development. In order for the District to fully inform infrastructure requirements, permitting, costs and delivery timelines a formal application should be submitted. Application costs can be assessed at that time consistent with the District's policies. Applications generally include a feasibility phase, system impact study, sub-area planning, design, engineering and cost allocations with specific check-in points for the Applicant to consider.

Line Extensions: The Mission Ridge Expansion Plan sits outside the proximity of the current electrical, water and fiber optic infrastructure that is owned operated and maintained by Chelan County PUD. Extending the existing infrastructure from the current locations to the project development area is necessary in addition to improvements of existing infrastructure. Due to the fire prone area, underground fiber and electrical infrastructure would be a requirement. Water, Electric, and Telecommunications (Fiber) all have supporting line extension policies that outline the processes, roles and responsibilities of the Applicant and the District.

System Improvements: Chelan County PUDs existing network infrastructure (water, electric & fiber optics) are not currently conditioned to serve the Mission Ridge Expansion Plan. In addition to extending utilities to the project location, significant improvements to the existing utilities are necessary to condition the existing infrastructure properly and maintain reliable service to existing customers and allowing organic growth to continue.

Environmental Impacts, Land-use Rights & Permitting: The upper Squilchuck area and the Expansion Plan is located in an environmentally sensitive area relative to typical utility services throughout the County. These areas include, but are not limited to, difficult terrain, weather sensitive, fire, heavy timber, high winds, wetlands, creeks, slope instability, narrow right-of-ways, wildlife among others. As such, the Chelan County PUD would expect a higher degree of environmental evaluations, engineering, land-use and property rights be completed as a review and prelude to building utility infrastructure.



Upper Squilchuck Planning ELECTRICAL



Current planning condition- **ELECTRICAL:**

The Squilchuck Valley, Wenatchee Heights, various canyons and the upper Squilchuck including Mission Ridge are currently served electrical power from the existing Squilchuck substation located at the mouth of Squilchuck Canyon near Wenatchee and off of Methow Street. A single distribution circuit of 12.47KV serves the entire Squilchuck vicinity. Capacity of the existing distribution line is sufficient to serve the existing customers in the vicinity including Mission Ridge. However, serving the Mission Ridge Expansion Plan can not be accomplished with the existing distribution infrastructure.

Recent planning models that include the Mission Ridge Expansion Plan identify the need to build a new standardized 28 MVA substation in the vicinity of the upper Squilchuck Canyon to alleviate both power quality and capacity limitations found in the existing electrical system servicing the area in addition to planned growth in the Mission Ridge Expansion Plan. Organic electrical growth is forecasted at ~ 1.2% per year in the Squilchuck area. Organic growth includes; commercial, agriculture, and residential homes in the Mission Ridge, Squilchuck and Wenatchee Heights vicinity. However, the Mission Ridge Expansion Plan is not considered organic growth in PUD planning models and represented doubling the electrical demand in the area.



Upper Squilchuck Planning ELECTRICAL



Recommended action- **ELECTRICAL:**

In order to continue providing reliable electrical service to existing customers and provide new electrical services to applicants, the District needs a formal application to initiate the in-depth system studies. Early indications are a new substation in the vicinity of the upper Squilchuck area is required. A new substation will require a 115KV transmission line connection from the Columbia River area to the new substation location. Organic growth and new large development growth, such as the Mission Ridge Expansion Plan will ultimately drive the timing of new substation and related infrastructure. Substation and Transmission locations and routes have not been identified at this time. These siting efforts are significant and require extensive public involvement and engineering processes.

