

# North Creek Bi-weekly update

The North Creek project has begun! The contractors (Oregon State Bridge Co) and subcontractors (Chris Dials Construction) met with the MidCoast Watersheds Council and the Forest Service on Monday, June 17<sup>th</sup> to kick off work.

## June 17<sup>th</sup> – 21<sup>st</sup> was spent:

- Clearing alder from the road prism and decking it for firewood
- Placing silt fencing and erosion control measures
- Beginning excavation of the culvert

Site visits by FS personnel, including: Cole Smith (eng), Lola Coombe (eng), Jennifer and Jameson (FS eng pathways interns), Ryan Krause (DRM pathways intern), and Michelle Dragoo (wildlife bio).

Conditions were dry and work went quickly and smoothly.



## June 24<sup>th</sup> – 28<sup>th</sup> was spent:

- Setting up a coffer dam and preparing dewatering equipment
- Setting up block nets and salvaging fish from the site
- Continuing excavation to the culvert

Salvage assistance was AMAZING! Paul Olmstead, Caleb and Chris from ODFW ran the electroshocker. Various FS and Midcoast personnel assisted with netting, counting, and ID'ing the fish. There were 432 organisms rescued, including 240 Coho Salmon.

Rains came on Monday night and raised water levels, leaving wet conditions that slowed work. Excavation paused Tuesday to allow road conditions to improve. Erosion control measures were beefed up, and excavation continued on Wednesday with drier weather. More rain came Thursday, and culvert removal is planned for Friday afternoon.



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The North Creek project continues with long days of excavation. The contractors (Oregon State Bridge Co) and subcontractors (Chris Dials Construction) continue in-water work with USFS and MidCoast Watersheds Council partners.

## July 1<sup>st</sup> – 5<sup>th</sup> was spent:

- Continuing excavation of fill around and below the former culvert (which was removed Friday, June 28<sup>th</sup>)
- Chipping weak basalt bedrock found throughout the project site to make room for the concrete footers
- Removal of the downstream weirs in the lower portion of the project area and additional fish salvage of the area around the weirs

Site visits by agency partners, including: Jeff Young (NOAA) and Pete Baki (ODFW). Some drizzle throughout the week, and weirs drilled into the bedrock slowed their removal a bit!

## July 8<sup>th</sup> – 12<sup>th</sup> was spent:

- Improving erosion control measures and setting up a coffer dam downstream of excavated weir area
- Continuing excavation and chipping of the bedrock to prepare for footer installation
- Trucked rock into the area to stockpile

Site visits by Bill Brignon (USFS Regional Office) and engineering team (Cole Smith, Zeke Langum, and Helmut







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The North Creek project continues with major excavation complete, footings formed, poured and stripped, and building of the culvert beginning. The contractors (Oregon State Bridge Co) and subcontractors (Chris Dials Construction) continue in-water work with USFS and MidCoast Watersheds Council partners.

\*\*\*A special note: Leah Tai, Hydrologist for the Hebo Ranger District, has accepted a temporary District Ranger position in Entiat, WA. Leah has been a major force in getting this project funded and completed and she will be greatly missed while she is away. It is not an understatement to say that we would not be completing the North Creek project this year without Leah's dedication, diligence and hard work. **Thanks Leah!!!**\*\*\*

## July 15th-19th was spent:

- Completing final excavation. The last 5% of excavation since chipping weak basalt bedrock on one side of the project was necessary to make room for the concrete footing
- Footings forms were built in two stages, starting with the far (east) footing. OSBC crew completed footing forms mid-week and the footings were poured on Friday, July 19<sup>th</sup>. Although there were some issues and delays due to concrete delivery, the pour went well. The concrete was delivered via six trucks and pumped down to the site using a concrete pump truck.

Site visits by USFS personnel, including: Cole Smith, lead project engineer.

## July 22<sup>nd</sup>-26th was spent:

- Stripping first poured footing and forming second footing form.
- Second footing form was poured on Wednesday, July 24<sup>th</sup>. Concrete trucks were on time, or early, and from first truck delivery to completion was just under 4 hours.
- The first set of panels for the new culvert structure were installed!
- Trucking rock into the area to stockpile for backfill and stream simulation- watch for truck traffic on FR-17

Site visits by USFS personnel, including: Josh Chapman, acting District Ranger for the Hebo Ranger District.





Footing pour #2 (Wednesday, July 24<sup>th</sup>):







Pump truck set up to deliver concrete to the footing.







