

Manti-La Sal National Forest Travel Analysis

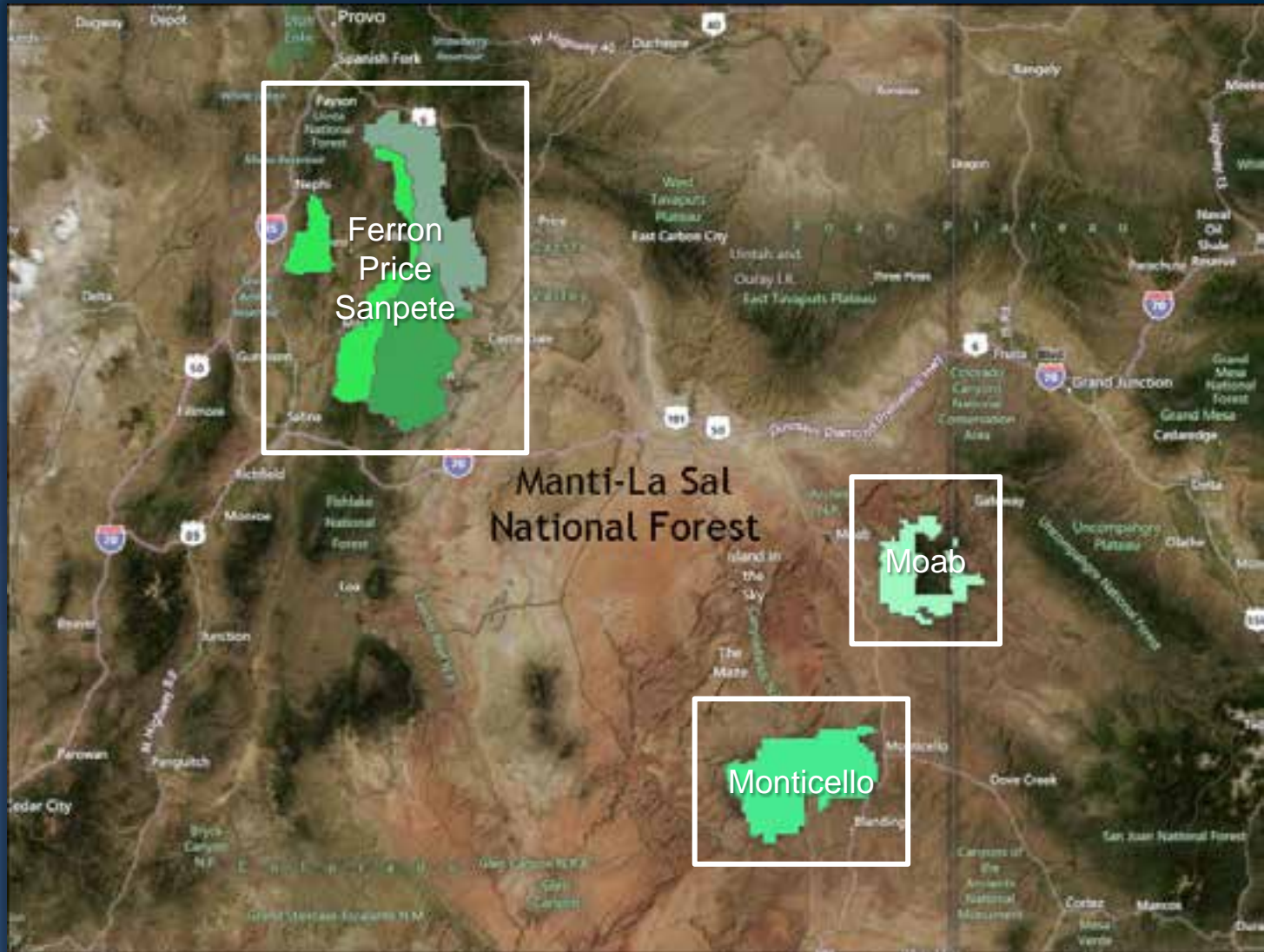
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2013 Esri Southwest User Conference

