

**National Park Service**  
**U.S. Department of the Interior**



# **Olympic Hot Springs Road Geotechnical Investigation Environmental Assessment**

**Olympic National Park  
Public Meeting  
May 15, 2018**

## Purpose (of the Geotechnical Investigation EA)

- The park's purpose in taking action is to assess subsurface conditions of the Olympic Hot Springs Road and of a potential area for road relocation.
- This action would determine the feasibility of the potential relocation of a portion of the road outside of the floodplain.
- The analysis of a potential road relocation would occur in a separate environmental assessment (EA) that would consider road relocation among other road-related alternatives OR in an environmental impact statement (EIS) that would address long-term planning for the Elwha Valley.

## National Environmental Policy Act (NEPA)

- Why do we need to first determine the *feasibility* of relocating the road?
- Normally, geotechnical investigations are covered under categorical exclusions, so why are we doing an EA for this one?

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Normally, geotechnical investigations are covered under categorical exclusions, so why are we doing an EA for this one?

- Any of the following indicates
- An EA may be prepared when it would assist with or inform agency planning and decision-making (1501.3(b); 46.300(b)).

# NEPA

## Why do we need to first determine the feasibility of potentially relocating the road to this area?

- “Range of alternatives” (set of “reasonable” alternatives)
- What is a “Reasonable” alternative?
  - Meet the purpose and need for action
  - Are technically and economically feasible
  - Not remote and speculative
  - Must be rigorously explored and objectively evaluated
  - Would not require a major change to a law, regulation, or policy

Why do we need to first determine the feasibility of relocating the road?

- The term **“range of alternatives”** refers to the set of all reasonable alternatives as well as other alternatives considered but eliminated from detailed analysis (46.420(c)).
- **“Reasonable”** alternatives:
  - Meet the purpose and need for action (DOI NEPA Regs 43 CFR 46.420(b))
  - Are technically and economically feasible (DOI NEPA Regs 43 CFR 46.420(b))
  - An alternative is not considered reasonable if technical, economic, or jurisdictional obstacles make the ability to implement the alternative remote and speculative.
  - Must be rigorously explored and objectively evaluated (CEQ NEPA Regs 40 CFR 1505.1(e); 46.426(c))
  - Would not require a major change to a law, regulation, or policy

# NEPA

**Normally, geotechnical investigations are covered under categorical exclusions, so why are we doing an EA for this one?**

- The proposal has no CE [given it's occurring in a semi-previously undisturbed area]
- Is not an action that normally requires preparation of an EIS
- Is unlikely to result in significant adverse environmental impacts
- The proposal has an applicable CE but may trigger an extraordinary circumstance (as defined by NEPA) [If it *was* previously disturbed it may still be an EA due to EC triggers]
- It is unknown whether the proposal would result in significant adverse environmental impacts
- An EA may be prepared when it would assist with or inform agency planning and decision-making (1501.3(b); 46.300(b))

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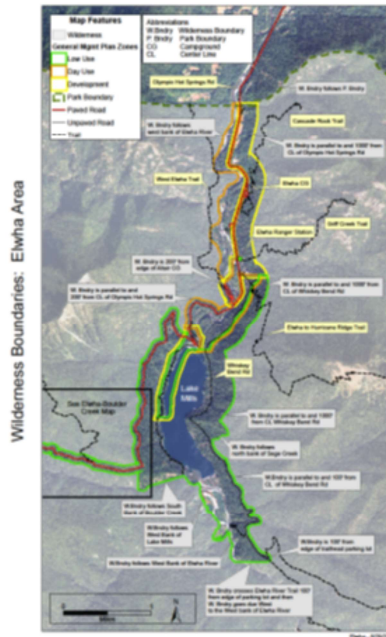
- The proposal has no CE
- Is not an action that normally requires preparation of an EIS
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- It is unknown whether the proposal would result in significant adverse environmental impacts
- An EA may be prepared when it would assist with or inform agency planning and decision-making (1501.3(b); 46.300(b)).

