Route Inventory and Designation in Travel Management Planning

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Arizona BLM

- Arizona BLM has a route network of approximately 26,000 miles of Roads, Primitive Roads and Trails.
- Between 1990 and 2007, BLM recorded (inventoried) over 22,000 miles or nearly 90% of the network.
- BLM is moving to a system of Designated Routes.
- Currently, the Transportation System is Existing Routes.
Photo Interpretation
Field Maps
Collecting GPS Data
Collecting GPS Data
Collecting GPS Data
Collecting GPS Data
Field Maps

- Photo Interpreted Line Feature
- Base GIS Transportation Layer
Collecting GPS Data

- Photo Interpreted Line Feature
- Base GIS Transportation Layer
- GPS Collected Linear Feature
Post-Processing

- GPS Data is downloaded and differentially corrected.
- GPS Data is exported to a shapefile format as points, lines and polygons.
- Shapefiles are edited to remove overshoots, undershoots and spikes.
- MetaData is produced for collected GPS Data.
Arizona BLM

- Arizona BLM has begun the process to Designate its Transportation System in 4 Districts.
- BLM utilizes a systematic and analytical process that includes public participation in order to complete route designations.
Arizona BLM

• **Transportation Assets:**
  - **Road**—A linear route declared a road by the owner, managed for use by low-clearance vehicles having four or more wheels, and maintained for regular and continuous use.
  - **Primitive Road** (new asset) – A linear route used by four wheel drive or high clearance vehicles. Primitive roads do not normally meet any BLM road design standards.
  - **Trail** – A linear route managed for human powered, stock, or off highway vehicle forms of transportation or for historical or heritage values. Trails are not generally managed for use by four wheel drive or high clearance vehicles.
Route Inventory to Evaluation

Route Inventory Data

Other GIS Data (e.g., wildlife habitat, riparian, etc.)

GIS Analysis Results (e.g., route density)

Professional Knowledge of Agency (not reflected in GIS)

Input from Collaborating Agencies and Public (not reflected in GIS)

Route Evaluation Tree Process ©

Route Evaluation Tree

Select Jurisdiction: Arizona BLM

Select User Level:
- Use with prompts
- Use without prompts

Route Evaluation Tree Process©

...is a tool for assisting land management agencies with Travel Management Planning, not just with route evaluation and designation.
Route Evaluation Tree Process

- Route evaluation and designation occurs only *after* preliminary work performed
  - Identification of Issues
  - Identification of Travel Management Areas
  - Development of Desired Future Conditions / Management Objectives
  - Development of Option Criteria (e.g., alternatives if in NEPA)
  - Refinement of Data (e.g., identify data sources and data deficiencies, rectify data deficiencies)
  - Development of Maps (utilizing GPS route inventory)
Route Evaluation Tree Process

Route evaluation and proposing designations (done with Agency staff participation) are only two steps amongst many within the Route Evaluation Tree Process.

17. Evaluate each route utilizing the Route Evaluation Tree; concurrently enumerate each route and, as needed, for each route segment

18. Record evaluation code for each route under each alternative as well as special notes (e.g., potential impacts, proposed mitigation, etc.)
Route Evaluation and Designation

• Route Evaluation Tree Process® Software
  – Systematic and Standardized
  – Customized Specifically for Agency Planning Needs
  – Database Format
  – Queriable
  – Reporting Capabilities
  – Data Output for Joining with GIS
  – Maintains Human Interaction with Route Evaluation and Designation
  – Results in Centralized Depository for Route Data
  – Useful for Future Permitting and Planning Efforts
Route Evaluation Tree Process© Software

• Begins with General Route Information
  – Collected From a Variety of Potential Sources:
    • GPS Inventory Data
    • GIS Data
    • Maps
    • Agency Management / Staff Knowledge
    • Collaborating Agency and Public Input
  – Information Such As:
    • Route width and use level
    • Route characteristics
    • Age / origin of route
    • Cooperating agency and/or public proposals for route
Route Evaluation Tree Process© Software

• Utilizes a drop-down menu system for collecting information about the routes
• Data can be imported from GIS
• Incorporates data not available in GIS
• Drop-down menu items are:
  – based upon statutory requirements
  – customized from agency input (as well as public scoping results) to address statutorily-based issues specific to individual District Offices/ Field Offices
Map Development
Drop-Down Menus