Manti-La Sal National Forest



National Forest System Roads and Trails



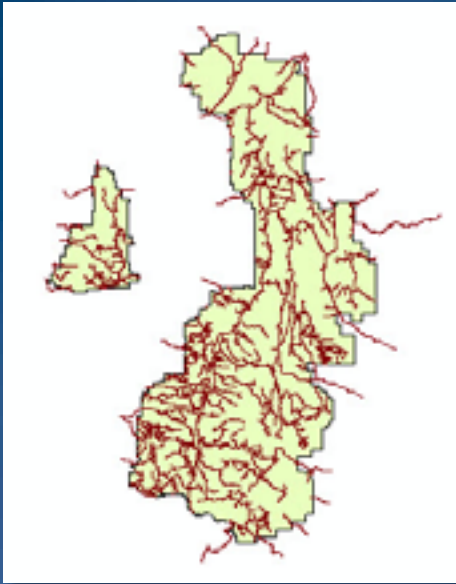
Note: State highways and county roads on national forests are not “system roads.”

- Public uses of roads & motorized trails
 - Touring and dispersed camping
 - Hunting access
 - OHV trail systems
- Private uses
 - Access to private land
 - Special use permits
- Administrative uses
 - Access to timber resources
 - Range management access
 - Access to water control structures
 - Emergency access - firefighting

Road Operational Maintenance Levels

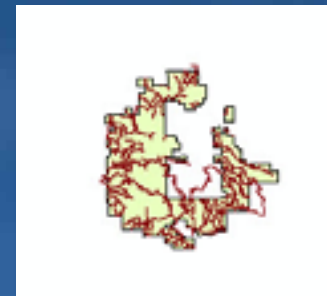
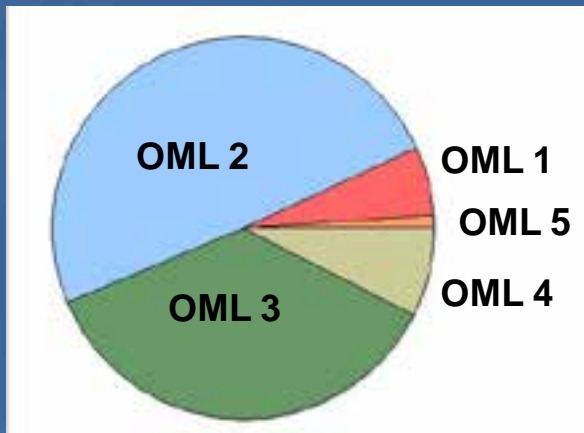
- **Maintenance Level 1** – Basic custodial care. These roads are closed. Some intermittent use may be authorized. When closed to vehicular traffic, they may be suitable and used for non-motorized uses with custodial maintenance.
- **Maintenance Level 2** – High Clearance. Roads open for use by high-clearance vehicles. Passenger car traffic is discouraged. Traffic is minor administrative, permitted or dispersed recreation. Non-traffic-generated maintenance is minimal.
- **Maintenance Level 3** – Passenger Cars. Roads open and maintained for travel by a prudent driver in a standard passenger car. Typically low speed, single lane with turnouts and native or aggregate surfacing.
- **Maintenance Level 4** – Moderate User Comfort. Roads that provide moderate user comfort and convenience at moderate speeds. Most are double lane and aggregate surfaced.
- **Maintenance Level 5** – High User Comfort. Roads that provide a high degree of user comfort and convenience. Normally double lane, paved, or aggregate surface with dust abatement; the highest standard for maintenance.

Road Operational Maintenance Levels

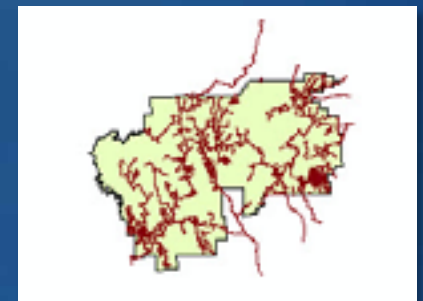


Ferron / Price / Sanpete

Operational Maintenance Level	Count	Mileage
1- Basic Custodial Care (Closed)	523	485
2 - High Clearance Vehicles	1580	4076
3 - Suitable for Passenger Cars	329	2985
4 - Moderate Degree of User Comfort	51	611
5 - High Degree of User Comfort	1	1



