Forest Service Road
Decommissioning Strategy

Presented by:
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Regional Transportation Program Manager
Alaska & Pacific Northwest Regions
• Strategic Goals & Direction
• **Why** we decommission
• How we make the hard decisions to decommission
• Different Decommissioning Objectives & Treatments
Secretary Perdue’s 7 Strategic Goals for USDA

Strategic Goals for FY2018-2022

1. Ensure USDA programs are delivered efficiently, effectively, and with integrity and a focus on customer service.
2. Maximize the ability of American agricultural producers to prosper by feeding and clothing the world.
3. Promote American agricultural products and exports.
4. Facilitate rural prosperity and economic development.
5. Strengthen the stewardship of private lands through technology and research.
6. Foster productive and sustainable use of our National Forest System Lands.
7. Provide all Americans access to a safe, nutritious and secure food supply.
Chapter 2: Citizen Services

For anticipated result to protect and improve public access to National Forests and Grasslands,

“Limit new road closures and road decommissioning only to activities for public safety, significant environmental risk, or as required by law and regulation or as negotiated with state or local governments.”
USFS Transportation Data

- Nationally – About 267,000 miles of open road and 103,000 miles of closed (stored) road
  - ~65% open roads (maintained for public/admin purposes)
  - ~35% closed roads

- Regionally – About 89,500 miles (24% of the nation)
  - ODOT = 7,990 miles
  - WSDOT = 7,050 miles
  - This is only 17% of USFS roads!

Earth’s C = 24,900 mi
Total System can Circle the Globe 11 Times!
USFS Data – National Visitor Use Monitoring Data (FY12-16)

Visits (millions) to national forests

Region 6 ~ 18M Rec Visits!
Oregon Timber Harvest Annually – All Ownerships

Per Associate Oregon Loggers, Inc.
Oregon Timber Harvest by Jurisdiction

Oregon Statewide Harvest (Billion Board Feet)

- Private
- Federal
- State/Tribal/County

Per Associate Oregon Loggers, Inc.
USFS Timber Volume Trend (2012 – 2022)

* Projected Target Assignment – Subject to Change
Per Associate Oregon Loggers, Inc.
Region 6 Decommissioning Trend

Miles Decommissioned

- Miles Decommissioned


Miles Decommissioned:
- 2008: 150 miles
- 2009: 350 miles
- 2010: 300 miles
- 2011: 250 miles
- 2012: 200 miles
- 2013: 150 miles
- 2014: 100 miles
- 2015: 50 miles
- 2016: 100 miles
- 2017: 150 miles
- 2018: 200 miles
- 2019: 250 miles
2005 Travel Management Rule

Subpart A – Administration of the Forest Transportation System

Identify minimum road system to better match available funding with recurrent road maintenance cost.

Identify roads recommended “needed” and “not needed” for future long term land management use.

Subpart B – Designation of Roads, Trails, and Areas for Motor Vehicle Use

Determine where, and if appropriate, when motor vehicles may be operated (with the focus being recreational use of roads, trails, areas, and stop uncontrolled cross-country motorized travel).

Forests were to create a Motorized Vehicle Use Map.
How to Determine IF we Decommissioning Roads?

**First… proper planning.**

- Collaborate (public input)
- Coordinate (governments and tribes)
- Investigate (do the proper analyses and address environmental criteria)

**Second… implementation.**
Decommissioning a Road: Reestablishing vegetation and, if necessary, initiating restoration of ecological processes interrupted or adversely impacted by the unneeded road.

Authority:
The Forest and Rangeland Renewable Resources Planning Act (16 USC 1608) requires that within 10 years after it is determined that a road is no longer needed, vegetative cover be reestablished on the road by either artificial or natural means.

Objective:
Stabilize, restore, and revegetate unneeded roads to a more natural state to protect and enhance NFS lands. (FSM 7734.1)
Road Decommissioning Treatments

1. Reestablishing former drainage patterns, stabilizing slopes, and restoring vegetation;

2. Blocking the entrance to a road or installing water bars;

3. Removing culverts, reestablishing drainages, removing unstable fills, pulling back road shoulders, and scattering slash on the roadbed;

4. Completely eliminating the roadbed by restoring natural contours and slopes; and

5. Other methods designed to meet the specific conditions associated with the unneeded road.

(FSM 7734.02)
Road Entrance Treatments
The objective or road entrance treatment is to physically prevent motor vehicles from entering the road.
Entrance Treatment – Barrier or Berm
Entrance Treatment – Barrier, Boulders, and Logs
Entrance Treatment – Barrier using Slash
Entrance Treatment by Recontouring
## Treating Road Entrances

