

An aerial photograph of a wide, light-colored river meandering through a deep mountain valley. The surrounding hillsides are covered in dense forests with trees displaying vibrant autumn colors of yellow, orange, and green. A long, multi-span bridge crosses the river in the lower-left foreground, with a single car visible on it. The river continues to wind through the valley towards the background, where more mountains are visible under a cloudy sky.

USMP Rating Form - Site Information

6/23/2017

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USMP Rating Form - Site Information

Getting Started

SITE INFORMATION									
ITALICIZED DATA CATEGORIES REQUIRED FOR FULL RATING									
Management Area								Date	
Hazard Type	Rockfall Planer Wedge Topple Ravelling Rock Avalanche Indeterminate Rock Failures Differential Erosion				Landslide Above, Below, or Across Route Translational Rotational Debris Flow Shallow slump Erosional Failure				
	Road/Trail No.				Road/Trail Class		Rater		
Beginning Mile Marker				Ending Marker		Side		Weather	
Begin Coord.	Lat. Long.	End Coord.	Lat. Long.	Datum		AADT			
Length of Affected Road/Trail (ft)				Slope Height (rock) / Axial Length (slide) (ft)				Slope Angle (°)	
Sight Distance (ft)				Roadway/Trail Width (ft)				Speed Limit (mph)	
Ditch Width (ft) RANGE		Ditch Depth (ft) RANGE		Ditch Slope (H:V) RANGE		Blk Size (ft)/Volume (cy)			
Annual Rainfall (in) RANGE		Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No		Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range			
Comments									

PRELIMINARY RATING					
Category Rating	3	9	27	81	Score
A. Landslide – Roadway Width Affected	0-5 Percent	6-25 Percent	26-50 Percent	51-100 Percent	
B. Landslide – Slide/Erosion Effects	Visible crack or slight deposit of material / minor erosion	1 inch offset, or 6-inch deposit of material / major erosion will affect travel in < 5 yrs	2-inch offset or 12-inch deposit/mod. erosion impacting travel annually	4-inch offset or 24-inch deposit/severe erosion impacting travel consistently	
C. Landslide – Roadway Length Affected	25 ft	100 ft	225 ft	400 ft	CALC
D. Rockfall – Ditch Effectiveness (consider launch features)	Good	Moderate	Limited	No Catchment	
E. Rockfall – Rockfall History	Few Falls	Occasional Falls	Many Falls	Constant Falls	
F. Rockfall – Block Size or Volume per Event	1 ft or 3 yd ³	2 ft or 6 yd ³	3 ft or 9 yd ³	4 ft or 12 yd ³	CALC
G. All - Impact on Use	Full use continues with minor delay	Partial use remains - Use modification required, short (3 mi/30 min.) detour available	Use is blocked – long (>30 min) detour available or less than 1 day closure	Use is blocked – no detour available or closure longer than 1 week	
H. All - AADT / Usage / Economic or Recreational Importance (highest rating applies)	50 Rarely Used Insignificant economic / rec. importance	200 Occasionally used Minor economic / rec. importance	450 Frequently used Moderate economic / rec. importance	800 Constantly used Significant economic / rec. importance	CALC FOR AADT ONLY
LANDSLIDES TOTAL (A+B+C+G+H)					CALC
ROCKFALL TOTAL (D+E+F+G+H)					CALC
Preliminary Rating Good (15-21 pts) Fair (22-161 pts) Poor (>161 pts) Sites rated as Fair or Poor receive detailed evaluation (complete back page)					

SLOPE HAZARD RATING						
Category Rating		3	9	27	81	Score
I. All - Slope Drainage		Slope appears dry or well drained; surface runoff well controlled	Intermittent water on slope; mod. well drained; or surface runoff moderately controlled	Water usually on slope; poorly drained; or surface runoff poorly controlled	Water always on slope; very poorly drained; or surface water runoff control not present	
J. All - Annual Rainfall		0-10"	10-30"	30-60"	60"+	
K. All - Slope Height / Axial length of slide		25 ft	50 ft	75 ft	100 ft	CALC
Select One Unstable Slope Type Landslides/ Erosion (add A, B, C) Rockfalls (add D, E, F) Geologic Character Case 1 Case 2	L. Thaw Stability (Cold Climates)	Unfrozen/Thaw Stable	Slightly Thaw Unstable	Moderately Thaw Unstable	Highly Thaw Unstable	
	M. Instability-Related Maint. Frequency	Every 10 years	Every 5 years	Every 2 years	Every year	
	N. Movement History	Minor movement or sporadic creep	Up to 1 inch annually or steady annual creep	Up to 3 inches per event, one event per year	>3" per event, >6" annually, more than 1 event per year (includes all debris flows)	
	O. Rockfall-Related Maint. Frequency	Normal, scheduled maintenance	Patrols after every storm events	Routine seasonal patrols	Year-round patrols	
	P. Structural Condition	Discontinuous Favorable	Discontinuous Random	Discontinuous Adverse	Continuous Adverse	
	Q. Rock Friction	Rough/Irregular	Undulating	Planar	Clay infilled/Slickensided	
	R. Structural Condition	Few differential erosion features	Occasional differential erosion features	Many differential erosion features	Major differential erosion features	
	S. Diff. in Erosion Rates	Small difference	Moderate difference	Large difference	Extreme difference	
	T. LANDSLIDE HAZARD TOTAL (A+B+C+H+K+L+M+N)					CALC
	U. ROCKFALL HAZARD TOTAL (D+E+F+J+K+O+(greatest of P+Q or R+S))					CALC

RISK RATING					
V. Route Width or Trail Width	36 ft 14 ft	28 ft 10 ft	20 ft 6 ft	12 ft 2 ft	CALC
W. Human Exposure Factor	12.5% of the time	25% of the time	37.5% of the time	50% of the time	CALC if AADT > 1000
X. % of Decision Sight Distance (Judge avoidance ability on trails)	Adequate, 100% of low design value	Moderate, 80% of low design value	Limited, 60% of low design value	Very Limited, 40% of low design value	CALC for roads
Y. Right of Way (R/W) Impacts (If Left Unattended)	No R/W implications	Minor effects beyond R/W	Private property, no structures affected	Structures, roads, RR, utilities, or Parks affected	
Z. Environmental/Cultural Impacts if Left Unattended	None/No Potential to Cause Effects	Likely to Effect/No Hist. Prop. Affected	Likely to adversely Affect/Finding of No Adverse Effect	Current adverse effects/Adverse Effect	
AA. Maintenance Complexity	Routine Effort/In-House	In-house maint./ special project	Specialized equip./ contract	Complex/ dangerous effort /location/contract	
BB. Event Cost	\$0-2k	\$2-25k	\$25-100k	>\$100k	
CC. RISK TOTALS: (G+H+V+W+X+Y+Z+AA+BB)					CALC
TOTAL USMP SCORE: LANDSLIDES (T+CC) OR ROCKFALL (U+CC)					CALC

SITE INFORMATION										ITALICIZED DATA CATEGORIES REQUIRED FOR FULL RATING	
Management Area									Date		
Hazard Type		Rockfall Planar Wedge Topple Ravelling Rock Avalanche Indeterminate Rock Failures Differential. Erosion					Landslide Above, Below, or Across Route Translational Rotational Debris Flow Shallow slump Erosional Failure				
Road/Trail No.			<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class				Rater		
Beginning Mile Marker				Ending Marker			Side		Weather		
Begin Lat. Coord. Long.		End Lat. Coord. Long.		Datum			AADT				
Length of Affected Road/Trail (ft)				Slope Height (rock) /Axial Length (slide) (ft)				Slope Angle (°)			
Sight Distance (ft)				Roadway/Trail Width (ft)				Speed Limit (mph)			
Ditch Width (ft) RANGE		Ditch Depth (ft) RANGE			Ditch Slope (H:V) RANGE			Blk Size (ft)/Volume (cy)			
Annual Rainfall (in) RANGE		Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No			Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No			Photo # Range			
Comments											

Management Area

- Utilize Existing / Develop Agency Approach

- NPS – Four letter code (i.e. YELL, GLAC, GRSM, etc.)
- USFS – National Forest (GPNF - Gifford-Pinchot, CTNF - Caribou-Targhee, etc.)
- Corps of Engineers – Location - Facility (NWP-Columbia-Bonneville)
- Bureau of Land Management – Region – District Office (OR/WA – Vale)
- DOTs – Region/District

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Management Area															Date				
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Road/Trail No.					<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class					Rater							
Beginning Mile Marker					Ending Marker					Side					Weather				
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Sight Distance (ft)					Roadway/Trail Width (ft)					Speed Limit (mph)									
Ditch Width (ft)		RANGE		Ditch Depth (ft)		RANGE		Ditch Slope (H:V)		RANGE		Blk Size (ft)/Volume (cy)							
Annual Rainfall (in) RANGE					Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No					Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No					Photo # Range				
Comments																			

Road/Trail Number

- Utilize Existing Agency Designations
 - Corridors
 - Highway Numbers
 - Route Name
 - Etc.

