

Steelhead Landslide

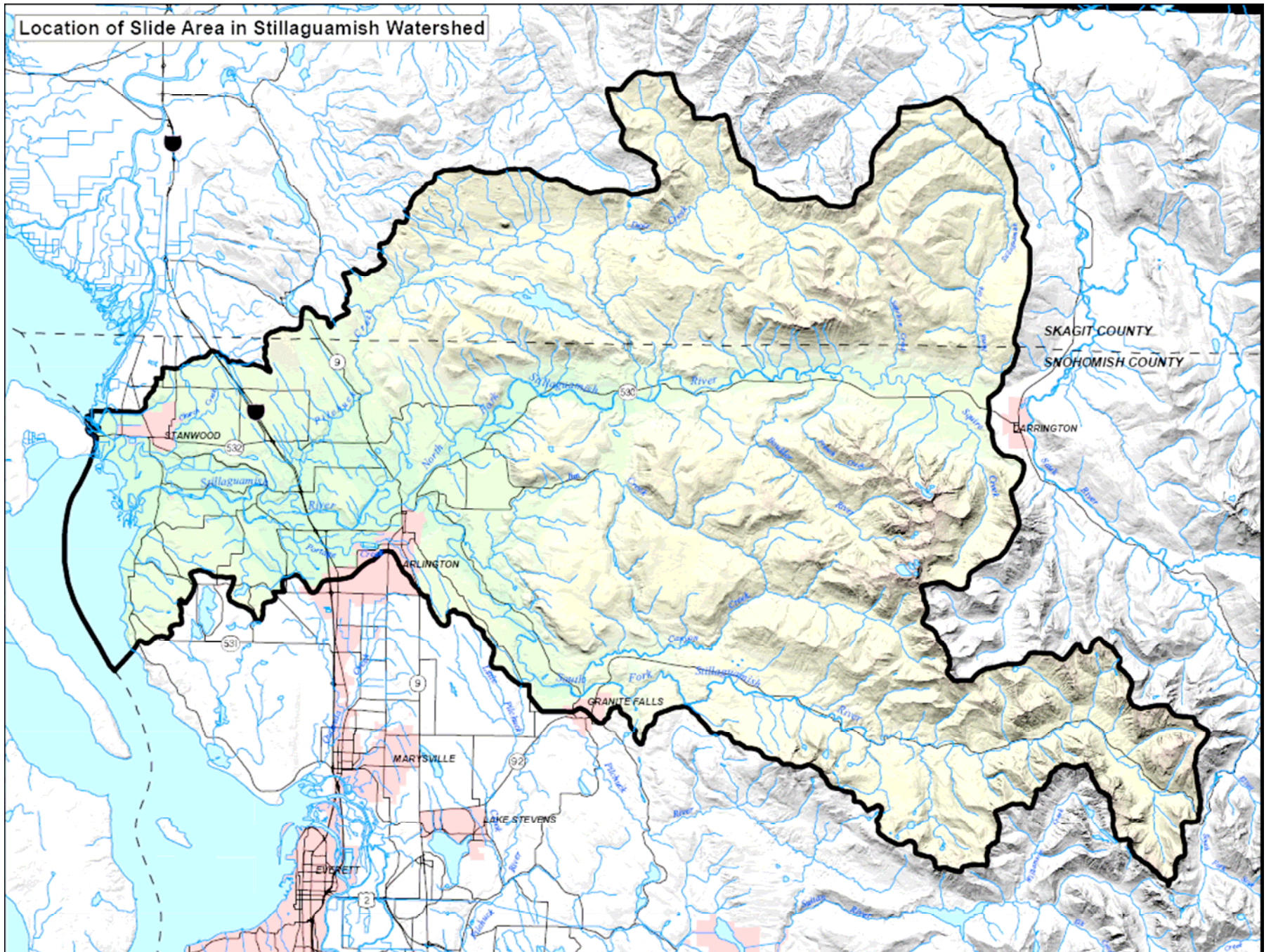
Jan. 25, 2006

“Geologic Time is Now”

Chronology

- ❑ Wed. 1/25/06
Approx. 2:00 PM Slide began
4:00 PM Call from DEM
- ❑ Thurs 1/26/06
AM helicopter tour of slide to assess problem
DEM, Public Works, Corps developed approach
- ❑ Friday 1/27/06
9:30 AM community meeting at Oso Fire Station
2 PM – began removing trees from lower channel
- ❑ Sat. 1/28 – 29
Completed tree removal – river started to downcut new channel
- ❑ Sunday night
High water – 15,000 cfs – further downcutting and widening
- ❑ Monday 1/30
Rapid erosion threatening two homes immediately
Corps w/ County decided to place rock along bank
- ❑ Tuesday 1/30 to Friday 2/ 3
Completed rock placement with large wood on downstream and upstream ends.