As an initial step, the District is interested in hearing from project stakeholders to gain their insights and input into the following:

- *Is the need understood and staff recommendation supported ?*
- *What if any are potential limitations or challenges with location of a substation and transmission lines ?*
- *What major obstacles and concerns do local stakeholders have ?*
- *What limitations if any does the Applicant have in engaging the District in the large load application process ?*



Location Criteria
Electrical
transmission & substation locations &
Water system infrastructure

General Infrastructure Sighting Considerations:

- Functional
- Reliable
- Cost effective
- Accessible
- Maintainable
- Expandable
- Minimal aesthetic impacts
- Coexistent with other land use
- Constructible
- Compatible to environment
- Community supported
- Future redundant capable
- Resilient to Fire
- Safe
- Standardized components
- Permissible

Types of power lines

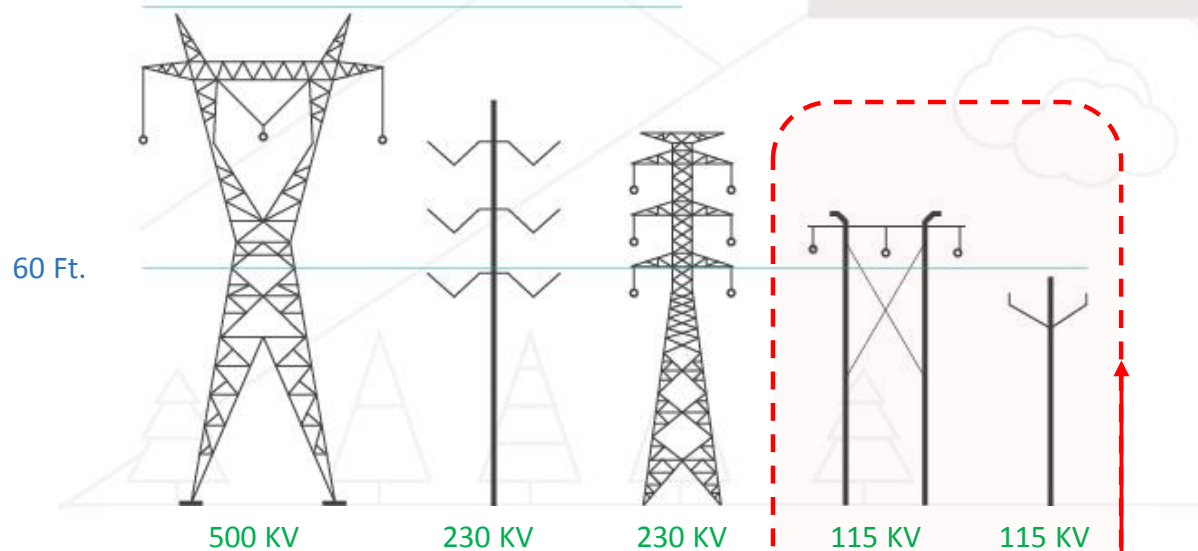
We rely on a system of transmission towers and power lines to carry the electricity produced at our hydro electric plants to the neighborhoods, homes and businesses in the County

Transmission lines

Transmission lines are the big, high voltage power lines that bring electricity from where it's made at our generating stations to substations near communities

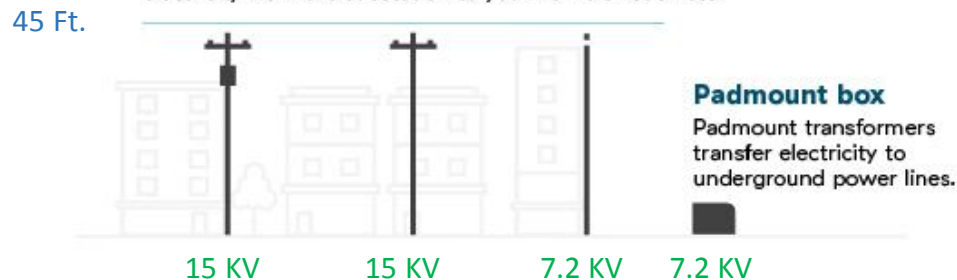
What's a kV?

kV stands for kilovolt, which is a unit of potential energy. One kV is equal to 1,000 volts.



Distribution lines

Distribution lines are the smaller, lower voltage lines that carry electricity from the substation to your home or business.