SITE INFORMATION										
Management Area									Date	
Hazard Type	Rockfall	Planar	Wedge	Topple	Landslide				Above, Below, or Across Route	
	Ravelling	Rock	Avalanche	Indeterminate	Rock	Translational				Rotational
	Failures	Differential	Erosion	Shallow slump				Erosional Failure		
Road/Trail No.		<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class				Rater		
Beginning Mile Marker				Ending Marker		Side		Weather		
Begin Coord.	Lat. Long.	End Coord.	Lat. Long.	Datum		AADT				
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Annual Rainfall (in)	RANGE	Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No		Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range				
Comments										



Road/Trail Classification

- Utilize Existing Agency Classification Approach that correspond to management approach
 - Maintenance level (USFS)
 - Main or high traffic routes (NPS)
 - Functional classification (DOTs)
 - Sole access routes
 - Critical access routes, tied to PFMs (Corps)

SITE INFORMATION										ITALICIZED DATA CATEGORIES REQUIRED FOR FULL RATING
Management Area									Date	
Hazard Type	Rockfall Planar Wedge Topple				Landslide Above, Below, or Across Route					
	Ravelling Rock Avalanche Indeterminate Rock				Translational Rotational Debris Flow					
	Failures Differential Erosion				Shallow slump Erosional Failure					
Road/Trail No.		<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class				Rater		
Beginning Mile Marker				Ending Marker			Side		Weather	
Begin Coord.	Lat. Long.	End Coord.	Lat. Long.	Datum			AADT			
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Annual Rainfall (in) RANGE		Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No		Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range				
Comments										



Unstable Slope Location

- Beginning Mile Marker & Lat/Long
 - Where the unstable slope starts
 - Lower of the two mile markers (rater may be accessing from opposite direction of mile post increase)
 - When there is no post, opt for offset from intersection
 - When all else fails, lat/long will serve as location information
- Ending Marker & Lat/Long
 - Where feature ends, in same format as beginning
- Side
 - Left, Right for roads with mile markers
 - Cardinal direction for those routes/trails without markers
- Datum: WGS 84 is needed for online mapping

SITE INFORMATION									
Management Area								Date	
Hazard Type	Rockfall Planar Wedge Topple Ravelling Rock Avalanche Indeterminate Rock Failures Differential Erosion			Landslide Above, Below, or Across Route Translational Rotational Debris Flow Shallow slump Erosional Failure					
Road/Trail No.	<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class			Rater			
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Ditch Width (ft)	RANGE		Ditch Depth (ft)	RANGE		Ditch Slope (H:V)	RANGE		
Annual Rainfall (in) RANGE			Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No			Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range	
Comments									



Rating & Rater Information

- Date of rating
- Who performed the rating
- Weather during the rating

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Hazard Type	Rockfall Planar Wedge Topple Ravelling Rock Avalanche Indeterminate Rock Failures Differential Erosion						Landslide Above, Below, or Across Route Translational Rotational Debris Flow Shallow slump Erosional Failure				
Road/Trail No.			<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class				Rater		
Beginning Mile Marker				Ending Marker			Side		Weather		
Begin Coord.	Lat. Long.	End Coord.	Lat. Long.	Datum			AADT				
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Ditch Width (ft) RANGE		Ditch Depth (ft) RANGE		Ditch Slope (H:V) RANGE		Blk Size (ft)/Volume (cy)					
Annual Rainfall (in) RANGE		Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No		Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range					
Comments											



Hazard - Rockfall

- Discontinuity controlled failures
 - Planar
 - Wedge
 - Toppling
- Differential erosion controlled failures
 - Raveling/Undermining
 - Differential Erosion

SITE INFORMATION									
Management Area									Date
Hazard Type	<input type="checkbox"/> Rockfall <input type="checkbox"/> Planar <input type="checkbox"/> Wedge <input type="checkbox"/> Topple <input type="checkbox"/> Ravelling <input type="checkbox"/> Rock Avalanche <input type="checkbox"/> Indeterminate Rock Failures <input type="checkbox"/> Differential Erosion				<input type="checkbox"/> Landslide Above, Below, or Across Route <input type="checkbox"/> Translational <input type="checkbox"/> Rotational <input type="checkbox"/> Debris Flow <input type="checkbox"/> Shallow slump <input type="checkbox"/> Erosional Failure				
Road/Trail No.	<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class			Rater			
Beginning Mile Marker			Ending Marker		Side		Weather		
Begin Coord.	Lat. Long.	End Coord.	Lat. Long.	Datum		AADT			
Length of Affected Road/Trail (ft)			Slope Height (rock) /Axial Length (slide) (ft)			Slope Angle (°)			
Sight Distance (ft)			Roadway/Trail Width (ft)			Speed Limit (mph)			
Ditch Width (ft)	RANGE	Ditch Depth (ft)	RANGE	Ditch Slope (H:V)	RANGE	Blk Size (ft)/Volume (cy)			
Annual Rainfall (in)	RANGE	Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No		Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range			
Comments									

Planar

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Planar

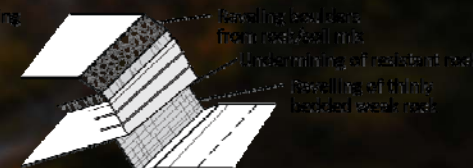
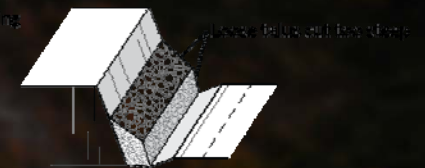
Wedge

Topple

Circular

Blockfall

Revolving



Wedge

Planar



Wedge



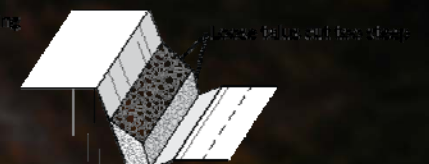
Topple



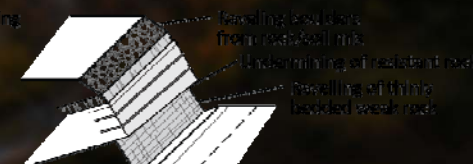
Circular



Blockfall



Reavelling

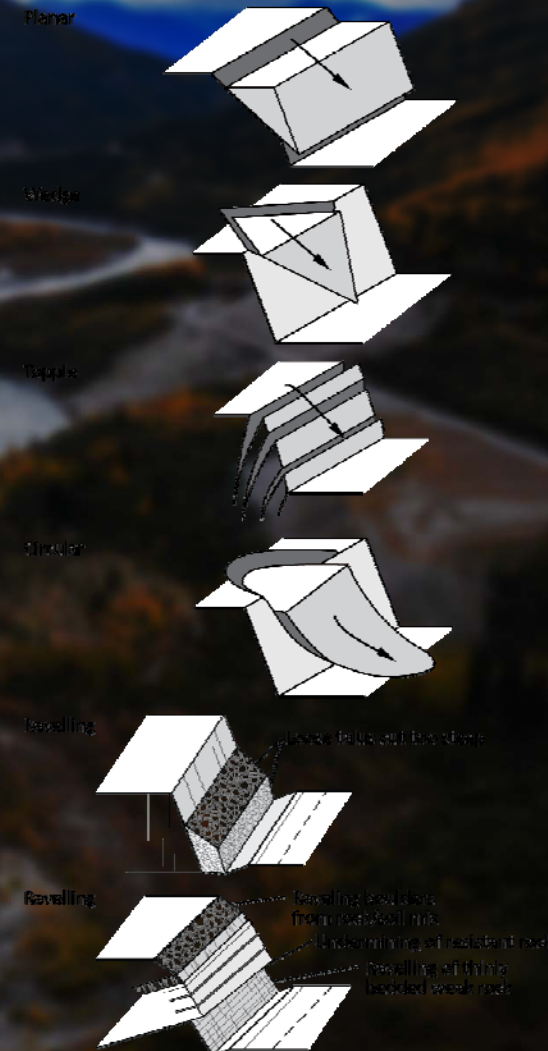


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Topple



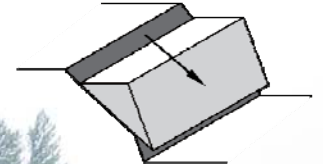
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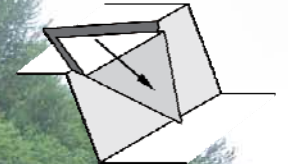
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Indeterminate