Moab



Monticello

Travel Management Rule

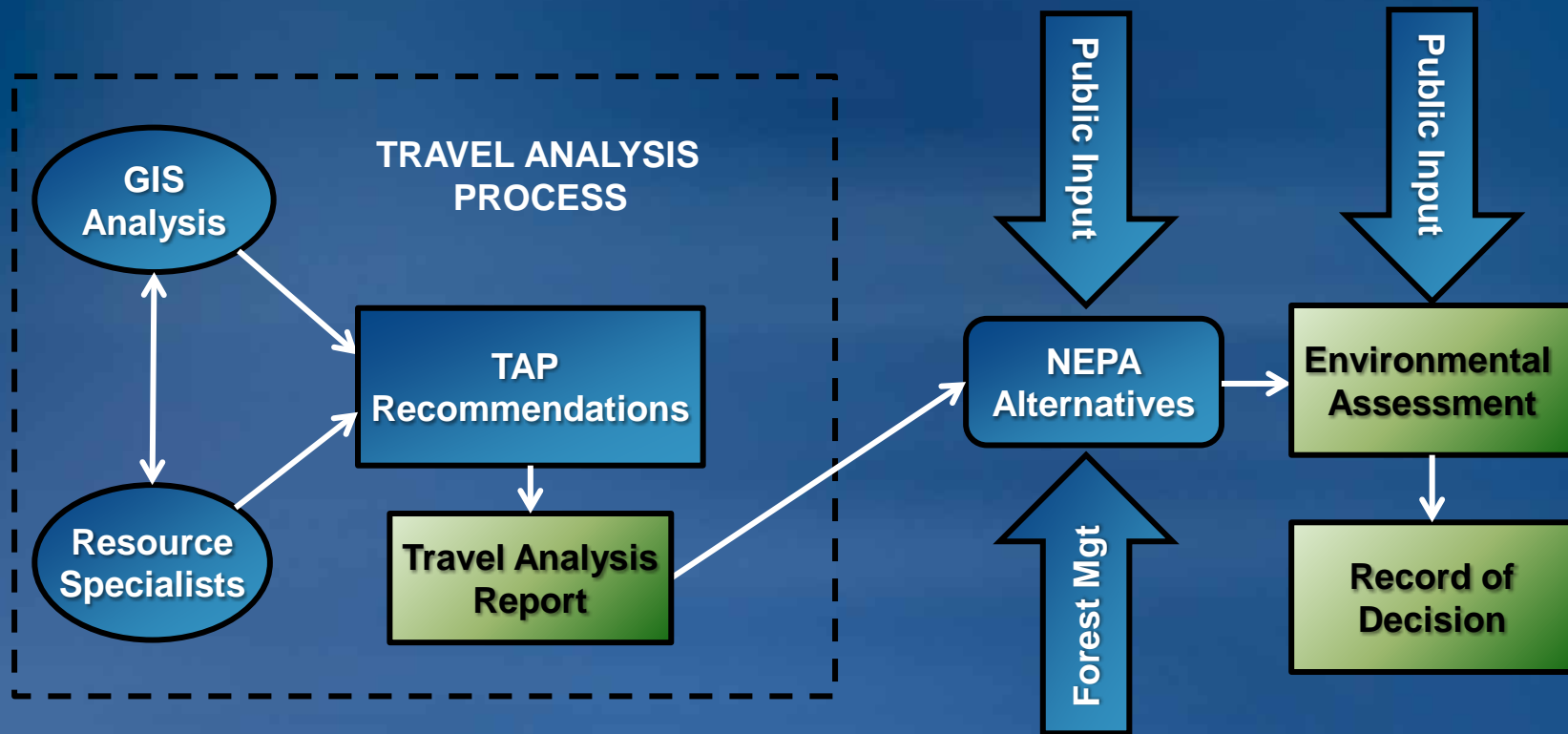
The Forest Service Travel Management Rule (36 CFR 212.5(b)) requires each national forest to perform a Travel Analysis Process (TAP) by 2015. The purpose of the TAP is to identify the “**minimum road system**” needed for safe and efficient travel and for the protection, management, and use of National Forest System lands. The TAP may also address motorized trails.



Travel Analysis Process (TAP)

- The TAP provides the framework for developing recommendations for designation which decision makers may consider in the National Environmental Policy Act (NEPA) process.
- **The TAP is not a decision process.** The analysis and recommendations will be documented in a TAP report before NEPA alternatives are devised.
- TAP applies to National Forest System road and trail routes, not to non-system and user-created roads and trails.