Location of Slide Area in Stillaguamish Watershed





Deer Creek

Spokan Creek

Stillaguamish

Fork

Yukon

SKAGIT COUNTY

SNOHOMISH COUNTY

River

530

Stillaguamish

Squire

DARRI

Boulder

Squalicum

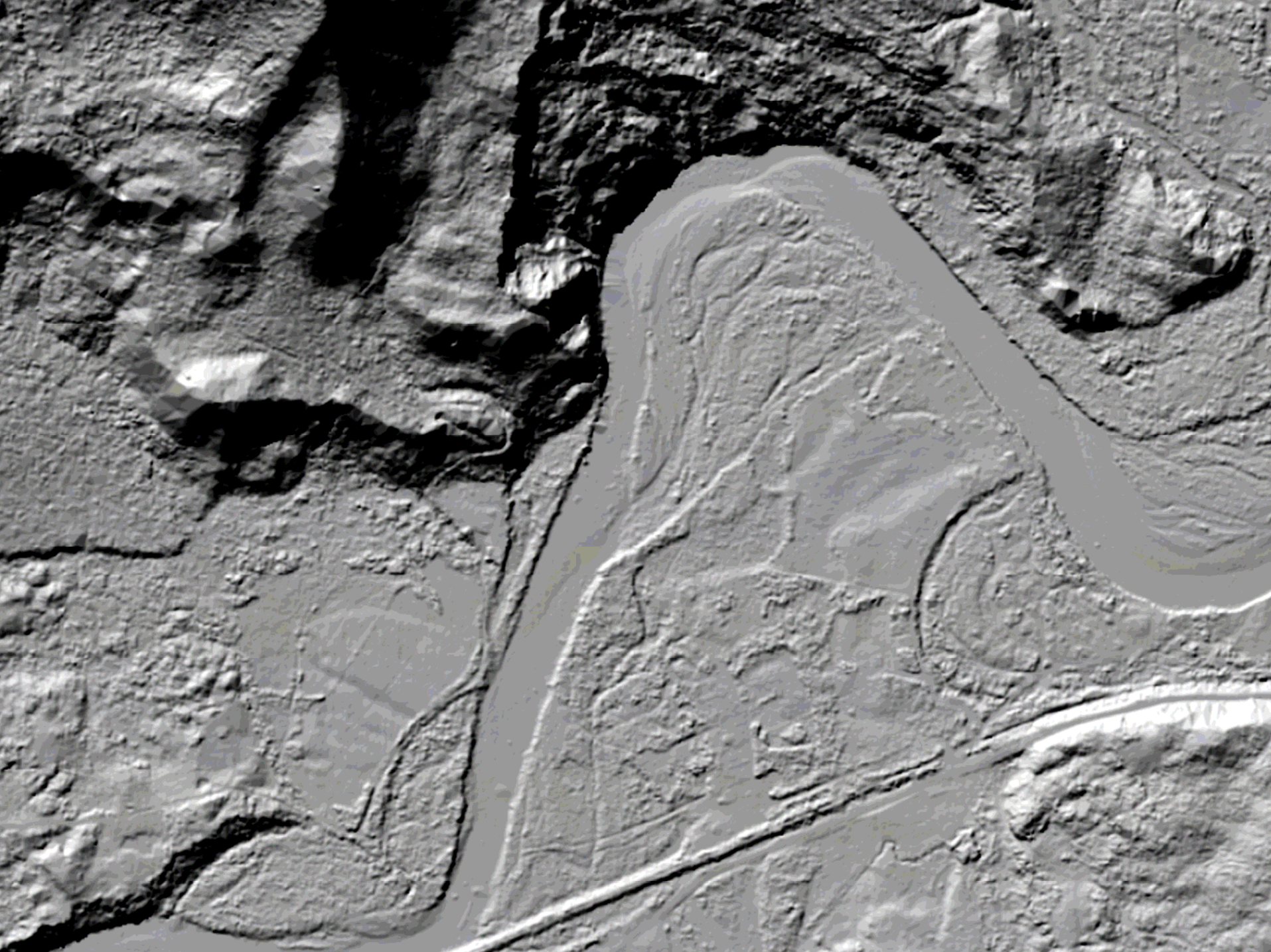
River

Creek

Yukon

Creek

























Jan. 27 - 28

New channel formation

















Monday 1/30/06

- ❑ High water brought river from 2000 cfs to almost 15,000 cfs.
- ❑ New channel – continued downcutting and widening









Monday Night and Tuesday

- ❑ Corps and County placed rip rap to protect homes
- ❑ Added wood to enhance the rip rap on the upstream and downstream ends.

