Planar



Wedge



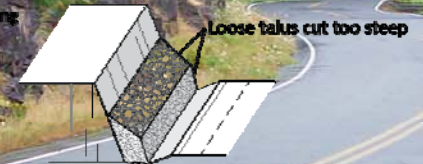
Topple



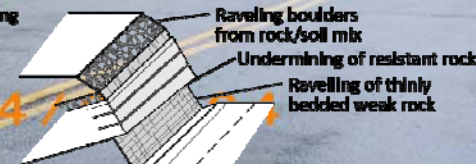
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Ravelling



Ravelling



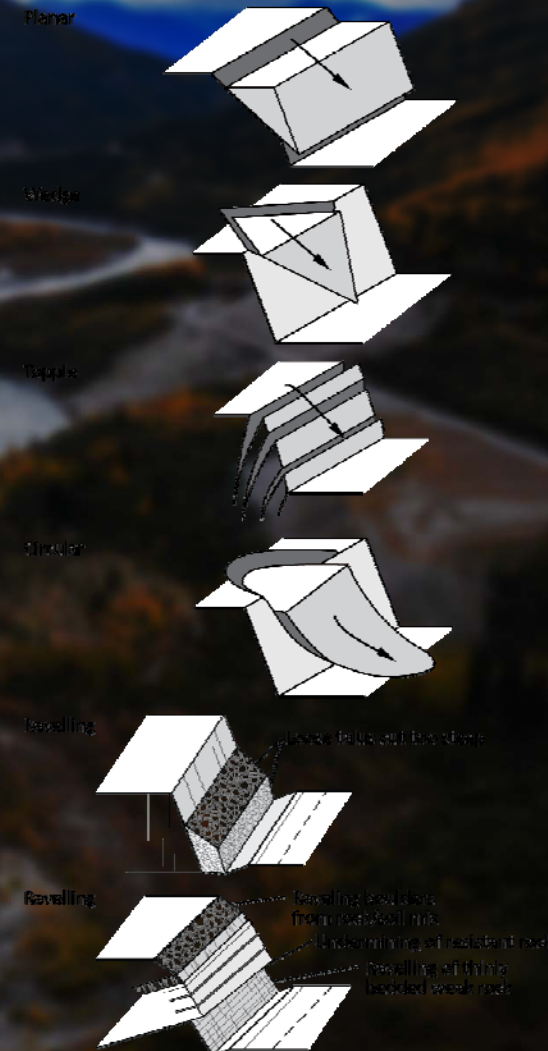
2014 / 2014

6/23/2017

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Differential Erosion

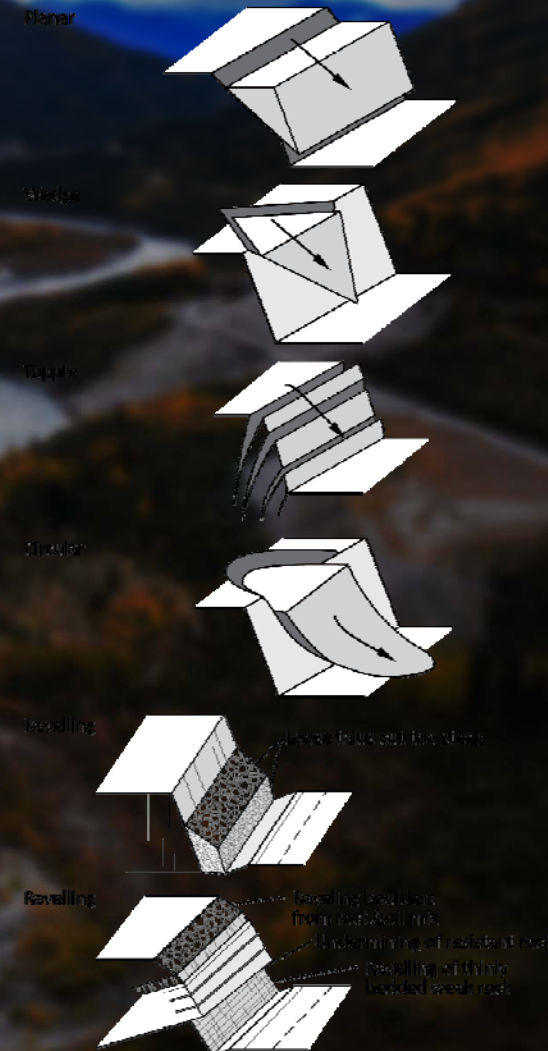


Differential Erosion



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Talus Ravelling



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Planar



Wedge



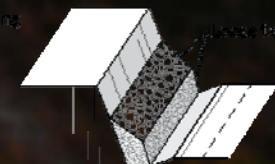
Topple



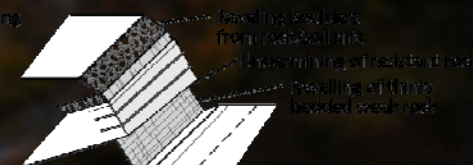
Shear



Roading



Ravelling



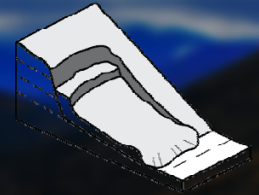
Hazard - Landslide

- Where is the slide located, relative to the road?
 - Above, below, or through?
- Type of slide – best judgement (most are not textbook examples...)
 - Translational, Rotational, Shallow Slump, Erosional Failure, Debris Flow

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Management Area									Date		
Hazard Type	Rockfall Planar Wedge Topple				Landslide Above, Below, or Across Route						
	Ravelling Rock Avalanche Indeterminate Rock				Translational Rotational Debris Flow						
	Failures Differential Erosion				Shallow slump Erosional Failure						
Road/Trail No.		<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class				Rater			
Beginning Mile Marker				Ending Marker			Side		Weather		
Begin Coord.	Lat. Long.	End Coord.	Lat. Long.	Datum			AADT				
Length of Affected Road/Trail (ft)				Slope Height (rock) / Axial Length (slide) (ft)				Slope Angle (°)			
Sight Distance (ft)				Roadway/Trail Width (ft)				Speed Limit (mph)			
Ditch Width (ft) RANGE		Ditch Depth (ft) RANGE		Ditch Slope (H:V) RANGE		Blk Size (ft)/Volume (cy)					
Annual Rainfall (in) RANGE		Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No		Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range					
Comments											

Rotational

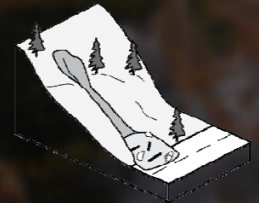
Translational



Rotational



Rock Flow

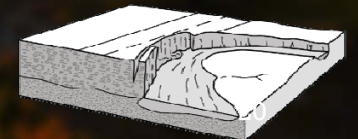


Flow Slide



Spillway Flow Slide Failure (in soil)

Spillway

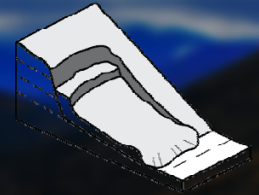


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Rotational

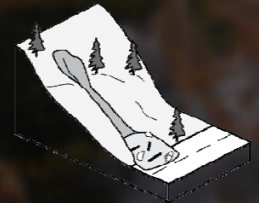
Translational



Rotational



Rock Flow

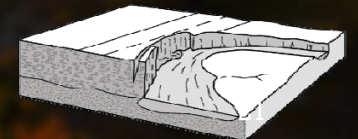


Flow Slide



Soil Flow (Flow Slide)

Block Slide



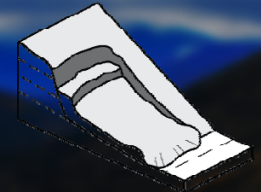
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Translational



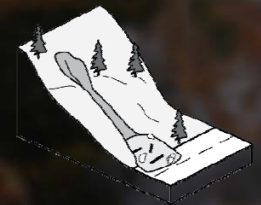
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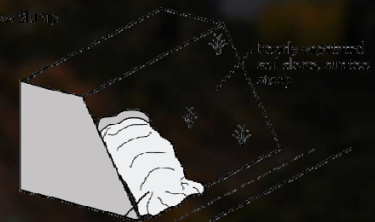
Rotational



Rock Flow



Shallow Sliding



Soil Slides (Flow Slides)
Failure in soil

Block Slide

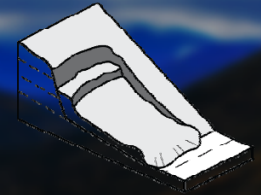


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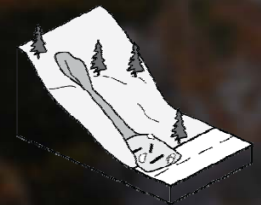
Translational



