

Documenting the Environmental Impacts of Motorized Vehicle Use

Survey Protocol

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This protocol, which includes two survey forms, is designed to enable you to effectively document the impacts of motorized vehicle use. We designed this protocol to be readily combined with efforts to inventory roadless area boundaries and preemptively document potential RS 2477 claims as well.

The data collected using this protocol can be used in the following ways:

- to prevent proposed special events by demonstrating that previous events of the same type had significant impacts (by conducting inventories before, after, and possibly during an event or project);
- to prevent proposed projects by demonstrating that similar projects had significant impacts;
- to halt ongoing projects by demonstrating that such projects are having significant impacts; and
- to proactively close trails, legal and illegal, by documenting their impacts
- to provide information useful in the travel planning process

We encourage you to modify the forms as needed. You are welcome to add or remove questions, modify questions, alter the layout, or make any other changes appropriate for your survey effort. Feel free to replace Wildlands CPR contact information at the bottom of the forms with the appropriate information for your organization. Any feedback on the forms will be much appreciated – we continue to revise them so they can be as useful as possible. Please contact us if you have any comments or questions.

It is important to note that there are several questions we have deliberately omitted from this protocol because they can not be easily answered in the field. However, they may be extremely important depending on the purpose of your survey effort. These include the legal status of the route (is it officially closed to motorized use, restricted to specific types or conditions of use, or open without restriction?), the legal purpose of the route (which is often different from the apparent purpose in the field), and the presence of suitable or occupied habitat for protected species.

The Road Impact Documentation Process

This protocol is designed to provide for the thorough, systematic, and replicable collection of data documenting the environmental impacts of motorized use. It is crucial that anyone else, at any future point in time, can find the precise location and orientation of every route you document and every photograph you take.

The general survey process is straightforward. You will follow an assigned route for its entire length, or a specified portion of the entire length. You will document every motorized route you find that starts at or crosses your assigned route (including all spur routes). You will fill out a "Route Form" for every route you find. Additionally, you will take photographs of every route you find, important features of that route (e.g., closure devices), and sites where motorized use has resulted in environmental impacts. You will fill out one line on a Photo Record Form for every photograph you take.

Survey efforts will vary depending on the specific purpose of the inventory. In some cases, you will need to photograph the beginning, middle, and end of every route you find. In other cases you may not need to walk the length of every route you find. Your project coordinator will assist you in figuring out how to address routes in the field that do not have official route numbers. Other considerations that will depend on the specifics of your survey effort include whether to use slide or print film or a digital camera and to what extent your survey should document off-route impacts (e.g., impacted campsites). It is extremely important that you carefully follow the protocol for your specific survey project.

Filling Out the Route Form

- *Fill out one Route Form for every route you encounter, whether you survey the route or not. Fill out the top of the form on every new form. The "Area" is the name of the area you are documenting. The "USGS quad" is the name of the topographic field map you are using. If you move from one map to another, list both and make a note in the "Comments" section.*
- **Line 1 (Location).** Indicate whether this is a system or non-system route according to your official travel map. Also indicate the number of the road, way, or trail as marked on the travel map and any signs in the field. If the numbers on the ground and on the map differ, list them both and note this in the "Comments" section.
- **Line 2 (Legal Uses).** Check all that apply.

- Line 3 (Legal Uses – Cross Country Travel). Mark the appropriate box.
- Line 4 (Motorized Use). Indicate whether there are signs in the field clearly explaining where motorized use is permitted/not permitted.
- Line 5 (Closures). Check all that apply.
- Line 6 (Closure Effectiveness). Take photos and record them on the Photo Record Form.
- Line 7 (Types of Travel). Check all that apply.
- Line 8 (Number of Users). Fill in the number of each type of user observed during your field survey.
- Line 9 (Deliberate Construction). Take photos and record them on the Photo Record Form.
- Line 10 (Deliberate Maintenance). Take photos and record them on the Photo Record Form.
- Line 11 (Survey). Indicate whether you fully surveyed this route or simply documented its presence.
- Line 12 (Purpose). Check all that apply.
- Line 13 (Additional Comments). Additional comments are extremely important. Record any additional comments about the route on these lines *while you are still in the field*. Use additional pages if necessary.
- Line 14 (Surveyor Information). Fill in your name, your phone number (with area code), and the date you finished your work.