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Description</th>
<th>Considerations</th>
<th>Relative cost</th>
<th>Typical equipment</th>
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</table>
| **Non-ground-disturbing** | Allow road entrance to return to more natural condition by natural means.  
Remove all unnecessary entrance signs, including route markers and regulatory signs.  
Install appropriate travel management signs. | No traffic or safety concerns at road entrance.  
Low risk for resource impacts.  
Current use is minimal.  
Entrance can be easily revegetated in a short or reasonable amount of time. | $             | None.            |
| **Barriers**            | A closure device (other than a gate) that physically blocks motor vehicles.  
Examples include: berms, boulders, slash, logs, waterbars, and guardrails. | Road has current use.  
Barrier mitigates safety concerns.  
Protect treatment investments.  
Entrance has not or will not revegetate in a reasonable amount of time. | $             |                  |
| **Recontour**           | Restore road entrance to a more natural topography by recontouring to provide a more acceptable physical appearance. | Reestablishing natural drainage patterns is a priority.  
Maintaining effective physical barriers is difficult.  
Visual quality is a concern. | $$            |                  |
Road Drainage Treatments
The objective of treating drainage features is to prevent resource damage, eliminate the need for future drainage maintenance, and in some places, to improve aquatic organism habitat.
Drainage Treatment – Outslope Road Prism
Drainage Treatment – Remove Relief Culverts
Drainage Treatment – Remove Live Stream Culverts
Drainage Treatment – Remove Structures

Before

After
Drainage Treatment – Scarify Roadway
Drainage Treatment – Decompact or Subsoil Roadway
Drainage Treatment – Scatter Slash
Entrance Treatment – Remove Ford Crossing
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<tr>
<td>Non-ground-disturbing</td>
<td>No physical work done on the ground.</td>
<td>Existing drainages are functioning and have low risk for resource impacts.</td>
<td>None.</td>
<td>None.</td>
</tr>
<tr>
<td>Waterbar</td>
<td>Diverts surface water flow off of the roadway to reduce erosion.</td>
<td>To prevent concentrated flow of water on roadway.</td>
<td>$</td>
<td><img src="hoe.png" alt="" /></td>
</tr>
<tr>
<td>Reestablish natural drainage</td>
<td>Reestablish natural drainage crossings that were altered by road construction or maintenance.</td>
<td>To reduce risk of landslides and erosion.</td>
<td>$$</td>
<td><img src="hoe.png" alt="" /></td>
</tr>
<tr>
<td>crossings</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Outslope prism</td>
<td>Fill ditches, flatten fill slopes, round shoulders, remove berms, and outslope the roadway to allow for natural side slope drainage.</td>
<td>To disperse flow and reduce or eliminate concentration points.</td>
<td>$$</td>
<td><img src="hoe.png" alt="" /></td>
</tr>
<tr>
<td>Remove relief culvert</td>
<td>Remove relief culvert and associated ditches, inlets, and outlets, and replace with outsloped prism and waterbars.</td>
<td>Where there is potential culvert failure. To reduce risk of landslides and erosion. To reduce risk of ditch degradation. Most appropriate for decommissioning or storing roads for an extended time period.</td>
<td>$$</td>
<td><img src="hoe.png" alt="" /></td>
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## Drainage Treatments

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| **Remove live stream culvert**                | Remove culvert and recontour site.                                          | When existing culvert is insufficiently sized.  
Where there is potential for culvert failure.  
To reduce negative impacts from culverts that restrict flow.  
To reduce negative impacts to aquatic organisms. | $$ $$ | ![Excavator](image) |
| **Remove at-grade drainage features**         | Remove open top culvert and replace with outsloped prism and waterbars, or recontour. | Where there is potential culvert failure.  
To reduce risk of landslides and erosion. | $$ $$ | ![Excavator](image) |
| **Remove major structures such as large culverts and bridges** | Remove structure and recontour site.                                       | To remove insufficiently sized, deficient, or unsafe structures.  
To reduce negative impacts from structures that restrict flow.  
To reduce negative impacts to aquatic organisms.  
To eliminate inspection requirements. | $$ $$ | ![Excavator](image) |
| **Scarify roadway**                           | Break up and loosen compacted roadway.  
Generally 4 to 6 inches in depth. | To reduce surface water velocity and disperse runoff.  
To establish vegetation. | $ | ![Excavator](image) |
| **Decompress or subsoil roadway**             | Break up and loosen compacted roadbed.  
Generally 6 to 24 inches or more in depth. | To allow infiltration of rainwater and improve natural runoff patterns.  
To restore groundwater movement through the roadbed.  
To enhance vegetative root growth. | $$ | ![Excavator](image) |
| **Scatter slash**                             | Scatter slash on roadway, cut and fill slopes, and other disturbed areas.   | To reduce water velocity and concentration points.  
To allow infiltration of rainwater. | $ | ![Excavator](image) |
| **Remove ford crossing**                      | Remove constructed features, reestablish drainage, and recontour site.       | To improve and enhance drainage to reduce risk of erosion.  
To eliminate restricting flow that negatively impacts the stream.  
To reduce negative impacts to aquatic organisms.  
To remove insufficiently sized, deficient, or unsafe structures. | $$ | ![Excavator](image) |
Road Prism Treatments