Rotational



Rock Flow

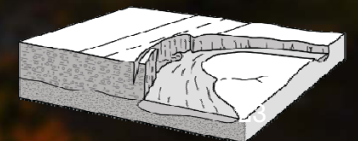


Shallow Sliding



Soil Sliding (Failure in soil)

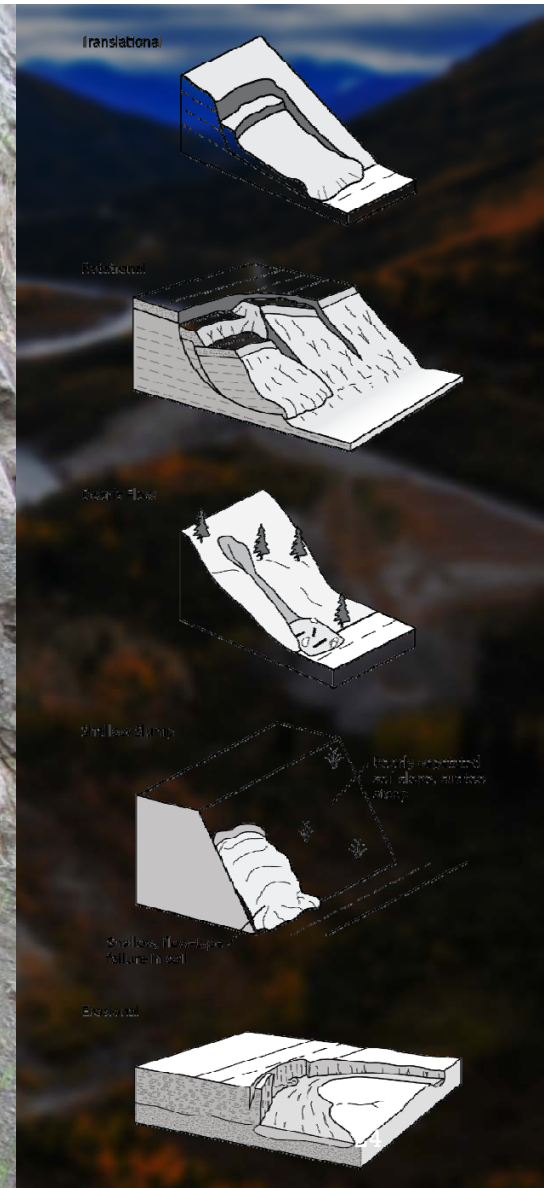
Block Slide



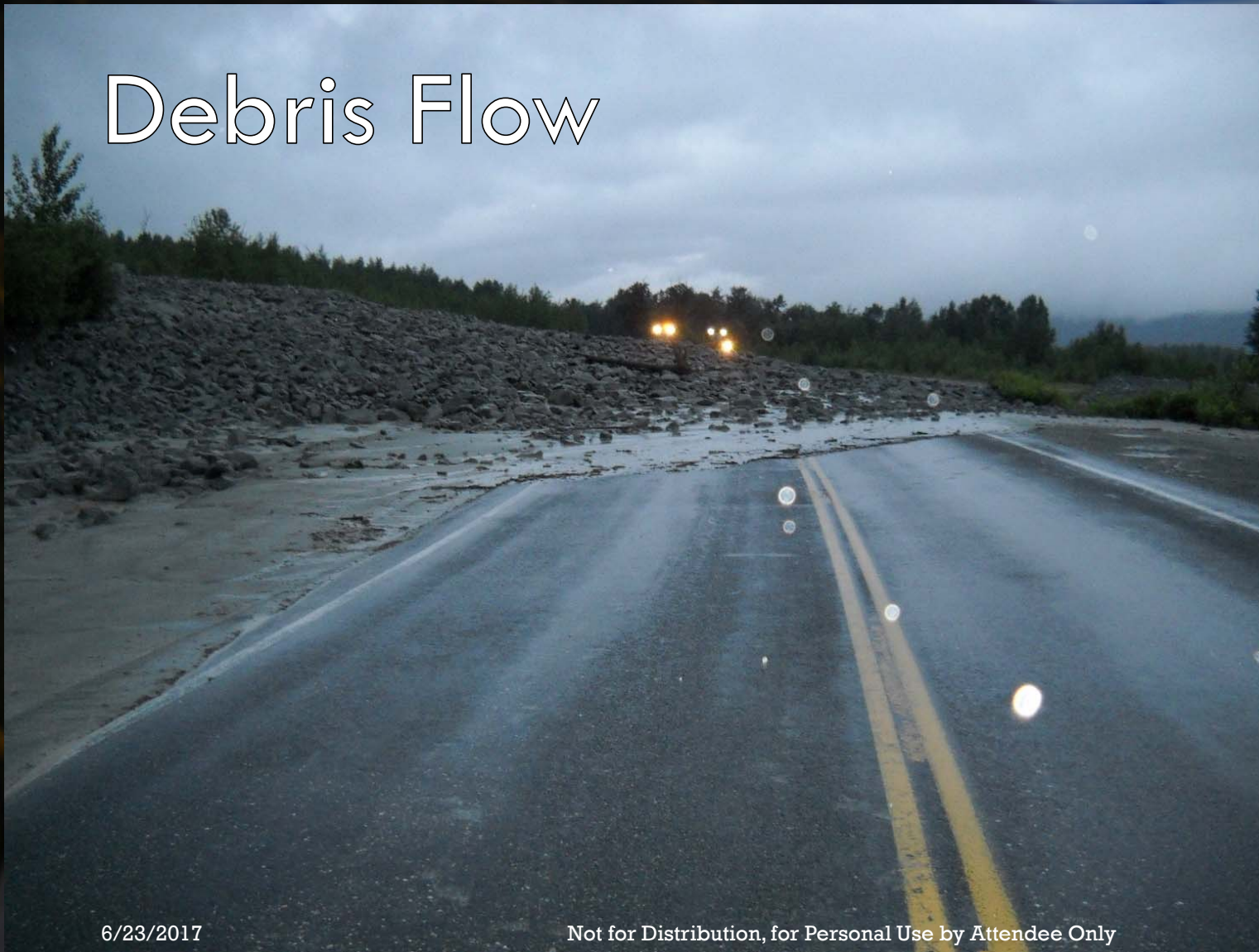
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Translational



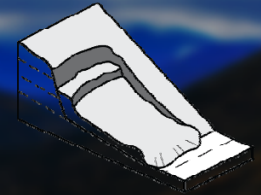
Debris Flow



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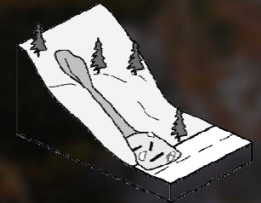
Translational



Rotational



Rock Flow

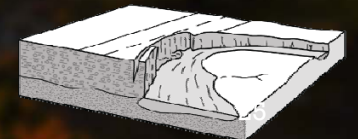


Soil Flow



Soil Flow (Debris Flow)

Debris Flow



Debris Flow



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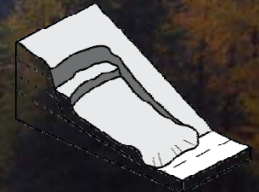


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Erosional Failure

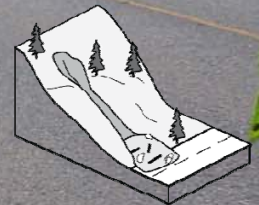
Translations



Rotational



Debris Flow

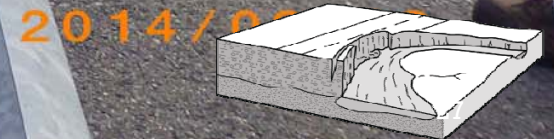


Shallow Slump



Shallow, flow-type failure in soil

Erosional



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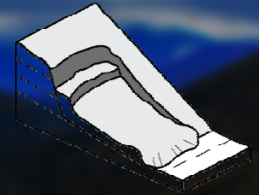
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Erosional Failure

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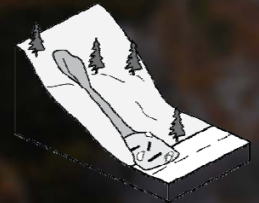
Translation



Rotation



Rock Flow

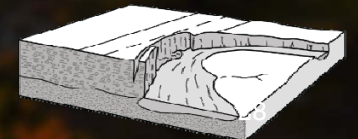


Flow Slide



Soil Flow (Flow Slide)