## **NEPA “Extraordinary Circumstances”:**

- a. Have significant impacts on public health or safety
- b. Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation, or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (EO 11990); floodplains (EO 11988); national monuments; migratory birds; and other ecologically significant or critical areas;

- c. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources (Sec. 102(2)(E));
- d. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks;
- e. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects;
- f. Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects;
- g. Have significant impacts on properties listed or eligible for listing in the National Register of Historic Places as determined by the bureau;
- h. Have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species or have significant impacts on designated critical habitat for these species;
- i. Violate a federal law, or a state, local, or tribal law or requirement imposed for the protection of the environment;
- j. Have a disproportionately high and adverse effect on low income or minority populations (EO 12898);
- k. Limit access to and ceremonial use of Indian sacred sites on federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (EO 13007); or
- l. Contribute to the introduction, continued existence, or spread of noxious weeds or nonnative invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and EO 13112).

Why isn't the park considering conducting geotechnical investigations on the other side of the river?



#### Notes:

- Wilderness boundary on the **east side of the river** is 1000' from the centerline of OHS Rd. until it hits Sege Creek up Whiskey Bend Rd.
- The wilderness boundary on the **west side of the Elwha River** starts immediately at the river's bank until it reaches the Altair picnic area.
- It would take an **act of Congress** to modify the wilderness boundary.



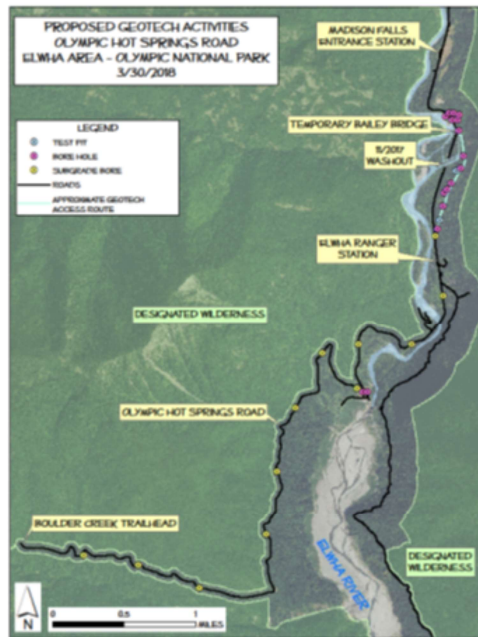
## **What this proposal is *not*...**

- **A proposal to conduct actual road work (repair, rehabilitation, etc.)**
- **A proposal to relocate the road**
- **A proposal to examine/determine other access methods (bicycles) and routes**
- **A proposal to address cultural resources other than archeological (within the proposed path)**

### **What it is not...**

- While there would be some geotechnical drilling conducted within the road prism, there is no actual road work (repair, rehabilitation, etc.) included in this proposal.
- This proposal also does not include an analysis of potential road relocation
- Nor would it include an analysis or determination of other access methods and routes





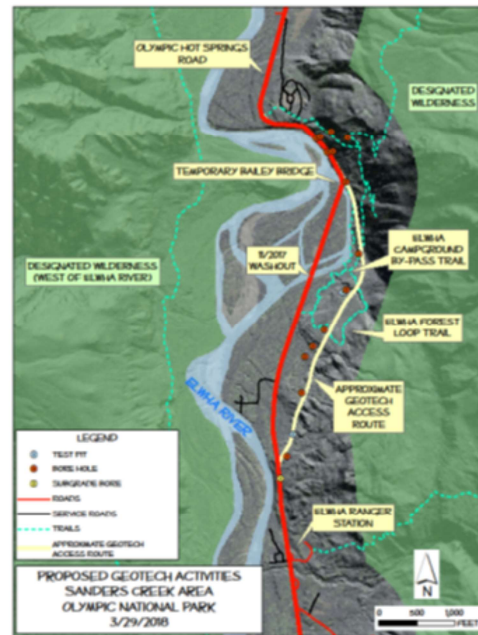
**What this proposal is...**

### **Information Gathering:**

- Soil Types
- Groundwater
- Slope Stability
- This information will determine if a relocation is feasible alternative from an engineering perspective

## Information Gathering: Viability

- Are there slopes, hazards that will prevent or significantly increase road construction costs?
- Ancient landslides?
- Active landslides?
- Groundwater?
- Settling embankments?
- Etc...