TAP and Decision Process



Travel Analysis Process

TAP is a six-step analytical process, providing a technical science-based review of the transportation system.

The six steps for travel analysis are:

1. Setting up the Analysis
2. Describing the Situation
3. Identifying Issues
4. Assessing Benefits, Problems and Risks
5. Describing Opportunities and Setting Priorities
6. Reporting (Key Findings)

TAP Assessment (Step 4)

- Evaluate the need for each road/trail
- Identify maintenance costs
- Evaluate the environmental resource risks



TAP Value/Cost Analysis

Value/Cost
Matrix

HIGH COST LOW VALUE	HIGH COST MODERATE VALUE	HIGH COST HIGH VALUE
MODERATE COST LOW VALUE	MODERATE COST MODERATE VALUE	MODERATE COST HIGH VALUE
LOW COST LOW VALUE	LOW COST MODERATE VALUE	LOW COST HIGH VALUE

High maintenance cost and low value = possible decommission

TAP Risk Analysis

Travel routes were analyzed for forest plan consistency and redundancy using raster geographical information system (GIS) density analysis.

Staff specialists established environmental risk criteria for travel route effects and potential risks to soil, water, fisheries, wetlands, landslides, wildlife, and heritage resources. These criteria formed the basis for vector GIS models used to flag routes as low, moderate or high risk.

A Forest interdisciplinary (ID) team conducted a thorough review of the GIS analysis results using on-the-ground knowledge, in some cases identifying and rating routes not flagged by GIS models. Some routes were flagged for additional field checking.

Route Density Analysis

Forest Plan Consistency

Identified roads and motorized trails in Non-motorized Recreational Opportunity Spectrum (ROS) class as not meeting criteria in the Forest Land and Resource Management Plan.

Analyzed roads and trails in Semi-primitive motorized ROS class for route density; lower density needed to preserve semi-primitive classification (no threshold established because of variables such as terrain isolation; judgment call.)