Typical
2-pole
Structure 115KV
Transmission



Typical
1-pole
Structure 115KV
Transmission

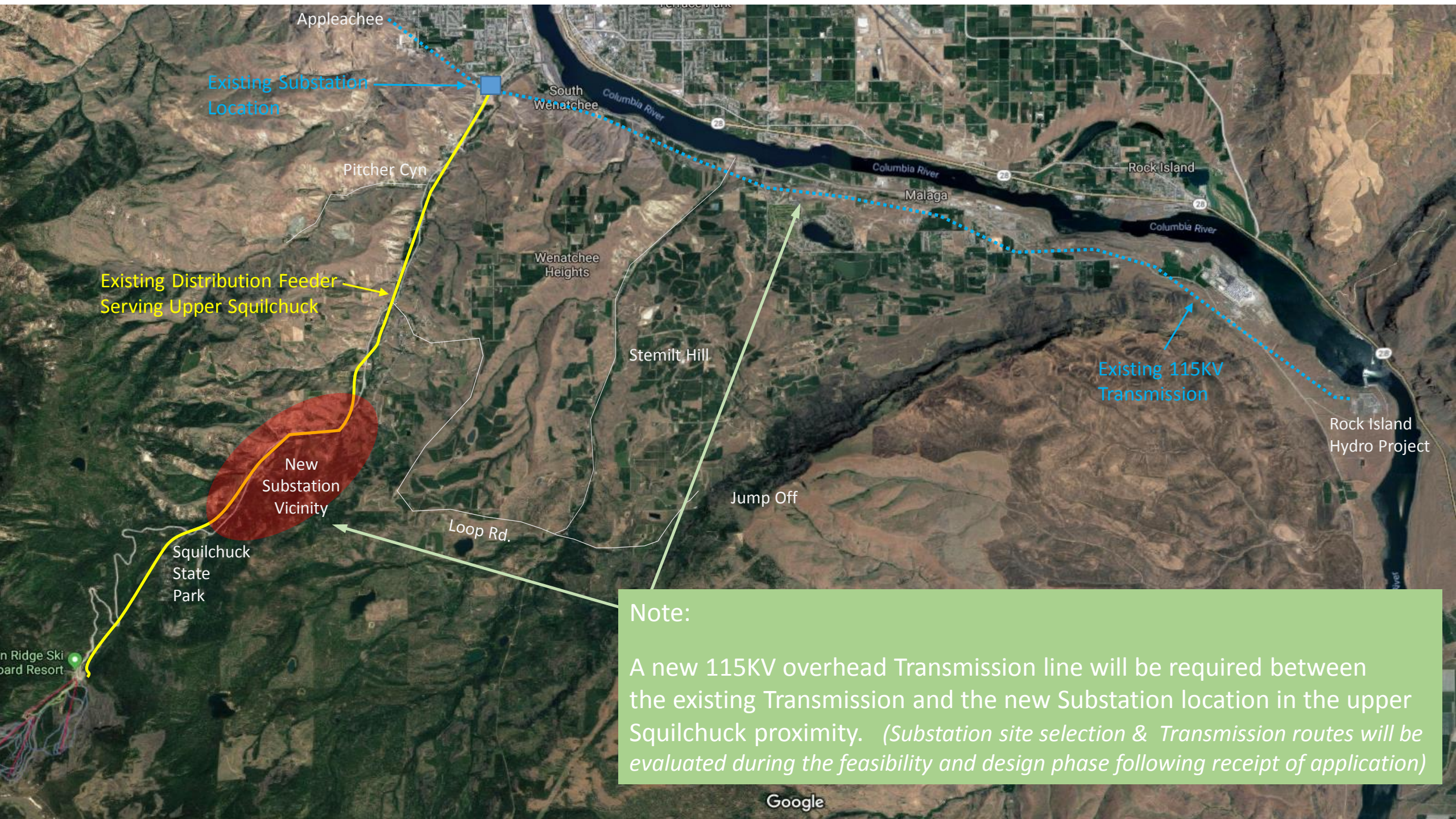


For an Upper Squilchuck Transmission line structures similar to these will be required. Typical right of way 25 feet right and left of centerline

