

North Shore Chelan Substation Property Planning

Board of Commission Update

May 1, 2017

Today's Agenda

- Review of recent decisions to date
- Progress update on Chelan substation work since March 20th Board update
- Decision to narrow load center area
- Review next steps and timeline

Review

- **March 6th Board meeting**
 - Presented information on three sites under consideration (*Uhrich, Chelan Heights, WA Federal*)
 - Showed the cost and visual impacts of being outside the load center area (blue line)
- **March 16th Focus Group meeting**
 - Provided update and heard support to seek sites closer to the load center
 - Presented hypothetical alternatives closer to the load center to demonstrate an opportunity of significant cost savings, visual impact reductions, and fewer easements required
- **March 20th Board meeting**
 - Commissioners agreed three sites did not meet the PUD's goals
 - PUD staff directed to seek sites closer to the load center
 - Staff directed to analyze underground transmission

North Shore Chelan Substation



Legend

- Transmission
- Initial Area Identification
- Load Center Focus
- City Limits

1 in = 0.12 miles

Dashed lines are underground distribution and solid lines are over head distribution.

March 20, 2017 Board Meeting

- Initial site analysis presentation
- Emphasis to reduce visual impacts and cost
- Direction to move closer to load center

Ref: Uhrich

Ref: Chelan Heights

Ref: Franconia

Ref: Henderson Site 1

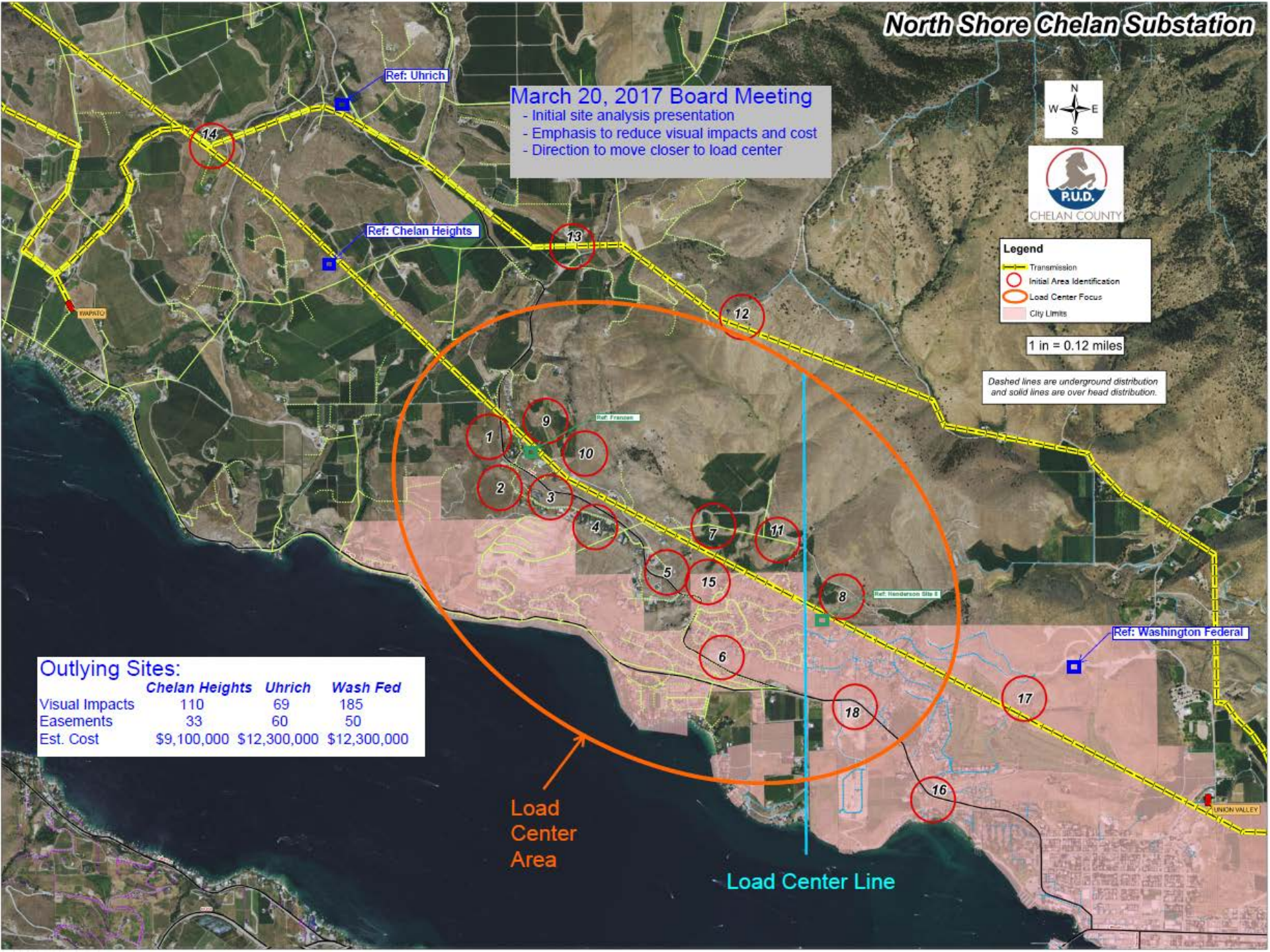
Ref: Washington Federal

Outlying Sites:

	Chelan Heights	Uhrich	Wash Fed
Visual Impacts	110	69	185
Easements	33	60	50
Est. Cost	\$9,100,000	\$12,300,000	\$12,300,000

Load Center Area

Load Center Line



North Shore Chelan Substation



Legend

- Transmission
- Initial Area Identification
- Load Center Focus
- City Limits

1 in = 0.12 miles

Dashed lines are underground distribution and solid lines are over head distribution.

Follow-up Analysis

- Emphasis to reduce visual impacts and cost
- Choose generic sites closer to load center
- Compare Visual Impacts, Easements & Cost

Outlying Sites:

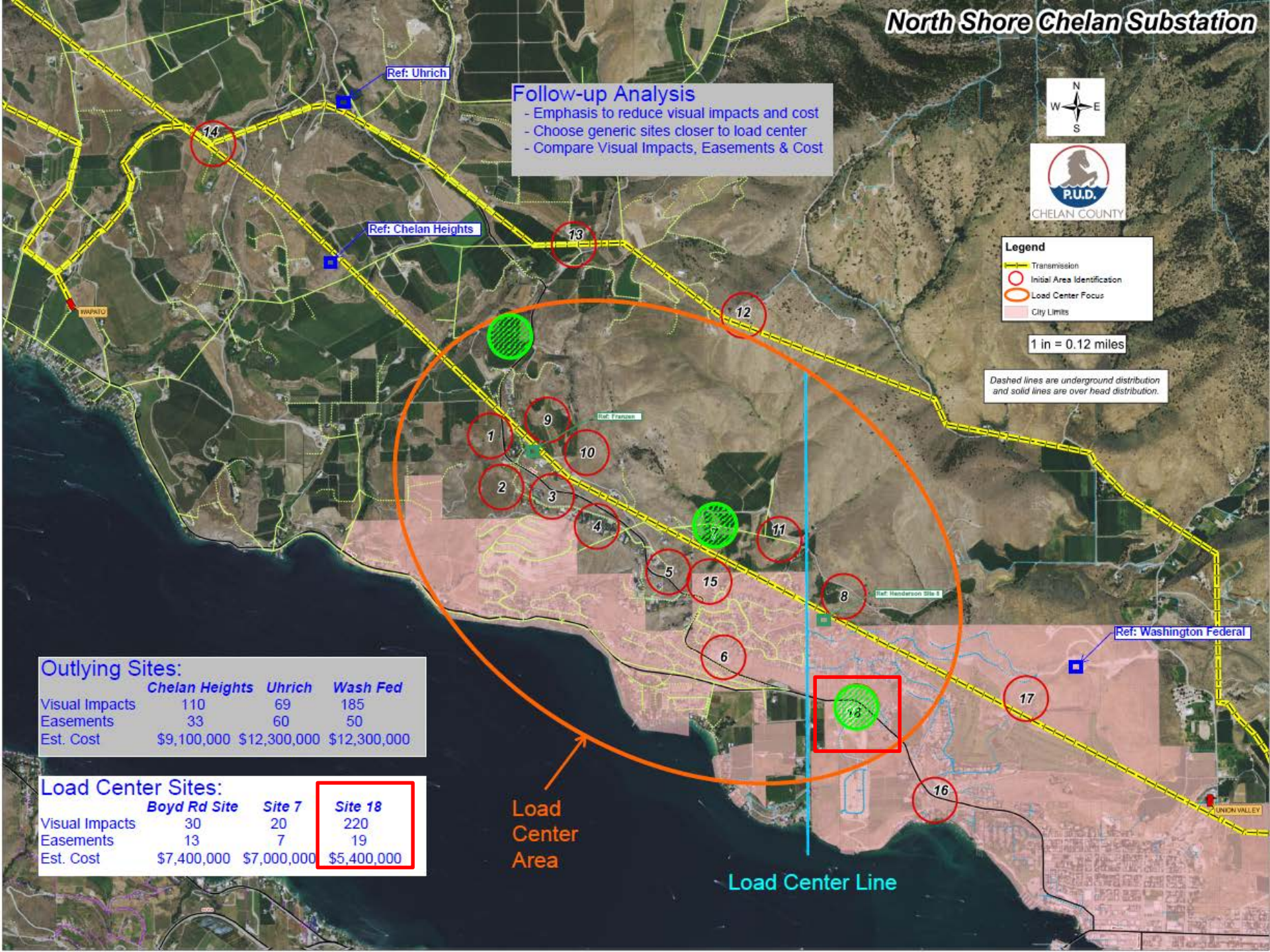
	Chelan Heights	Uhrich	Wash Fed
Visual Impacts	110	69	185
Easements	33	60	50
Est. Cost	\$9,100,000	\$12,300,000	\$12,300,000