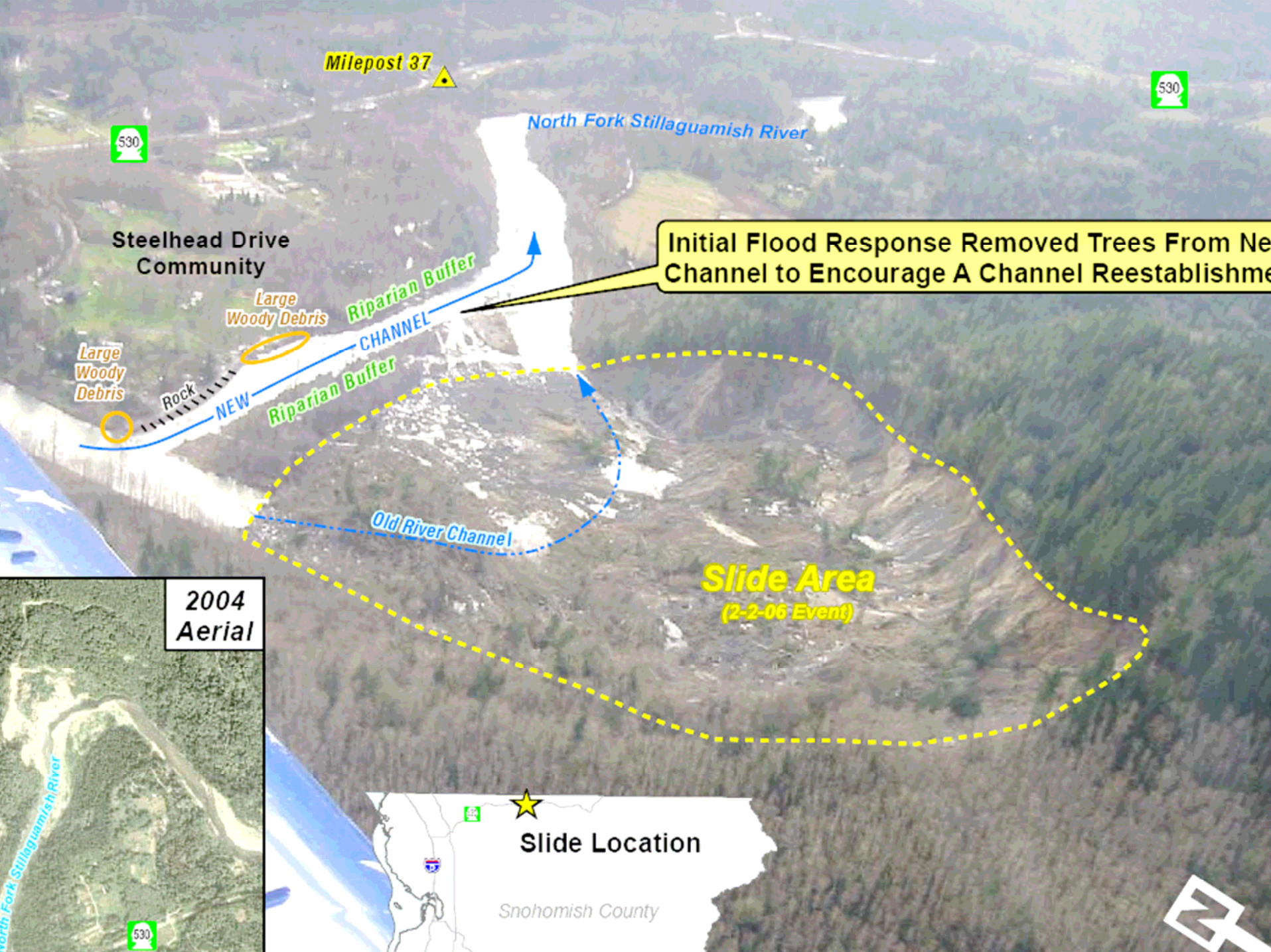






Where do we go from here?

- ❑ Follow up permitting and mitigation
- ❑ Community still at risk:
 - Continued channel erosion – headcutting and widening.
 - Reduced channel capacity
- ❑ Community meeting later in February.
- ❑ Slide monitoring.
- ❑ Long term solution ?? Log revetment??



Milepost 37



North Fork Stillaguamish River

Steelhead Drive Community

Initial Flood Response Removed Trees From New Channel to Encourage A Channel Reestablishment

Large Woody Debris

Riparian Buffer

Riparian Buffer

CHANNEL

NEW

Large Woody Debris

Rock

Old River Channel

Slide Area
(2-2-06 Event)

2004 Aerial



Slide Location

Snohomish County