Typical Electrical Substation Chelan County PUD

2 Acres (300 ft. x 300 ft.)





Note:

A new 115KV overhead Transmission line will be required between the existing Transmission and the new Substation location in the upper Squilchuck proximity. *(Substation site selection & Transmission routes will be evaluated during the feasibility and design phase following receipt of application)*



Squilchuck Planning Timeline EXAMPLE

Current planning condition:

We are here now (No formal application received)



NOTE:

Timelines can vary based on resource availability and support from other public agencies assisting in the Community engagement, permitting and right-of-way acquisition among other processes.



Upper Squilchuck Planning WATER



Current planning condition- **WATER:**

The Squilchuck basin, Wenatchee Heights, various canyons and the upper Squilchuck and Forest Ridge residential development are currently served potable water from the existing PUD Wenatchee water system network. The water source originating at the Regional water system near Hawley Street in Wenatchee and is connected in the vicinity of Pitcher Canyon. The water distribution system proceeds up the Squilchuck supported through a series of booster stations and reservoirs.

As of February 2020, the number of service connections in the Squilchuck water network include approximately 438 residential and 11 commercial water services, ranging from 5/8" to 2" size services. Recent planning efforts completed in 2017 have identified *no* new infrastructure or capital improvements are needed to serve existing customers and new organic growth at approximately 1% annually through the next planning cycle.

The Mission Ridge Expansion Plan represents major increases in demand for potable water that the existing PUD water system can not support. In order to support the new development significant capital improvements would be necessary.



Upper Squilchuck Planning WATER



Recommended action- WATER:

In order to facilitate connection of the planned Mission Ridge expansion area to Chelan PUD Wenatchee water system several conditions would need to occur . As an initial step, the District is interested in hearing from stakeholders to gain their insights and input into the following:

- *The District's Comprehensive water system plan would need to be updated and incorporate Mission Ridge Expansion Plan.*
- *The comprehensive plan will identify existing system deficiencies, improvements needed, and new infrastructure required to serve the Mission Ridge Expansion Plan.*
- *Because of the significant area of existing private property, public property and right of way the Wenatchee system affects it would be necessary to perform a supplemental comprehensive review of Land-use, easements and permitting for new and existing infrastructure.*

Mission Ridge

Wenatchee WATER System - Vicinity of the Upper Squilchuck

Forest Ridge

- System built 1980
- Main Line primarily ductile iron
- Approx. 1% growth annually
- ~ 449 Customer connections
- ~ 10 Water reservoirs
- ~ 7 Booster pump stations

Wenatchee Heights

Pitcher Canyon

Appleachee

Capital Improvement Examples:



Typical Water System Pump Station
Chelan County PUD
~1/2 Acres (150 ft. x 150 ft.)



Typical Water Reservoir Storage Structure
Chelan County PUD
~2 Acres (300 ft. x 300 ft.)



Upper Squilchuck Planning

External Influences that could impact timeline:

- Excessive growth and expansion beyond planned

(High Density Loads – Cryptocurrency – Seasonal Loads- Major development)

- Inability to attain permitting and community support
- Insufficient financial resources



Upper Squilchuck Planning

Conditions of relevance:

- Agriculture heavy Irrigation & frost protection
- Varying elevation changes (water)
- Seasonal loads recreational Skiing & Snow making
- Narrow County Road Right of way
- Significant environmental attributes
- Long electrical feeders (voltage)
- Costly system improvements
- Seasonal access concerns

Stakeholders:

- Applicant & Investors
- Local Ag community
- Water users
- County
- State & Federal
- State Parks
- Economic Development Community
- Transportation Planners
- Utilities