Load Center Sites:

	Boyd Rd Site	Site 7	Site 18
Visual Impacts	30	20	220
Easements	13	7	19
Est. Cost	\$7,400,000	\$7,000,000	\$5,400,000

Load Center Area

Load Center Line



North Load Center Focus

- Outreach to load center property owners
- Potential Site identification
- Future specific Site analysis



Legend

- Transmission (Yellow dashed line)
- Wapato (Yellow solid line)
- North Load Center Focus (Orange outline)
- City Limits (Pink shaded area)

1 in = 0.12 miles

Dashed lines are underground distribution and solid lines are overhead distribution



Reduced Load Center Area (north of Chelan-Manson transmission line)

14

13

12

1

9

10

2

3

4

7

11

5

15

8

6

18

17

16

Ref: Chelan Heights

Ref: Francon

Ref: Henderson Site B

Ref: V

Summary

- Three outlying sites had significant cost, visual and easement impacts
- Staff began to pursue sites within the original load center area
- Hypothetical sites within the original load center area showed less cost, visual and easement impacts
- Further narrowed load center area based on underground transmission cost and reliability requirements
 - Underground transmission is cost prohibitive
- Eliminated options south of the transmission line – site 18 (Lookout)
 - Overhead transmission would have significant visual impacts
- Currently seeking options within the narrowed load center area (north of the transmission line)
 - Engaging property owners within the load center to develop assessment

North Shore Chelan Substation Planned Next Steps & Timeline

- **April:** PUD staff identified multiple locations inside the modified load center area
- **May 1:** Update to Commissioners
- **May 1-26:** PUD staff begin surveying potential properties to analyze
 - Costs
 - View impacts
 - Aesthetics
 - Property easements
- **May 22-26:** Chelan Focus Group meeting
 - Present initial information gathered on costs, view impacts and easements
 - Seek support on options
- **May 30-June 1:** Community meeting
 - Present preliminary cost estimate and line routes for potential load center sites
 - Seek community input and feedback and preferred alternative
- **June 16:** Finalize conceptual cost estimate and line routes
- **June 30:** Complete feasibility options
- **July 10:** Update to Commissioners and possible request for approval on preferred alternative
- **Q3-Q4:** Begin major equipment purchases

Questions?