Commercial, Administrative, Property and Economics

**Identify all access/uses for this route:**

**Access / Use:**
- Commercial Ranching Facility
- Utilities
- Military Facility
- Private Property
- Administrative Uses
- Mining

**Select the Access/Use by clicking "P"-Primary, "S"-Secondary, or "T"-Tertiary**

<table>
<thead>
<tr>
<th>Specifically</th>
<th>P</th>
<th>S</th>
<th>T</th>
<th>Memo</th>
</tr>
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<tbody>
<tr>
<td>Ranch / Ranching</td>
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<tr>
<td>Fence</td>
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<tr>
<td>Tank, Trough</td>
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<td>Corral</td>
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<tr>
<td>Windmill</td>
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<tr>
<td>Well</td>
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Drop-Down Menus

Public Uses

Identify all uses:

Select the Uses by clicking "P"-Primary, "S"-Secondary, or "T"-Tertiary

<table>
<thead>
<tr>
<th>Uses</th>
<th>P</th>
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<th>Memo</th>
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<tbody>
<tr>
<td>OHV Touring</td>
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<tr>
<td>Jeep Tours</td>
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<tr>
<td>4x4 (Standard Stock 4x4)</td>
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<tr>
<td>ATV</td>
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<tr>
<td>Motorcycle</td>
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<td>Equestrian</td>
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<tr>
<td>Hiking</td>
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<tr>
<td>Hunting</td>
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<tr>
<td>Vistas, Sightseeing, Photography</td>
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<tr>
<td>Rockhounding</td>
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<tr>
<td>Camping - Primitive/Dispersed</td>
<td>□</td>
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<tr>
<td>Wilderness Access</td>
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<tr>
<td>OHV - Recreational</td>
<td>□</td>
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Route Designations

- Agency staff make the proposed designation; the software does not make the proposed designation.

- Agency staff may also identify potential maintenance, monitoring or mitigation needs.

- The proposed designation for each route network option is captured in the software.
Drop-Down Menus

Environmental Impacts / Sensitive Resources

Identify all impacts:

Impact:
Wild Burro Herd Area (Herd Management Area-HMA)
Air Quality
Dumping
High Density Route Polygon
Route Proliferation
Other Hazards

Select the impact by clicking "D"-Direct or "I"-Indirect

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<th>Specifically</th>
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<th>I</th>
<th>Memo</th>
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<tbody>
<tr>
<td>Contributing to Fugitive Dust Concerns</td>
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<tr>
<td>Within a PM10 Non-Attainment Area</td>
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<tr>
<td>Proximate to a PM10 Non-Attainment Area (1/2 mile)</td>
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<tr>
<td>Possible air quality issues</td>
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<tr>
<td>Other</td>
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Work Products

- Use of the Route Evaluation Tree Process® software provides:
  - **Designation table** for joining with GIS to produce maps
  - **Individual route reports** to identify specific issues identified and considered
  - **Area overview information** collected to aid in understanding the landscape perspective
  - **Contribution of information for future NEPA documentation** for a centralized depository of information
  - **Readily queriable database** to assist with impact analysis
  - **Documentation for an Administrative Record**
Travel Management Plan

• Each BLM Office will complete a Travel Management Plan (TMP)
  – Within NEPA, receiving full cumulative impacts analysis
  – Discussion of Travel Management Area (TMA)
  – Identification of route networks
  – Development of implementation plan
  – Development of monitoring and/or mitigation plan (may also incorporate adaptive management), as appropriate
Results of Travel Management Planning

- Identification of routes and route issues
- Creation of maps for the public
- Identification of specific maintenance, monitoring and/or mitigation needs
- Identification of law enforcement needs related to travel management
- Establishment of stronger links between budgetary requests and specific projects
- Creation of a Travel Management Plan to provide direction about how travel on the public lands will be managed to assist with:
  - enhancing the protection of sensitive resources
  - providing a range of recreational opportunities for the public (both motorized and non-motorized activities)
  - minimizing redundant routes
Web Site Information

- BLM Travel Management:

- ARS
  - http://www.arsplanning.com