Filling Out the Photo/Impact Form

- Fill in one line of the Photo Record Form *for every photograph you take, when you take it*. Use as many Photo Record Forms as necessary to fully document *every* photograph you take. Write additional comments whenever it would help explain what you observed and recorded. Attach additional pages if necessary.
- Fill out the top of the form *each time you start a new form*. The “Area” is the name of the area (e.g., popular name for a proposed Wilderness area) you are documenting.

The “USGS quad” is the name of the topographic field map you are using. If you move from one map to another, list both and make a note in the “Comments” section.

- Column 1 (Photo #). Fill in the photo number. The number is made up of your complete initials, the film roll number, and the frame number. For example, GWB-36-4 represents the fourth frame of the 36th roll of film that George W. Bush took. Also write this number on the field map in the location where it was taken with an arrow showing the direction it was taken. Later, you will write this number on the back of each photograph that you took. You will also put the roll in an envelope labeled with your name, the date, and area name, and the enclosed photo numbers.
- Column 2 (Photo Direction). Indicate which direction you faced when you took the photograph.
- Column 3 (Route #). Fill in the number from the field map that corresponds to the route you are documenting. This number should be printed on the field map somewhere along the route.
- Column 4 (Width). Indicate the width (in feet) of the route at the point you took the photograph. Measure this distance with a tape measure; do not simply guess.
- Columns 5 (Erosion). Fill in the appropriate number from the key at the bottom of the Photo Record Form.
- Column 6 (Vegetation). Fill in the appropriate number from the key at the bottom of the Photo Record Form.
- Column 7 (Exotics). Fill in the appropriate number from the key at the bottom of the Photo Record Form.
- Column 8 (Water). Fill in the appropriate number from the key at the bottom of the Photo Record Form.
- Fill in the Additional Comments section with any additional information on your photographs or what you observed. You might, for instance, provide additional information about a damaged area you observed, or sightings of rare or at-risk wildlife species. Always be sure to include the appropriate photo number for anything you write in this section.
- Fill in the Surveyor Information at the bottom of the Photo Record Form *on every form you fill out*. Fill in your name, your phone number (with area code), and the date you finished your work.

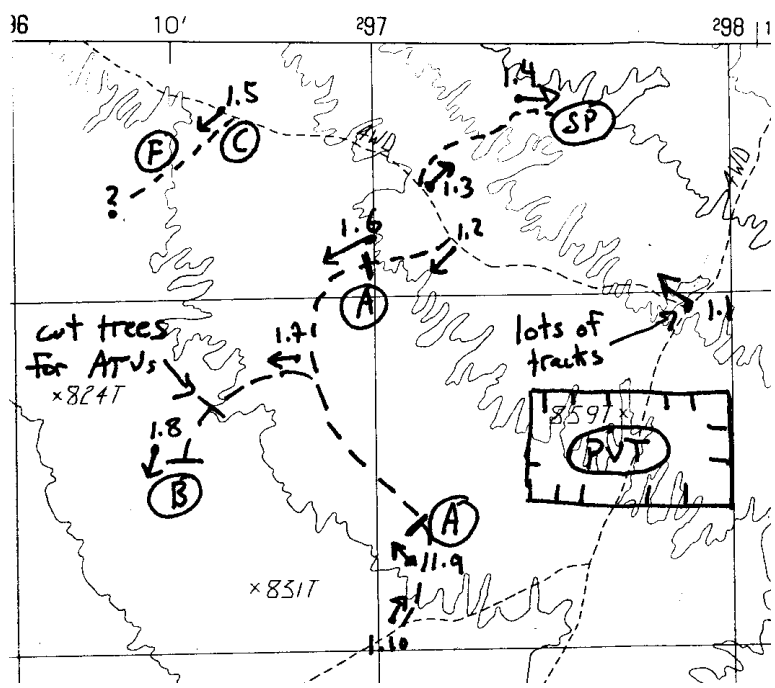
Taking Photos

- A picture is worth a thousand words, so if in doubt, take a photo.
- If your survey is intended to document all motorized routes in your area (e.g., a roadless area boundary survey), then take photographs at the beginning, middle, and end of *every* motorized route, as well as at every junction. Photos of the beginning should also show the intersection between the main road and the stem.
- Take photographs where routes change from constructed or maintained to unconstructed or unmaintained.
- Take photos of every location where a motorized route travels through a waterway.
- Take photographs of all significant environmental damage caused by motorized vehicle use. Take photographs of sites where damage is less significant but appears to be new or increasing. Environmental damage includes soil erosion, collapsing streambanks, high-marking or hill-climbing damage, crushed or trampled vegetation, significant rutting, mud holes or other altered hydrology, and the like.
- If your survey project is intended to identify potential wilderness, also take representative landscape photographs and make field notes about the wilderness qualities (e.g., solitude; opportunities for primitive recreation; high scenic, ecological, geological, or cultural/historical values) of the area.
- Take photographs of anything else you think may be significant. Be sure to include an ample narrative description of all photos that you take.
- Where appropriate, include an object in the photo to help indicate scale (e.g., a foot, a yardstick).

