

# Miles of Roads Inspected and Maintained

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## 1.0 Introduction

### 1.1 Description

The Miles of Roads Inspected and Maintained TMDL PM tracks the miles of permanent paved and unpaved forest roads that are inspected and/or maintained to reduce stormwater pollution from the Forested Uplands each year. Road inspections must be done in person to check for repair or improvement needs on existing stormwater retrofits. Road maintenance includes the implementation of repairs and improvements to existing stormwater retrofits as needed. This TMDL PM only measures permanent roads that are part of a landowners road network, and does not track roads that are built and removed for specific projects such as vegetation management activities.

### 1.2 Relevance to the Lake Tahoe TMDL

Forest roads generate the highest sediment particle yields on a per acre basis of any source in the Forested Uplands. As stormwater runoff washes over forest roads it picks up nutrients and particles, and deposits them into nearby surface waters, which ultimately carries the nutrients and particles to Lake Tahoe. Implementation of road treatments such as stormwater retrofits and full decommissioning have the ability to significantly reduce, if not completely eliminate pollutant loading from forest roads. Maintaining stormwater retrofits on roads is necessary to ensure that roadway treatments are reaching their full potential. Project implementers regularly inspect their roads to identify necessary maintenance needs and roadway upgrades.

### 1.3 EIP Reporting Relationship

*This Info Sheet supplants the related EIP PM Info Sheet. Providing the information requested through this Info Sheet is sufficient for EIP PM reporting purposes. The following EIP PMs track and report a similar set of data:*

- There are currently no EIP PMs that track operations and maintenance on forest roads in the Tahoe Basin

## 2.0 Reporting Criteria

### 2.1 Subcategories

*Performance measures are broken down into subcategories to allow for data aggregation and greater reporting detail. Subcategory names are shown in bold, followed by the options that can be selected for the subcategory and a brief description*

#### **Road Ownership**

USFS LTBMU, CA Tahoe Conservancy, CA State Parks, NV State Lands, Heavenly, Homewood, Diamond Peak, Urban Jurisdictions

This subcategory differentiates between ownership of roads in the Forested Uplands to allow separate tracking of efforts from different road ownership. The above list is not comprehensive.

#### **Road Type**

Paved, Unpaved

This subcategory tracks whether the treated road segment is paved or unpaved. This subcategory is important because of the difference in pollutant concentrations from these road types and the different type of maintenance required.

#### **Action Type**

Inspected, Maintained

Roads may be inspected and/or maintained to identify and address any needed repairs or improvements to stormwater retrofits. This subcategory allows tracking of the total miles of permanent roads inspected and/or maintained over time.

### 2.2 Data Attributes

*In addition to the subcategories described above, the following project-level data attributes are needed to support the reporting of TMDL PM accomplishments*

- Project Name
- Project Description
- Project Status
- Project Contact/Lead
- Implementing Partners
- Project Location (subwatershed, county, GPS coordinates – if available)

## 3.0 Key Definitions

**Inventory** - Roads are inventoried when they are accounted for within the property owner's road network. Road inventories are completed by property owners to better understand total net roads in their road network.

**Inspect** - Roads are inspected when road conditions and BMP retrofits are physically assessed for stability, function and maintenance needs by the land manager.

**Maintain** - Roads are maintained when improvements or fixes are made to road surfaces or drainage BMPs, either out of

necessity or as part of regular upkeep. Road maintenance needs are determined through road inspections.

**Permanent Road** - Paved or unpaved forest roads constructed for long-term use. For USFS, this means roads that are part of the National Forest Road System. Permanent roads do not include roads created for the purposes of serving a construction site. Therefore, permanent roads generally do not include roads, skid trails and landings constructed for vegetation management activities. A stored road is a type of permanent road. Landings associated with a permanent road network are tracked as a disturbed area.

#### 4.0 Reporting Display

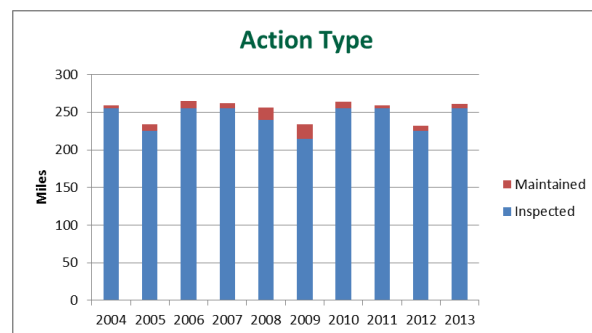
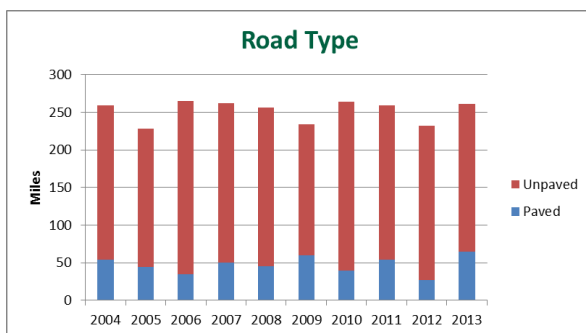
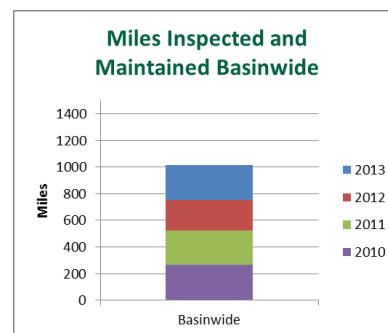
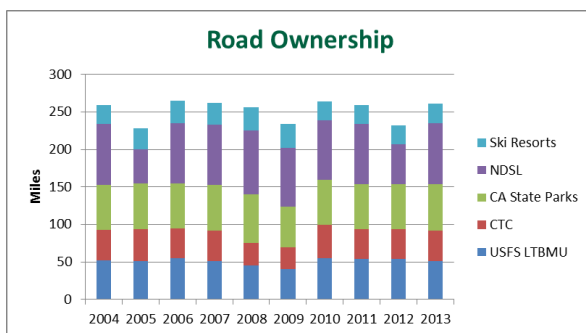
##### 4.1 Targets

Soft targets are used to display TMDL PM results. Soft targets are incorporated into data charts as a performance range on the y-axis. Soft targets can be defined for annual or longer term performance

There are no defined basin-wide targets for the Miles of Roads Inspected and Maintained TMDL PM

##### 4.2 Potential Data Charts

The charts below are potential displays for the Miles of Roads Inspected and Maintained TMDL PM. These charts enable a comparison of different road ownership, road types and treatment types, as well as an understanding of the trend in Miles of Roads Inspected and Maintained over time. The data in the charts below is hypothetical.



#### 5.0 Notes

This section contains additional information that would be useful to TMDL Program Managers or project implementers

- USFS LTBMU is the only project implementer with a regular annual road inspection program. USFS aims to inspect 20% of their road network annually (with the goal of inspecting 100% of their roads every 5 years). Roads are maintained as needed, even if they are not part of this 20% inspection.
- Multiple project implementers inspect 100% of their road network annually, through regular roadway use during the construction season. These inspections are not part of a formal inspection program. Maintenance is often implemented as needed.
- Completed road network inventories are not needed to report on this TMDL PM. However, road inventories provide helpful context for reporting this TMDL PM. As of February 2014, CTC and CA State Parks have not done a full inventory of their road network.