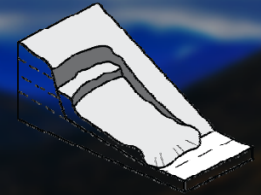
Block Slide



Shallow Slump



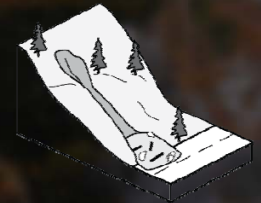
Translational



Rotational



Rock Flow



Shallow Slump



Shallow Flowslide
(Failure in soil)

Block Slide



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Rating Data - AADT

- Average Annual Daily Traffic
 - Check for Agency Data Sources
 - NPS
 - Visitor Use Statistics - <https://irma.nps.gov/Stats/>
 - FS
 - District/Forest Engineer may have statistics
 - DOTs
 - Annual Traffic counts collected – typically in GIS format

SITE INFORMATION										ITALICIZED DATA CATEGORIES REQUIRED FOR FULL RATING
Management Area									Date	
Hazard Type	Rockfall Planar Wedge Topple				Landslide Above, Below, or Across Route					
	Ravelling Rock Avalanche Indeterminate Rock Failures Differential Erosion				Translational Rotational Debris Flow Shallow slump Erosional Failure					
Road/Trail No.		<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class				Rater		
Beginning Mile Marker				Ending Marker			Side		Weather	
Begin Coord.	Lat. Long.	End Coord.	Lat. Long.	Datum		AADT				
Length of Affected Road/Trail (ft)				Slope Height (rock) / Axial Length (slide) (ft)				Slope Angle (°)		
Sight Distance (ft)				Roadway/Trail Width (ft)				Speed Limit (mph)		
Ditch Width (ft) RANGE		Ditch Depth (ft) RANGE		Ditch Slope (H:V) RANGE		Blk Size (ft)/Volume (cy)				
Annual Rainfall (in) RANGE		Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No		Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range				
Comments										



Rating Data - Length

- Measured as the length of the road or trail adjacent and exposed to the hazard
- Equipment:
 - Laser Rangefinder or roller tape

SITE INFORMATION										ITALICIZED DATA CATEGORIES REQUIRED FOR FULL RATING									
Management Area															Date				
Hazard Type		Rockfall Planar Wedge Topple Ravelling Rock Avalanche Indeterminate Rock Failures Differential Erosion					Landslide Above, Below, or Across Route Translational Rotational Debris Flow Shallow slump Erosional Failure												
Road/Trail No.					<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class					Rater							
Beginning Mile Marker					Ending Marker					Side					Weather				
Begin Coord.		Lat. Long.		End Coord.		Lat. Long.		Datum					AADT						
Length of Affected Road/Trail (ft)					Slope Height (rock) / Axial Length (slide) (ft)					Slope Angle (°)									
Sight Distance (ft)					Roadway/Trail Width (ft)					Speed Limit (mph)									
Ditch Width (ft)		RANGE		Ditch Depth (ft)		RANGE		Ditch Slope (H:V)		RANGE		Blk Size (ft)/Volume (cy)							
Annual Rainfall (in)		RANGE		Sole Access Route		<input type="checkbox"/> Yes <input type="checkbox"/> No		Fixes Present		<input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range							
Comments																			



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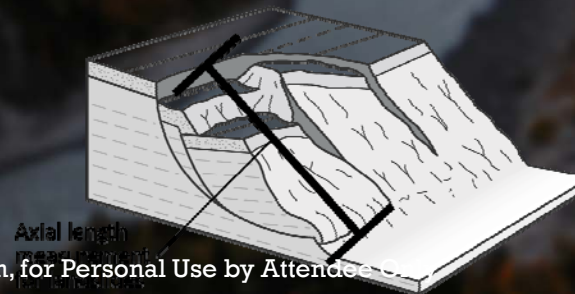
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Rating Data - Height

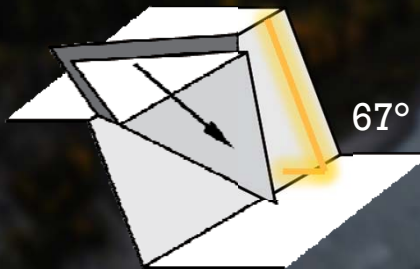
- Rock Slopes
 - Measured as the vertical height
- Soil Slopes
 - Axial length of the slide
 - Actual reconnaissance to find the slide toe is ideal
- Equipment
 - Laser Rangefinder or clinometer and tape

SITE INFORMATION										ITALICIZED DATA CATEGORIES REQUIRED FOR FULL RATING
Management Area									Date	
Hazard Type	Rockfall Planar Wedge Topple Ravelling Rock Avalanche Indeterminate Rock Failures Differential Erosion						Landslide Above, Below, or Across Route Translational Rotational Debris Flow Shallow slump Erosional Failure			
Road/Trail No.	<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class				Rater			
Beginning Mile Marker			Ending Marker		Side		Weather			
Begin Coord.	Lat.	Long.	End Coord.	Lat.	Long.	Datum		AADT		
Length of Affected Road/Trail (ft)			Slope Height (rock) / Axial Length (slide) (ft)				Slope Angle (°)			
Sight Distance (ft)			Roadway/Trail Width (ft)				Speed Limit (mph)			
Ditch Width (ft)	RANGE		Ditch Depth (ft)	RANGE		Ditch Slope (H:V)		RANGE		
Annual Rainfall (in) RANGE			Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No			Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Blk Size (ft)/Volume (cy)		
Comments										

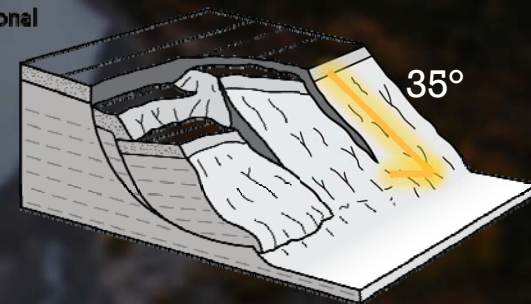


Information Data – Angle

- Slopes
 - Average or representative angle
- Equipment
 - Laser Rangefinder or clinometer



Rotational

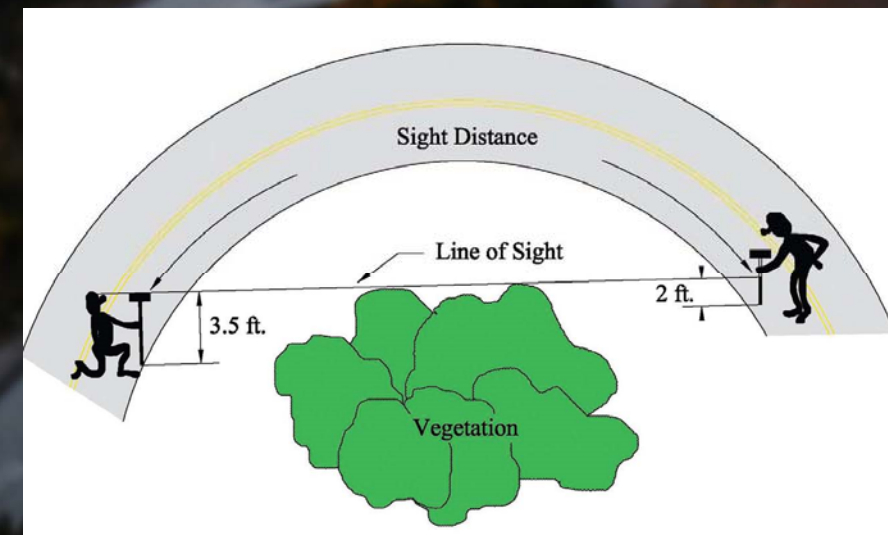


SITE INFORMATION										ITALICIZED DATA CATEGORIES REQUIRED FOR FULL RATING
Management Area									Date	
Hazard Type	Rockfall Planar Wedge Topple						Landslide Above, Below, or Across Route			
	Ravelling Rock Avalanche Indeterminate Rock						Translational Rotational Debris Flow			
	Failures Differential Erosion						Shallow slump Erosional Failure			
Road/Trail No.		<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class				Rater		
Beginning Mile Marker				Ending Marker		Side		Weather		
Begin Coord.	Lat. Long.	End Coord.	Lat. Long.	Datum		AADT				
Length of Affected Road/Trail (ft)				Slope Height (rock) / Axial Length (slide) (ft)				Slope Angle (°)		
Sight Distance (ft)				Roadway/Trail Width (ft)				Speed Limit (mph)		
Ditch Width (ft) RANGE		Ditch Depth (ft) RANGE		Ditch Slope (H:V) RANGE		Blk Size (ft)/Volume (cy)				
Annual Rainfall (in) RANGE		Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No		Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range				
Comments										