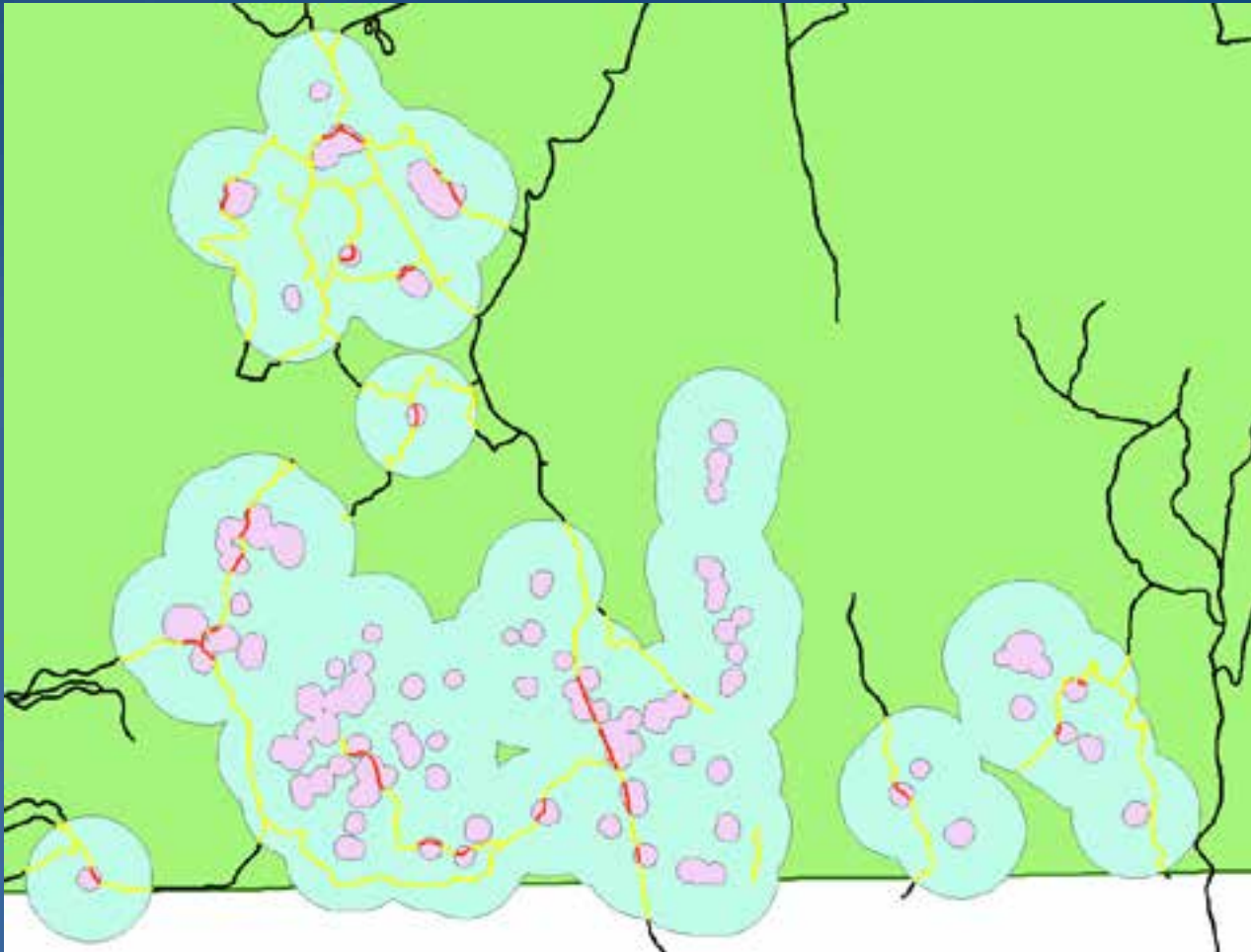
Route redundancy

Identified parallel routes in close proximity as to redundancy. Recommended keeping the lower cost route.

Environmental Risk Analysis

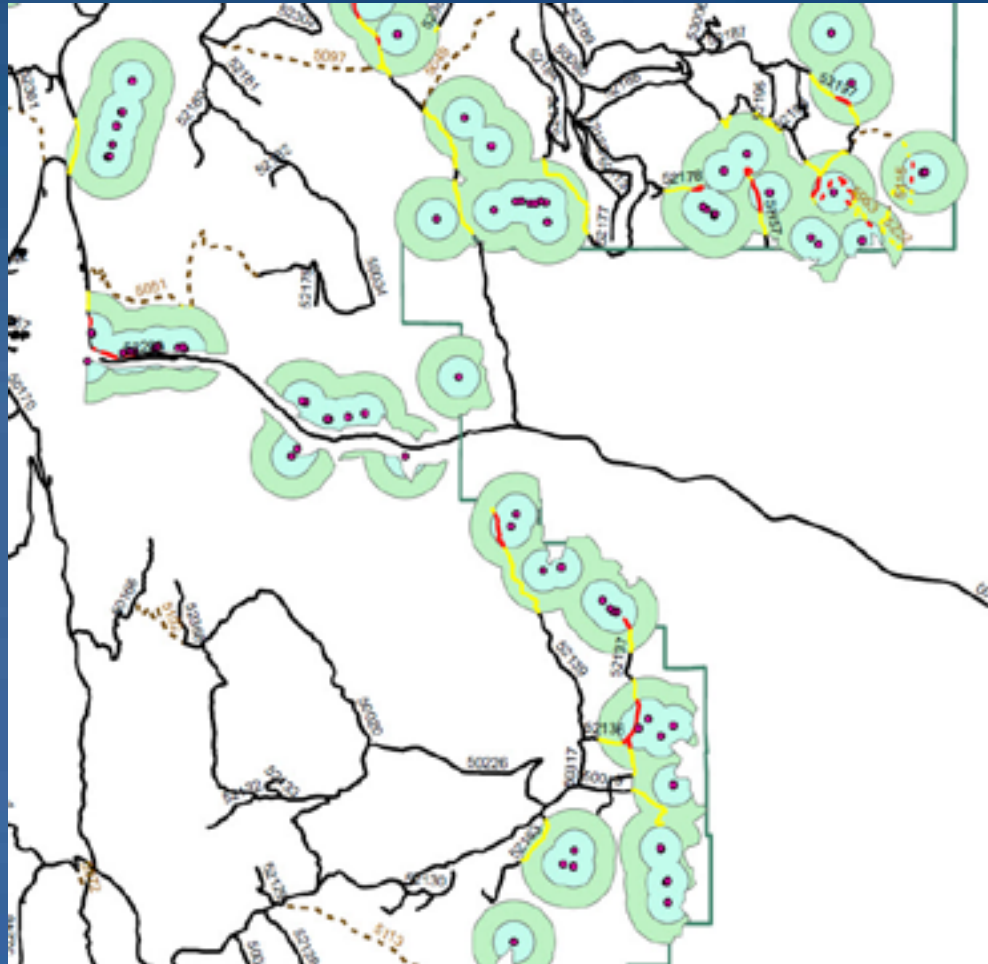
Resource	Analysis
Fisheries	Risk to Bonneville Cutthroat Trout and Colorado Cutthroat Trout
Heritage	Risk to cultural resources/archaeology
Soil/Landslide	Risk to highly erosive soils
Water/Wetlands	Risk to streams and wetlands
Wilderness/IRA	Risk to wilderness and inventoried roadless areas
Wildlife	Risk to habitat: Big game, Golden Eagle, Peregrine Falcon, Mexican Spotted Owl, Sage Grouse, Northern Goshawk

