

# Distribution Infrastructure Planning: Focus on Substations

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CHELAN COUNTY

# Purpose / Topics:

- Overview of substation planning efforts
- Information on progress to date for the 3 active substation sites
  - Olds Station / Ohme
  - Leavenworth / Bavarian
  - North Shore Lake Chelan
- Current efforts identifying future substation sites

*For information only, no board action requested*

# Planning update:

- Substation infrastructure planning is a top priority for staff
- Pursuing property options where availability exists in non-residential areas
- PUD staff requesting assistance from County & Municipal planners
- Identifying transmission line options in some areas
- Planning for long-lead time equipment ordering in 2018

# Olds Station North Wenatchee - Ohme

## Why:

Resolves issues with aging infrastructure at existing Olds Station Substation & improve capacity In North Wenatchee area

## Preferred solution:

Build new double bank 28 MVA station

## Current stage:

Property acquired

Site layout and design underway

Coordination with Stemilt continues

Anticipate construction beginning 2019



# Leavenworth - Bavarian

## Why:

Relieves demand on existing substation power transformer now loaded at 100%

## Preferred solution:

Build new 28 MVA substation

## Current stage:

Property acquired

Will use Olds Station design

30% transmission route design

Re-engage the community outreach Q3

Anticipate construction in 2020



# North Shore Lake Chelan

## Why:

Relieves demand on existing substation power transformer now loaded at 87%

## Preferred solution:

Build new 28 MVA substation

## Current stage:

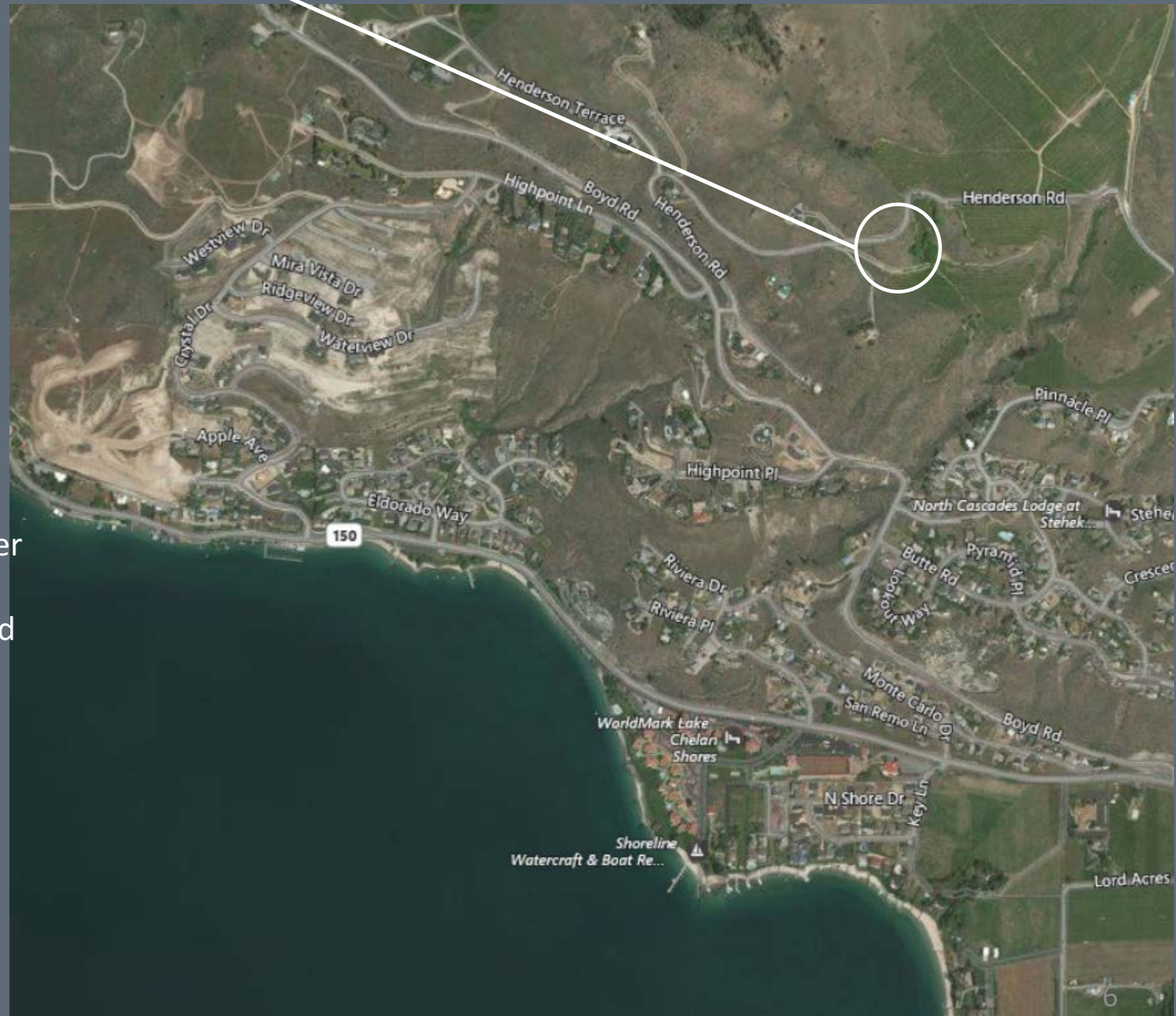
Real Estate Services working through the final parcel boundaries with owner

Next step: road access will be finalized

Station layout anticipated completed by end of 2018

2019 re-engage community members on aesthetic issues

Construction estimated for 2021



# Future substation priority list:

Highest

1. Wenatchee II
2. Castlerock (property owned)
3. Dry Lake - Manson
4. Simmer (current substation site)
5. Entiat
6. South Shore / Butte
7. Howard Flats
8. Stemilt Creek
9. Forest Ridge / Heights
10. Rock Island Dam

Lowest



# Wenatchee II

## Why:

Relieves demand on existing substation power transformer now loaded at 100%

## Preferred solution:

Acquire property near existing substation location

Build second transformer

## Current stage:

Evaluating property options





# Entiat

## Why:

Relieves existing substation power transformer now heavily loaded

## Preferred solution:

Build a new 28 MVA Station

## Current stage:

Evaluating property options with the City of Entiat



# Other items of interest

- Pursuing property options where availability exists in non-residential areas
- Future budget revision may be needed for land acquisition
- Seeking to understand approval process for long-lead time equipment – multi-unit order over several years should provide better pricing
- Acquiring property and long-lead time equipment will allow for alternative project management such as progressive design build
- PUD staff requesting assistance from County & Municipal planners – 6/20 planning meeting scheduled

# Agency Planning

District staff is meeting with individual municipalities reviewing:

Growth trends & future projections

Existing infrastructure capacity limitations

High Density Load (Crypto) impacts to infrastructure

Electricity use & land zoning relationships

Options for sighting transmission, substations & distribution infrastructure

Exploring land acquisition opportunities

Exploring code & safety aspects

A scenic view of a mountain peak at sunset. The foreground shows a rocky, reddish-brown slope with several dirt trails. A large, jagged rock formation is on the left, and another smaller one is in the center. In the background, a city is visible, surrounded by a river and rolling hills under a hazy, golden sky. The word "Questions?" is overlaid in white text in the center.

Questions?