Rating Data – Sight Distance

- Travel distance from a height of 3.5' above the road to first see a 2' object.
- Keep safety in mind!
- Be practical
- Intends to determine ability to see and respond to a object in the road (rock, slide, road is gone, etc.)
- Equipment
 - Laser rangefinder or roller tape

SITE INFORMATION									
Management Area								Date	
Hazard Type	Rockfall Planar Wedge Topple Ravelling Rock Avalanche Indeterminate Rock Failures Differential Erosion				Landslide Above, Below, or Across Route Translational Rotational Debris Flow Shallow slump Erosional Failure				
Road/Trail No.	<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class					Rater	
Beginning Mile Marker			Ending Marker		Side		Weather		
Begin Coord.	Lat.	Long.	End Coord.	Lat.	Long.	Datum		AADT	
Length of Affected Road/Trail (ft)				Slope Height (rock) / Axial Length (slide) (ft)			Slope Angle (°)		
Sight Distance (ft)				Roadway/Trail Width (ft)			Speed Limit (mph)		
Ditch Width (ft)	RANGE		Ditch Depth (ft)	RANGE		Ditch Slope (H:V)	RANGE		Blk Size (ft)/Volume (cy)
Annual Rainfall (in)		RANGE		Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No		Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range	
Comments									





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Rating Data – Road/Trail Width

- Drivable width of pavement – minimum in the segment
 - Paved shoulders, turnouts included
 - Be practical
- Navigable width of the trail w/o safety threat
- Equipment
 - Laser rangefinder or roller tape

SITE INFORMATION									
Management Area									Date
Hazard Type	Rockfall Planar Wedge Topple Ravelling Rock Avalanche Indeterminate Rock Failures Differential Erosion				Landslide Above, Below, or Across Route Translational Rotational Debris Flow Shallow slump Erosional Failure				
Road/Trail No.	<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class				Rater		
Beginning Mile Marker			Ending Marker			Side		Weather	
Begin Coord.	Lat. Long.	End Coord.	Lat. Long.	Datum			AADT		
Length of Affected Road/Trail (ft)				Slope Height (rock) / Axial Length (slide) (ft)				Slope Angle (°)	
Sight Distance (ft)				Roadway/Trail Width (ft)				Speed Limit (mph)	
Ditch Width (ft)	RANGE	Ditch Depth (ft)	RANGE	Ditch Slope (H:V)		RANGE	Blk Size (ft)/Volume (cy)		
Annual Rainfall (in)	RANGE	Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No		Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range			
Comments									



Rating Data – Speed Limit

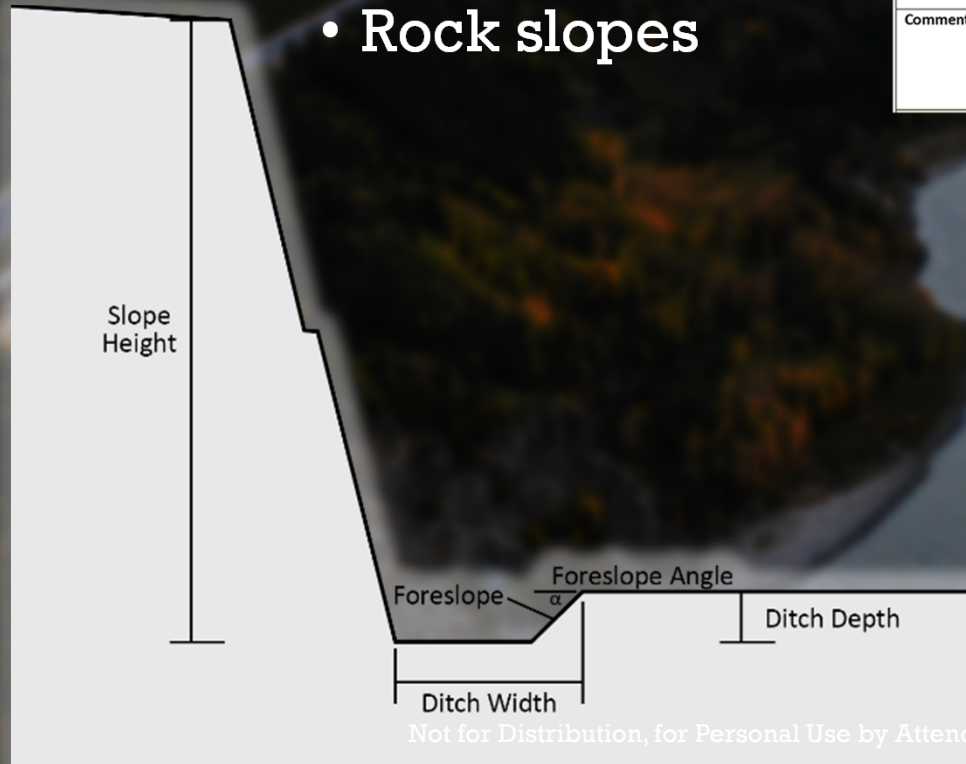
- Speed limit of the roadway, including advisory speeds on curves



SITE INFORMATION										ITALICIZED DATA CATEGORIES REQUIRED FOR FULL RATING
Management Area									Date	
Hazard Type	Rockfall Planar Wedge Topple Ravelling Rock Avalanche Indeterminate Rock Failures Differential Erosion						Landslide Above, Below, or Across Route Translational Rotational Debris Flow Shallow slump Erosional Failure			
	Road/Trail No.		<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class			Rater		
Beginning Mile Marker				Ending Marker		Side		Weather		
Begin Coord.	Lat. Long.	End Coord.	Lat. Long.	Datum			AADT			
Length of Affected Road/Trail (ft)				Slope Height (rock) / Axial Length (slide) (ft)				Slope Angle (°)		
Sight Distance (ft)				Roadway/Trail Width (ft)				Speed Limit (mph)		
Ditch Width (ft)		RANGE		Ditch Depth (ft)		RANGE		Ditch Slope (H:V) RANGE		Blk Size (ft)/Volume (cy)
Annual Rainfall (in)		RANGE		Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No		Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range		
Comments										

Information Data – Ditch Parameters

- Width, Depth, Foreslope Angle
- Rock slopes



SITE INFORMATION									
Management Area									Date
Hazard Type	Rockfall	Planar	Wedge	Topple	Landslide Above, Below, or Across Route Translational Rotational Debris Flow Shallow slump Erosional Failure				
	Ravelling	Rock Avalanche	Indeterminate Rock Failures	Differential Erosion					
Road/Trail No.				<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class		Rater	
Beginning Mile Marker				Ending Marker		Side		Weather	
Begin Coord.	Lat. Long.	End Coord.	Lat. Long.	Datum		AADT			
Length of Affected Road/Trail (ft)				Slope Height (rock) / Axial Length (slide) (ft)				Slope Angle (°)	
Sight Distance (ft)				Roadway/Trail Width (ft)				Speed Limit (mph)	
Ditch Width (ft)		RANGE		Ditch Depth (ft)		RANGE		Ditch Slope (H:V) RANGE	
Annual Rainfall (in)		RANGE		Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No		Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range	
Comments									

Rating Data – Rock Block Size and/or Volume

- Individual Maximum Block Size
 - Based on observed blocks, history, or reasonably large blocks observed on slope that would reach the road intact

SITE INFORMATION										ITALICIZED DATA CATEGORIES REQUIRED FOR FULL RATING
Management Area									Date	
Hazard Type	Rockfall Planar Wedge Topple Ravelling Rock Avalanche Indeterminate Rock Failures Differential Erosion						Landslide Above, Below, or Across Route Translational Rotational Debris Flow Shallow slump Erosional Failure			
Road/Trail No.		<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class				Rater		
Beginning Mile Marker				Ending Marker			Side		Weather	
Begin Coord.	Lat. Long.	End Coord.	Lat. Long.	Datum		AADT				
Length of Affected Road/Trail (ft)				Slope Height (rock) / Axial Length (slide) (ft)				Slope Angle (°)		
Sight Distance (ft)				Roadway/Trail Width (ft)				Speed Limit (mph)		
Ditch Width (ft) RANGE		Ditch Depth (ft) RANGE		Ditch Slope (H:V) RANGE		Blk Size (ft)/Volume (cy)				
Annual Rainfall (in) RANGE		Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No		Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range				
Comments										