Environmental Risk Analysis



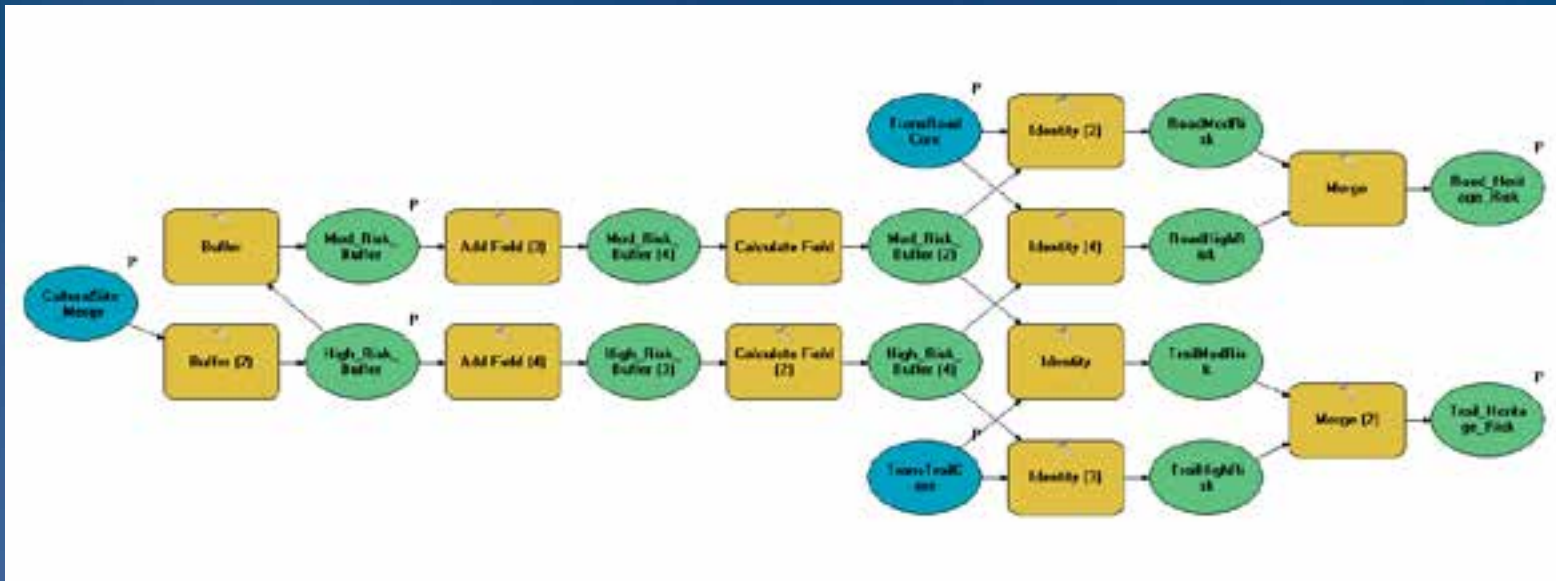
Example: road and trail heritage risk – Buffer and Intersect

Environmental Risk Analysis



Example: golden eagle wildlife risk – Buffer and Intersect

Environmental Risk Analysis



ArcGIS Model Builder used to document risk models
Example: road and trail heritage risk

