

APPENDIX S

OUTLINE OF MONITORING PLAN FOR OFF-ROAD VEHICLE AREAS

S-1. Executive Order 11644 requires that each agency monitor the effects of the use of off-road vehicles on lands under its jurisdiction. Data regarding the impact of off-road vehicles on soils, vegetation, water, air wildlife and other recreation activities is very limited. To provide for this recreation activity in harmony with other recreation activities and avoid despoilment of the resource base monitoring of the effects of ORV use will be accomplished as effectively as possible.

S-2. The following outline encompasses significant features which should be monitored in ORV areas within the capability of the District Engineer. It is recognized that a scientific evaluation of the impact or ORV's would encompass a great deal more data collection and analysis. The following encompasses a rather limited approach to guide the District Engineer within his budgetary constraints and manpower ceilings.

S-3. Outline.

- a. Estimate of use of area or trail by both ORV users and non-users.
- b. Impact of ORV use on vegetation, soil and water.
 - (1) Map existing trails in designated ORV area.
 - (2) Record mileage and average width of existing trails.
 - (3) Rate existing trails according to light, medium or heavy use.
 - (4) Select random sample plots on existing trails covering a variety of terrain, vegative and soil conditions.
 - (a) Photograph sample plots.
 - (b) Record width of trail and depth of ruts at selected intervals.
 - (c) Record inventory of vegetative community within the sample plot. Inventory should include species composition and size of woody vegetation.
 - (d) Record general condition of vegetation in sample plot.
 - (5) Record, at intervals of 0, 1, 3, and 5 years, those items included in (4) above.
 - (6) Define control plots near test plots to determine impact with and without ORV use.
 - (7) All control plots and test plots should be permanently but inconspicuously marked so that photographs and data collection can be accomplished on the same area in subsequent years.
 - (8) The following can be determined from test sections:

- (a) Impact on young vegetative growth.
 - (b) Impact on larger trees and shrubs (compaction, direct damage, root exposure).
 - (c) Impact on soil (erosion, compaction, lateral movement).
 - (d) Trail width variation from year to year.
 - (e) Extent of impact on either side of trail.
 - (f) Comparison of impact of ORV use on test plots with no ORV use on control plots.
 - (g) Annual spot checks of vulnerable areas such as steep slopes, creek banks and lake shoreline, should be conducted.
- c. Impact of ORV use on wildlife.
- (1) Track counts of big game animals such as deer, antelope and elk in ORV area compared to those outside ORV area.
 - (2) Count of songs of game birds and non-game birds.
 - (3) If hunting is permitted, compare wildlife harvest in ORV area to that of other areas in the project.
 - (4) Record sightings of game and non-game species.
- d. Impact of ORV use on other recreation activities.
- (1) Survey type and amount of recreation use on areas adjacent to designated ORV areas.
 - (2) Record attitudinal response of visitors who are surveyed as nearly as possible.
 - (3) Record distance between area where survey is made and the ORV area.