The objective of treating the road prism is to modify, reduce, or remove prisms from the landscape in order to stabilize the area, reduce erosion, and improve drainage.
Prism Treatment – Stabilize Fill Sections
Prism Treatment – Partial Fill Removal
Prism Treatment – Restore Natural Contours
# Road Prism Treatments

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<td>Non-ground-disturbing</td>
<td>No physical work done on the ground.</td>
<td>When there is low risk for future resource impacts from the existing prism.</td>
<td>None.</td>
<td>None.</td>
</tr>
<tr>
<td>Stabilize fills</td>
<td>Stabilize portions of fill that are unstable by modifying slopes to reduce risk of erosion or failure.</td>
<td>Use on fills prone to instability due to unstable soils and terrain. When protecting live streams or sensitive habitat is a priority.</td>
<td>$</td>
<td><img src="image1.png" alt="Equipment" /></td>
</tr>
<tr>
<td>Partial fill removal</td>
<td>Place portions of embankment fill in previously excavated areas and recontour to blend into natural slopes.</td>
<td>To enhance revegetation. When restoration of natural slope hydrology is a priority. To enhance or restore aesthetics of disturbed areas.</td>
<td>$$</td>
<td><img src="image2.png" alt="Equipment" /></td>
</tr>
<tr>
<td>Restore natural contour (full recontour)</td>
<td>Remove or replace embankment material in areas where excavation occurred during construction to restore original topography.</td>
<td>When visual quality is a very high priority. To enhance or restore aesthetics of disturbed areas. To enhance revegetation. When restoration of natural slope hydrology is a priority.</td>
<td>$$$$</td>
<td><img src="image3.png" alt="Equipment" /></td>
</tr>
</tbody>
</table>
Vegetation Treatments
The objective of vegetation treatments is to prevent resource damage, eliminate motor vehicle use, and return areas disturbed by road construction to a more natural state. Establishment of vegetation aids in stabilizing the area and reduces soil erosion.
Vegetation Treatment – Non-Ground Disturbing
Vegetation Treatment – Scarify/Decompress Roadway
Vegetation Treatment – Scatter Slash and Brush

Immediate Results

Long-term Results
Vegetation Treatment – Scatter Slash and Brush
Vegetation Treatment – Transplanting and/or Reseeding
Vegetation Treatment – Mulching
**Vegetation Treatments**

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<td>Seeding</td>
<td>Apply seed on disturbed areas.</td>
<td>To reduce and prevent erosion. To establish vegetation.</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>Mulch</td>
<td>Apply mulch on seeded or disturbed areas.</td>
<td>To reduce and prevent erosion. To establish vegetation. Short-term erosion prevention is needed. Enrich or insulate the soil for seed germination.</td>
<td>$</td>
<td></td>
</tr>
<tr>
<td>Fertilize</td>
<td>Apply fertilizer on seeded or disturbed areas.</td>
<td>To establish vegetation by enhancing soil conditions.</td>
<td>$</td>
<td></td>
</tr>
<tr>
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<td>----------------------------</td>
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</tr>
<tr>
<td><strong>Non-ground-disturbing</strong></td>
<td>Allow road to return to more natural condition through natural revegetation.</td>
<td>Low risk for resource impacts. Current use is minimal. Roadway can be easily revegetated in a short or reasonable amount of time.</td>
<td>None.</td>
<td>None.</td>
</tr>
<tr>
<td><strong>Scarify/decompact roadway</strong></td>
<td>Break up and loosen compacted road surface. Generally 4 to 6 inches in depth.</td>
<td>To reduce surface water velocity and disperse runoff. To retain moisture to induce revegetation. Where vegetation will not establish on compacted road surface.</td>
<td>$$</td>
<td></td>
</tr>
<tr>
<td><strong>Scatter slash and brush</strong></td>
<td>Scatter slash and brush on disturbed areas.</td>
<td>To reduce surface water velocity and disperse runoff. To retain moisture to induce revegetation. When camouflaging the road is a priority.</td>
<td>$$</td>
<td></td>
</tr>
<tr>
<td><strong>Transplant</strong></td>
<td>Transplant native plants on disturbed areas.</td>
<td>When aesthetics are a concern. To discourage motor vehicle access. To establish native vegetation.</td>
<td>$$ $$</td>
<td></td>
</tr>
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</table>
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