ID Team Review



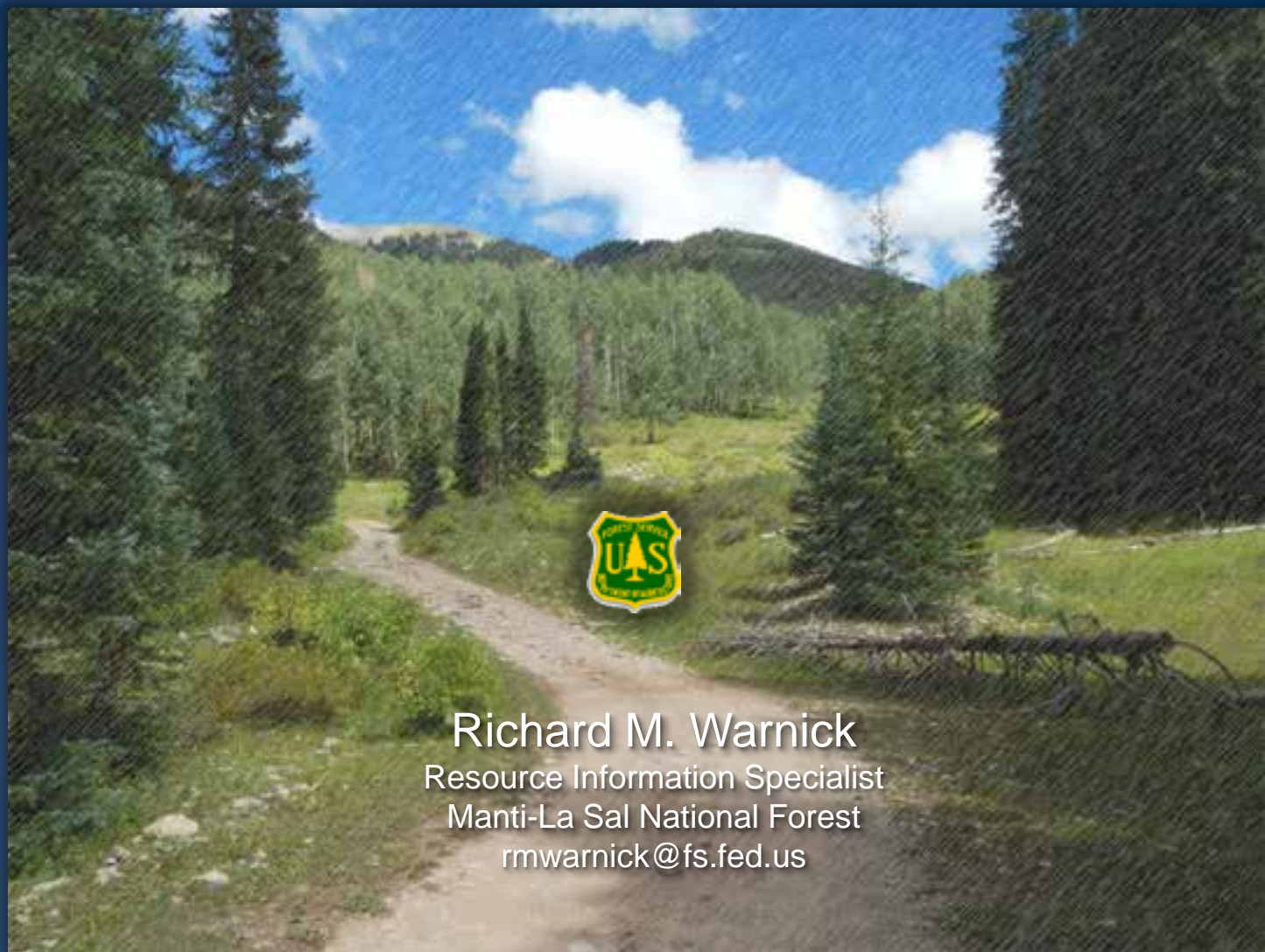
“Phantom” Level 1 road – recommend remove from system

TAP Route Recommendations

Approach was not based on a simple calculated rating but clear case of compelling need to change classification, close, or decommission a route based on a combination of GIS modeling, maintenance/resource management history, and on-the-ground knowledge.

- No Action – Keep route on system
- Keep as Level 1 – FS admin use only
- Remove from system (nonexistent)
- Gate and retain under special use permit, remove from system
- Decommission and remove from system
- Partial decommission
- Convert road to motorized trail

Questions & Discussion



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