Marking the Field Map

- Before you begin your field work, mark your name and the date of the survey on the upper right hand corner of the field map(s) (which will usually be 7.5 minute quadrangles).
- While in the field, put a dot on the map where you were standing every time you take a photograph. Then mark an arrow on the map next to that point showing the direction you were facing when you took the photograph. Write the photo number next to the dot and arrow. *This is extremely important.* Do this even if you are using a

GPS unit (or a combined GPS/digital camera). If the map is getting cluttered with notes and numbers, use arrows and captions to keep the map legible. Be precise about your location! It is extremely important that someone else can return to this area and take a photograph of the identical view at some future point in time. Keep track of your location on the map at all times. If you are uncertain about the location you mark on your map, make a note to that effect. Do your best to figure out where you are. Back track if necessary.



Sample of a field map. Photo points are marked with direction taken and photo number. Note photos at start of each road or trail leaving the boundary route. Use narrative field notes on the map as necessary to fully explain what you observe.

Field notes on the map are extremely important. We recommend you use a key. A sample key (easily modified to fit your needs) follows:

- ? - route not followed to end
- M - Main road
- F - faint route
- NE - non-existent
- A - ATV use only
- B - physical barrier stopping all motorized access
- C - new route developing
- ℓ - mapping error
- SP - stock pond
- PVT - private property boundary
- OPA - ORV play area

Mapping Supplies

Field maps (usually 7.5 minute quadrangles)	Camera and lots of film
Official agency travel map	Tape measure
Extra batteries (for the camera and the GPS unit)	Photo Record Forms
Route Forms	Mechanical pencils
Clipboard	Compass

Completing a Survey Project

- On the back of each photograph, write the area name, photo # and route # with a permanent marker. Place the photographs in an envelope labeled with your name, the date, the area name, and photo numbers (e.g., 1-36, 7-10).
- Review your Route Forms; make sure that routes are correctly identified and correctly referenced on the field maps and Photo Record Forms.
- Review your field map(s) and Photo Record Forms; make sure that all photo locations are legibly marked on the map(s) and correctly referenced by the Photo Record Forms. Note any that may be inaccurate.
- Review your field notes to make sure you include anything else you can think that might be relevant to your project.
- Review the progress of your fieldwork and make a “to do list” which includes field work not completed, field work that should be checked for accuracy, and research needs.
- Return the labeled photographs and labeled envelopes, field maps, forms and any additional field notes to the project coordinator. Everything needs to be well-organized and neat.

Conclusion

We cannot overemphasize the importance of conducting your field surveys in a manner that is systematic, thorough, and precise. In some cases it will be crucial that people uninvolved with the original survey effort be able to precisely replicate your fieldwork. The strength of legal claims may rest on the data you collect. Thus your data must be as accurate as possible; fully document all of the impacts of motorized activity on the ground, but don't exaggerate or embellish. Despite the challenges of conducting credible field surveys, the work itself is rewarding and often enjoyable. Not only do you get to spend time out-of-doors, but you will get to know the land more

intimately, and knowing the land is crucial to protecting it. Thanks for your help with this critical project.

A Note to Survey Coordinators

Consider planning your survey so that you can secure time series photographs of especially important locations. For example, first target high-priority areas that are likely to see considerable increases in use in the near future (e.g., high-impact ORV events), and then plan on returning to those areas later in the survey.

Ideally, you should plan to fully map and photograph all routes from beginning to end. There is a good chance someone will have to return to the field at some later date to complete mapping of routes not followed to their end. However, if time or resource constraints make this impossible, make sure that the field crew does a good job of clearly marking routes followed and routes not followed to the end.

If your ability to make determinations in the field about the legal status of routes is limited, you might consider dropping questions 2 and 3 from the Route Form. Regardless, your post-survey analysis will need to include a comparison of the legal status of routes (including more subtle restrictions, such as a ban on the use of ORV's in excess of 50" in width) as determined by the agency's Travel Map, amendments to the Travel Map and to the management plan, and other decision documents.