## What this proposal *is*...

- Drilling along a potential relocation route to gather information.
- Information would be provided from drilling (boring soil logs) activities and from monitoring equipment installed during drilling.
- Field measurements (regular monitoring activities) would provide further information
- Information-gathering to help determine if a relocation is feasible from an engineering perspective

## Equipment: Slope Inclinometer



- 3" diameter pipe
- Measures slope movement and depth of movement
- Field probe measurement determines if, how much, and where there's subsurface movement
- Full depth of holes
- Image: slope inclinometer with piezometer attached on outside. Data logger on top. See next slide for piezometer.

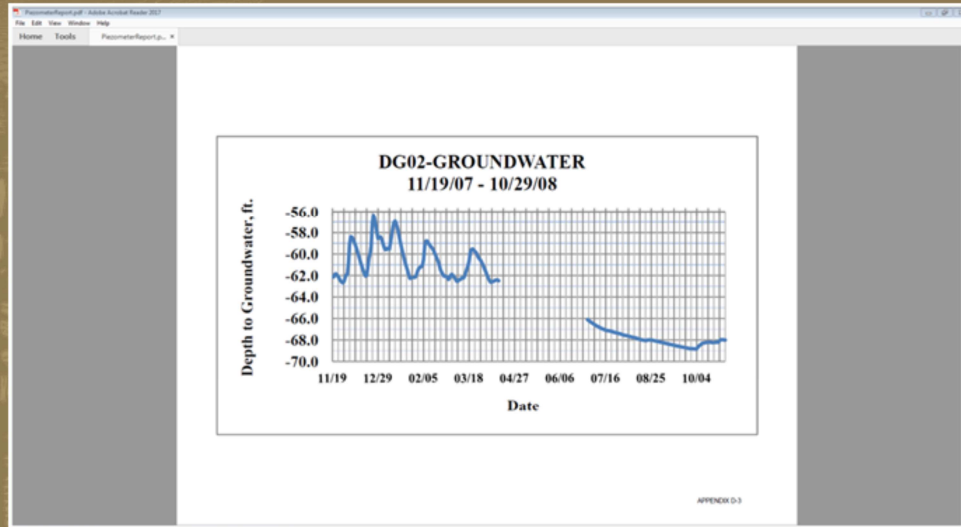
## Equipment: Piezometer

- Measures groundwater levels and fluctuations
- Installed on the outside of the inclinometer casing
- Measures frequency, converts to head pressure
- Basically allows correlation between precipitation and ground water changes
- Can inform cut slope depths and stability