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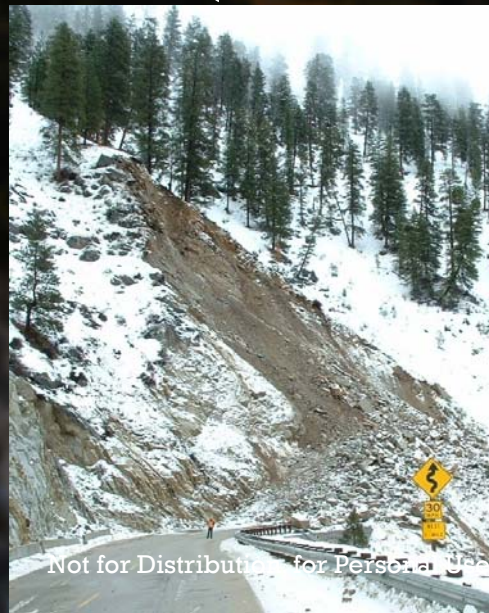
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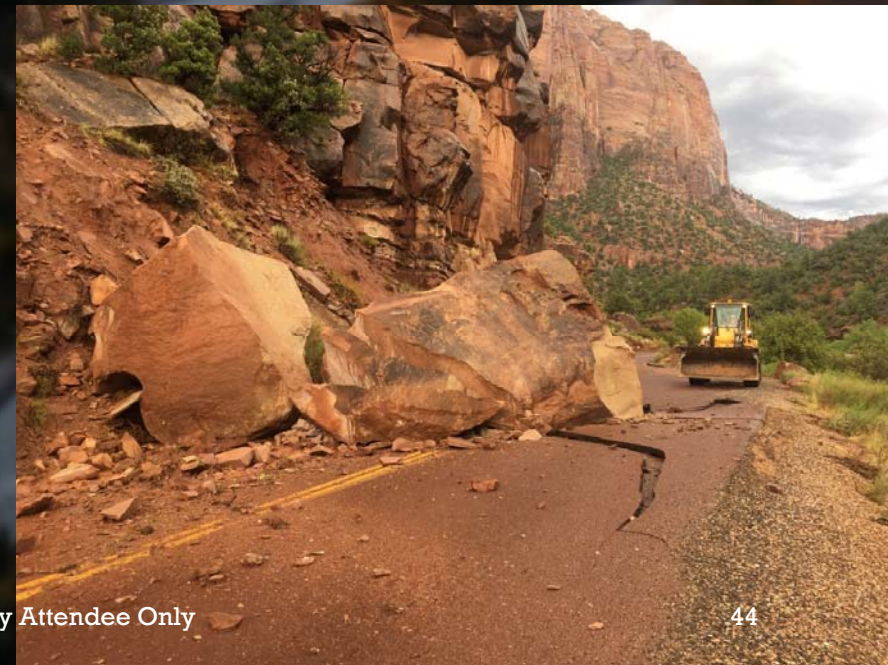
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Rating Data – Rock Block Size and/or Volume

- Rockfall Event Volume
 - Based on observed event accumulations, history, or reasonable mass of rock (not total ditch volume)



SITE INFORMATION										ITALICIZED DATA CATEGORIES REQUIRED FOR FULL RATING
Management Area									Date	
Hazard Type	Rockfall Planar Wedge Topple Ravelling Rock Avalanche Indeterminate Rock Failures Differential Erosion				Landslide Above, Below, or Across Route Translational Rotational Debris Flow Shallow slump Erosional Failure					
Road/Trail No.		<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class				Rater		
Beginning Mile Marker				Ending Marker		Side		Weather		
Begin Coord.	Lat. Long.	End Coord.	Lat. Long.	Datum		AADT				
Length of Affected Road/Trail (ft)				Slope Height (rock) /Axial Length (slide) (ft)				Slope Angle (°)		
Sight Distance (ft)				Roadway/Trail Width (ft)				Speed Limit (mph)		
Ditch Width (ft) RANGE		Ditch Depth (ft) RANGE		Ditch Slope (H:V) RANGE		Blk Size (ft)/Volume (cy)				
Annual Rainfall (in) RANGE		Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No		Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range				
Comments										

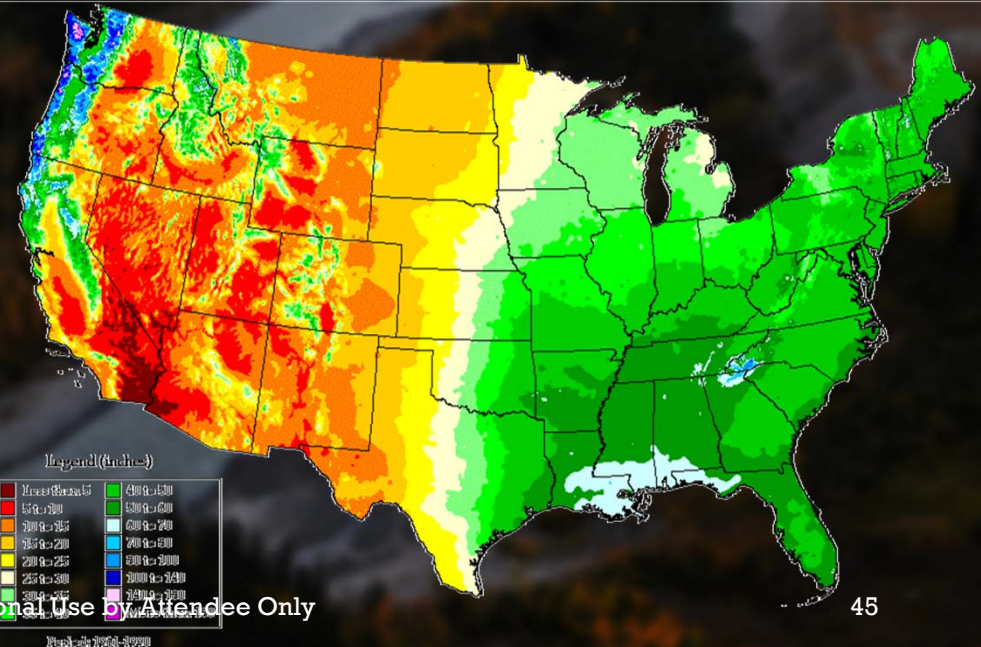
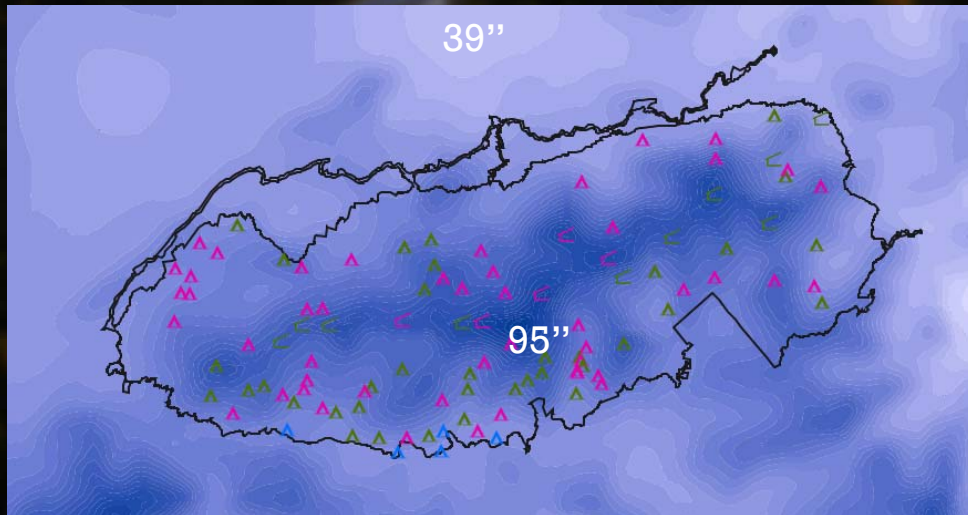


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Rating Data – Annual Rain

- Annual Average Rainfall
 - Don't neglect rain shadows, higher precip in higher elevations.