First panels of new culvert installed, it is gonna be huge!

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## July 29<sup>th</sup>-August 2<sup>nd</sup> was spent:

- Constructing the new wide spanning, open bottom culvert. OSBC had a full crew working for the week and completed construction of the new culvert on Friday August 2<sup>nd</sup>.
- Over 5,500 (!!!) bolts were used in the new culvert, and the crew meticulously pieced together the structure like a giant jigsaw puzzle.

Site visits by USFS personnel, including: Kami Ellingson, Watershed Program Manager and Robert Sanchez, Forest Supervisor

## August 5<sup>th</sup>-August 8<sup>th</sup> was spent:

- OSBC crew moving out construction materials, subcontractor Chris Dials Construction will complete the rest of the stream simulation, backfill and road grading.
- Trucking rock and stream rock material into the area to stockpile for backfill and stream simulation- continue to watch for truck traffic on FR-17.

With Leah Tai on detail up in Washington, Forest Service has brought in additional hydrologists to supervise the stream simulation and backfilling. Welcome to the project James Pettet and Kacey Largent from the Waldport office. Also, welcome back to the project Justin Anderson, who will be here for a few weeks on detail from his position in Colorado. Justin and Leah were the leads in the stream simulation design, so it will be great to have him and the rest of the USFS personnel on site to help with this crucial project element.



Forest Supervisor Robert Sanchez provides scale for the huge new culvert.



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The North Creek project continues with culvert construction complete, and backfilling and stream simulation is ongoing. The contractors (Oregon State Bridge Co) and subcontractors (Chris Dials Construction) continue in-water work with USFS and MidCoast Watersheds Council partners.

## **August 12-16th was spent:**

Progress was slow due to the transition from culvert construction to backfilling and stream simulation. The remote location of the site has also made transport of stream simulation and structural backfill material a logistical challenge. Over 2500 cubic yards of material had to be brought up windy Forest Service roads by trucks, some with trailers. The tourist traffic this time of year didn't help!

## **August 19<sup>th</sup>-23<sup>rd</sup> was spent:**

-Stream simulation work began with stockpiling stream material in the new channel.

-The stream characteristics for this "new" channel were based on step pool cross sections and the longitudinal profile of a reference reach directly upstream from the former culvert. The new channel consists of a repeating pattern of steps and pools at a 3.5% gradient. Because this matches the reach immediately upstream, this will allow the design to transition smoothly to the natural streambed. Stream simulation work was required both upstream and downstream from the former culvert footprint, because a "sediment wedge" upstream from the culvert was removed, and the concrete weirs and their plunge pools were also removed. The thalweg, or center of the stream, was also realigned into its historical location to avoid further erosion on the right hand stream bank beneath the roadway.

-Different bed classes, mixes of different sized rock, were utilized for stream bed material, stream bank material and larger boulders to create steps and provide grade control.

-Structural backfill has been slow because the fill requires no greater than 8 inch "lifts". Only about eight inches of backfill material can be placed at one time, and then it must be manually compacted. This ensures proper compaction around the new open bottom culvert.











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The North Creek project continues with culvert construction and stream simulation complete, and backfilling ongoing. The contractors (Oregon State Bridge Co) and subcontractors (Chris Dials Construction) continue in-water work with USFS and MidCoast Watersheds Council partners.

## **August 26<sup>th</sup>-30<sup>th</sup> was spent:**

- Completing stream simulation and bank construction as outlined in the last update
- The project site was re-watered on Wednesday, August 28<sup>th</sup>, and with this, full passage for aquatic organisms was restored to North Creek!

## **September 2<sup>nd</sup>-6<sup>th</sup> was spent:**

- Slowly backfilling the area around the culvert with structural backfill material
- Continuing trucking of backfill and riprap material to the project site

## **September 9<sup>th</sup>-13<sup>th</sup> was spent**

- Progress on backfilling was slowed due to heavy rains on Sunday and Monday. This saturated the soils around the project site, as well as the piles of fill material stockpiled during structure excavation.
- Project engineer Cole Smith (USFS) visited the site on Monday, September 9<sup>th</sup> to check on backfill progress. Compaction tests performed by a materials tester confirmed proper compaction levels.
- Soils started drying out by the end of the week and work will continue into the weekend, with final clean up, road grading, seeding/mulching to be complete next week.



Stream simulation work



# The “new” North Creek...





Flows increased after rains on  
September 8/9





Backfill has reached the top of the new culvert structure!