Piezometer

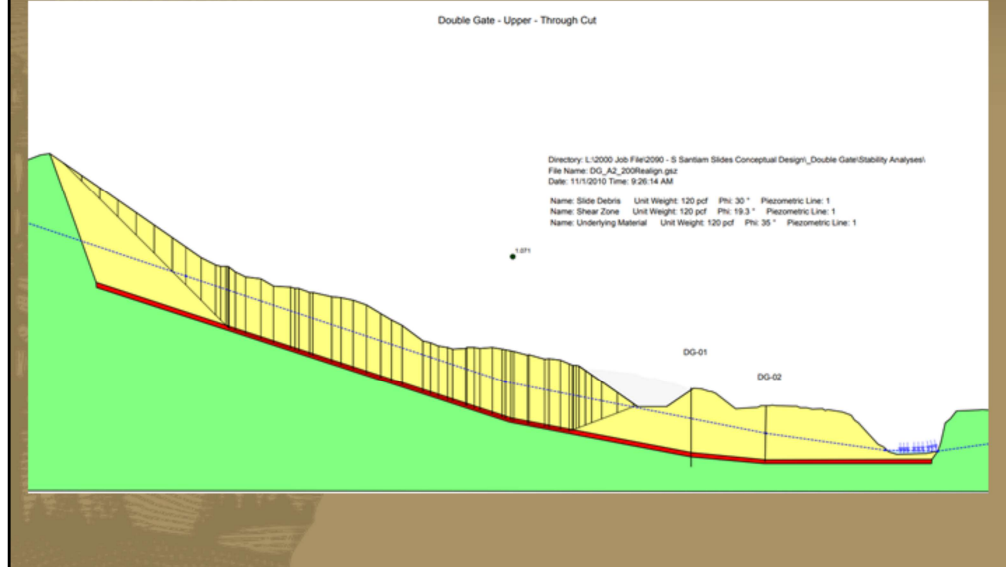
# Example Piezometer Log







# Sample Landslide Analysis



## Drill Rigs



## Drill Rig Path (Off-road Location)



## More Sample Cat Path Photos





## NEPA

If the geotechnical investigation reveals that a road relocation is feasible to that area...then we proceed to consider it, among other viable alternatives, if any, in a *new* NEPA document (EA or EIS).



## Simplified Tentative Timeline

Step	Timeframe
Draft the Environmental Assessment (EA)	Now (Spring 2018)
Release the EA for public review	Early Summer (2018)
Sign the decision document ("Finding of No Significant Impact")	Mid-Summer (2018)
Begin implementation	Mid- to Late Summer (2018)
Begin next EA or EIS process to analyze road relocation and/or long-term planning for Elwha Valley	*Fall/Winter (2018/2019)

**\*Internal preparations and scoping can begin, public scoping could occur in the winter/spring 2019, but definitive alternatives would not be drafted until we have results from the geotechnical investigation.**

### Notes:

- \*Internal preparations and scoping can begin, public scoping could occur in the winter/spring 2019 (with preliminary alternative concepts), but definitive alternatives would not be drafted until we have results from the geotechnical investigation – geotechnical monitoring would occur for up to one year (could be less depending on how soon we get some definitive information) in order to inform the alternative. The equipment could remain in place for an additional year or two to help inform design of a road relocation while the additional NEPA documentation and analysis is being drafted and conducted, respectively.



# Detailed Tentative Schedule

**Olympic Hot Springs Road Anticipated Schedule**

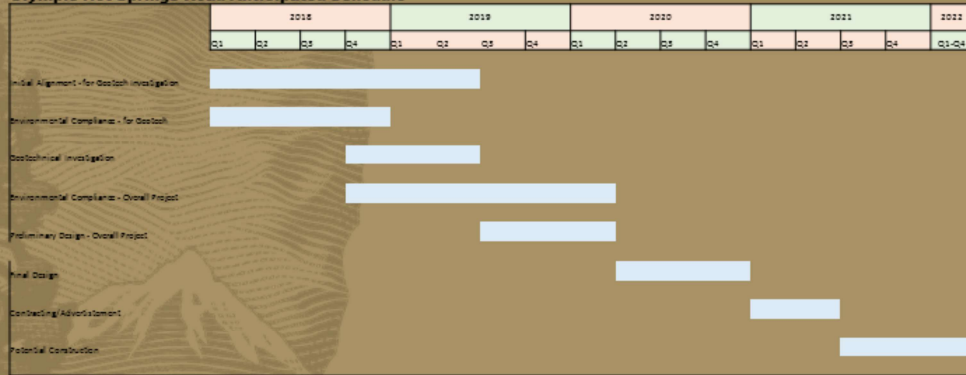




Photo by Dave Conca 11.28.17

**Thank you.**

**Questions?**