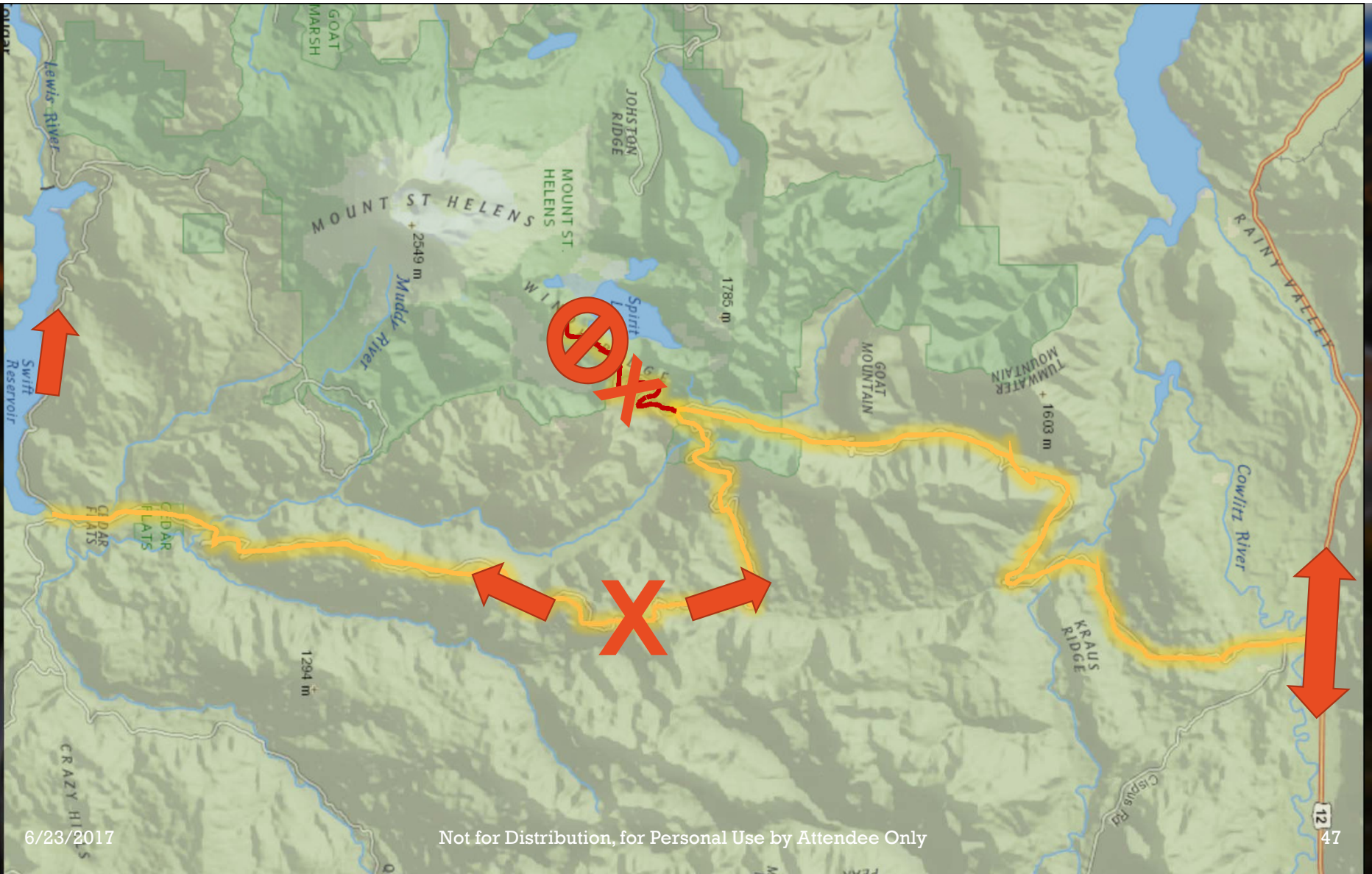
SITE INFORMATION											
Management Area											Date
Hazard Type	Rockfall Planar Wedge Topple Ravelling Rock Avalanche Indeterminate Rock Failures Differential Erosion						Landslide Above, Below, or Across Route Translational Rotational Debris Flow Shallow slump Erosional Failure				
	Road/Trail No.		<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class			Rater			
Beginning Mile Marker				Ending Marker			Side		Weather		
Begin Coord.	Lat.	Long.	End Coord.	Lat.	Long.	Datum		AADT			
Length of Affected Road/Trail (ft)				Slope Height (rock) / Axial Length (slide) (ft)				Slope Angle (°)			
Sight Distance (ft)				Roadway/Trail Width (ft)				Speed Limit (mph)			
Ditch Width (ft)		RANGE		Ditch Depth (ft)		RANGE		Ditch Slope (H:V)		RANGE	
Annual Rainfall (in)		RANGE		Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No				Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range	
Comments											



Information Data – Sole Access Route

- Are detours available in the event of road closure?

SITE INFORMATION										ITALICIZED DATA CATEGORIES REQUIRED FOR FULL RATING	
Management Area									Date		
Hazard Type	Rockfall Planar Wedge Topple Ravelling Rock Avalanche Indeterminate Rock Failures Differential Erosion						Landslide Above, Below, or Across Route Translational Rotational Debris Flow Shallow slump Erosional Failure				
Road/Trail No.		<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class					Rater		
Beginning Mile Marker				Ending Marker			Side		Weather		
Begin Coord.	Lat. Long.	End Coord.	Lat. Long.	Datum			AADT				
Length of Affected Road/Trail (ft)				Slope Height (rock) / Axial Length (slide) (ft)				Slope Angle (°)			
Sight Distance (ft)				Roadway/Trail Width (ft)				Speed Limit (mph)			
Ditch Width (ft)		RANGE		Ditch Depth (ft)		RANGE		Ditch Slope (H:V)		RANGE	
Annual Rainfall (in)		RANGE		Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No		Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range			
Comments											



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Information Data – Mitigation Present?

- Are mitigation measures present?
 - Rock slopes: improved ditches, mesh, bolts, flexible rockfall barriers, etc.

SITE INFORMATION									
Management Area									Date
Hazard Type	Rockfall Planar Wedge Topple				Landslide Above, Below, or Across Route				
	Ravelling Rock Avalanche Indeterminate Rock Failures Differential Erosion				Translational Rotational Debris Flow Shallow slump Erosional Failure				
Road/Trail No.		<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class				Rater	
Beginning Mile Marker				Ending Marker		Side		Weather	
Begin Coord.	Lat. Long.	End Coord.	Lat. Long.	Datum		AADT			
Length of Affected Road/Trail (ft)				Slope Height (rock) / Axial Length (slide) (ft)				Slope Angle (°)	
Sight Distance (ft)				Roadway/Trail Width (ft)				Speed Limit (mph)	
Ditch Width (ft) RANGE		Ditch Depth (ft) RANGE		Ditch Slope (H:V) RANGE		Blk Size (ft)/Volume (cy)			
Annual Rainfall (in) RANGE		Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No		Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range			
Comments									



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Information Data – Mitigation Present?

- Are mitigation measures present?
 - Soil Slopes: Deep patches w/geosynth, anchoring systems, walls, drainage, etc.?

SITE INFORMATION										ITALICIZED DATA CATEGORIES REQUIRED FOR FULL RATING	
Management Area									Date		
Hazard Type	Rockfall Planar Wedge Topple Ravelling Rock Avalanche Indeterminate Rock Failures Differential Erosion						Landslide Above, Below, or Across Route Translational Rotational Debris Flow Shallow slump Erosional Failure				
Road/Trail No.			<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class				Rater		
Beginning Mile Marker				Ending Marker			Side		Weather		
Begin Coord.	Lat. Long.	End Coord.	Lat. Long.	Datum			AADT				
Length of Affected Road/Trail (ft)				Slope Height (rock) / Axial Length (slide) (ft)				Slope Angle (°)			
Sight Distance (ft)				Roadway/Trail Width (ft)				Speed Limit (mph)			
Ditch Width (ft)		RANGE		Ditch Depth (ft)		RANGE		Ditch Slope (H:V)		RANGE	
Annual Rainfall (in)		RANGE		Sole Access Route		<input type="checkbox"/> Yes <input type="checkbox"/> No		Fixes Present		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Photo #		Range									
Comments											



Information Data - Photos & Comments

- Note your range of photos for that site from camera's image preview screen
- Note comments, brief site narrative, other specifics to expand on site details

SITE INFORMATION									
Management Area									Date
Hazard Type	Rockfall Planar Wedge Topple Ravelling Rock Avalanche Indeterminate Rock Failures Differential Erosion						Landslide Above, Below, or Across Route Translational Rotational Debris Flow Shallow slump Erosional Failure		
Road/Trail No.		<input type="radio"/> Trail <input type="radio"/> Road		Road/Trail Class				Rater	
Beginning Mile Marker				Ending Marker		Side		Weather	
Begin Coord.	Lat. Long.	End Coord.	Lat. Long.	Datum		AADT			
Length of Affected Road/Trail (ft)				Slope Height (rock) / Axial Length (slide) (ft)				Slope Angle (°)	
Sight Distance (ft)				Roadway/Trail Width (ft)				Speed Limit (mph)	
Ditch Width (ft) RANGE		Ditch Depth (ft) RANGE		Ditch Slope (H:V) RANGE		Blk Size (ft)/Volume (cy)			
Annual Rainfall (in) RANGE		Sole Access Route <input type="checkbox"/> Yes <input type="checkbox"/> No		Fixes Present <input type="checkbox"/> Yes <input type="checkbox"/> No		Photo # Range			
Comments									
