MEMORANDUM OF UNDERSTANDING BETWEEN IDAHO STATE DEPARTMENT OF AGRICULTURE AND IDAHO BUREAU OF LAND MANAGEMENT FOR THE COLLECTION AND USE OF PHOTO MONITORING DATA IN RANGELAND HEALTH ASSESSMENTS

Parties

This Memorandum of Understanding [MOU] is made and entered into by and between the Idaho State Department of Agriculture [ISDA], whose address is 2270 Old Penitentiary Road, P.O. Box 7249, Boise, Idaho 83707 and the Idaho Bureau of Land Management [BLM], whose address is 1387 S. Vinnell Way, Boise, Idaho 83709. (The above parties are hereafter collectively referred to as the "Parties").

Introduction

43 CFR § 4100 defines monitoring as *"the periodic observation and orderly collection of data to evaluate (1) effects of management actions* and *(2) effectiveness of actions in meeting management objectives."* Idaho's Standards for Rangeland Health and Guidelines for Livestock Grazing Management define monitoring as *"the orderly collection, analysis, and interpretation of resource data and information to evaluate progress toward meeting Standards for Rangeland Health and/or management objectives."*

A photo monitoring program involves the collection, analysis, and interpretation of repeat photography at designated locations. The Parties to this MOU agree that rangeland photo monitoring is an important tool to aid with livestock grazing management on public lands administered by the BLM, and that photos can supplement quantitative monitoring data. The Parties further agree that analysis of monitoring data and conclusions about resource conditions at the allotment level should be principally based on facts and data collected on the ground over time, using the best and most efficient scientific techniques available.

While the professional expertise of rangeland resource professionals is used to evaluate and interpret all of the information collected and available during the Rangeland Health Assessment Evaluation and Determination, information including photo monitoring data, historic knowledge, and practical experience from the permittee/lessee/landowners (hereafter permittees) is also necessary and important information to include in the permit renewal process.

To that end, the Parties agree that permittees or their representatives should be strongly encouraged to conduct photo monitoring in their allotments and actively participate in data collection efforts and rangeland health assessments with federal and State agency personnel during the permit renewal process. Permittees are

encouraged to work with BLM and ISDA in developing a photo monitoring program for their allotment(s). Photo monitoring at selected sites should be completed on an annual basis for the term of the associated grazing permit/lease.

It is the intent of ISDA and BLM that photos and data collected from photo monitoring sites should be provided to the BLM annually, or on another agreed-upon schedule, to be analyzed and incorporated into the Rangeland Health Assessments and during the evaluation/determination portion of the permit renewal process. Where feasible, photo monitoring should be conducted at existing long-term vegetation trend or photo trend monitoring sites. Where sufficient monitoring sites are not already in existence, establishment of photo monitoring sites on the public lands within specific allotment(s) would be in accordance with BLM policies and procedures.

Mutual Benefits and Interests: The Parties agree that:

A. Repeated photographs taken at permanent locations are an effective and efficient method for monitoring. Repeat photographs of landscape locations and/or photo plots can provide basic documentation of range trend. The parties will benefit by realizing an increase in frequency of photo monitoring at established sites, as well as an increase in the number of allotments/acres being monitored with photos.
B. Photo points are especially well adapted for use by permittees who are interested in monitoring their allotments. Photo points require minimal equipment, and are easy to set up and retake.
C. They can encourage participation by external groups or permittees by providing assistance such as formal or informal training, duplication of photographs, or copies of photo cards and other necessary forms.
D. They have a mutual interest in the BLM's photo monitoring process, photo monitoring data collection, and reporting methods for each area encompassed by the Photo Monitoring Program.
E. They have a mutual interest in retaining an economically viable livestock industry by ensuring healthy rangelands through proper grazing management.
F. Natural resources will benefit by management practices implemented as a result of the information obtained through this cooperative effort.
G. The Parties will benefit from having additional knowledge of the condition or status of the:
   (i) Resources,
   (ii) Open space, and
   (iii) Resource uses.

NOW THEREFORE, in consideration of the foregoing and the mutual promises and covenants herein contained, the Parties agree as follows:

1. **Purpose:** The purpose of this MOU is to increase the level of participation, coordination, and cooperation between the Parties and permittees in the collection and review of data used in the rangeland health assessments during the permit renewal process, specifically including the use of rangeland photo monitoring on Idaho rangelands. This MOU is intended to provide a framework for photo point monitoring data to be collected, analyzed, shared with the public, and used by permittees, ISDA and the BLM. It also provides a framework for the use and incorporation of photo monitoring data by BLM in Rangeland Health Assessments; evaluations; determinations; and in making land management decisions on public land allotments permitted for livestock grazing in Idaho.

2. **Mutual Responsibilities of the Parties:** The Parties agree to:

   A. Facilitate the orderly and timely collection of photo monitoring data by permittees.

   B. Publicize and support the goals and objectives of the Photo Monitoring Program among the permittees/lessees/landowners in the State.

   C. Continue to carry out their own separate activities and utilize their own resources in a coordinated and mutually beneficial manner to pursue the goals and objectives of the Photo Monitoring Program.

   D. Identify priority areas (i.e. allotments, watersheds, landscapes) where photo monitoring data is needed or where additional photo monitoring data collected by permittees can supplement ongoing monitoring efforts.

   E. Contact permittees and encourage them to be active partners in photo monitoring of their allotments.

   F. Incorporate the Photo Monitoring Program in additional allotments where photo monitoring does not exist or is limited each year, to the maximum extent reasonable, given the limits of available resources and level of permittee participation.

   G. Meet annually during the fall or winter to review and discuss the Photo Monitoring Program's completed and upcoming activities, and to develop a brief status report.

H. Work cooperatively with each other and the permittees participating in the Photo Monitoring Program to develop more refined monitoring plans.

I. Work cooperatively to improve the consistency of the photo monitoring process, data standards, and data management.

J. All photo monitoring will be in accordance with the protocol outlined in Attachment A of this MOU entitled **Photo Monitoring Methods**.

K. Any data collected in the process identified in this MOU on lands managed by the BLM shall be reviewed and validated by BLM in coordination with ISDA. The review and validation process will ensure that accepted data has been collected in accordance with the applicable protocols, photographs are of acceptable quality, and any supporting information is accurate and legible.

3. Responsibilities of the BLM: BLM agrees to:

A. Provide permittees participating in cooperative monitoring with site locations for all existing monitoring sites on the applicable allotment(s).

B. Provide participating permittees a copy of any existing photo monitoring site data in the permittees' grazing allotment(s). If previous photos of the monitoring site(s) do not exist or do not provide a satisfactory baseline for repeat photography, BLM will take the initial set of photos at existing photo monitoring site(s), in coordination with ISDA and the permittees, and provide the permittees a copy of this data. Other parties to this MOU may also request a copy of the initial year's data and photos.

C. After photos and supporting information collected and provided by the permittee are validated and accepted, the data will be placed in the BLM official record and given the same consideration as any other data of record to be used in the permit renewal process. Photo monitoring data provided by the permittee in accordance with the identified photo monitoring process described in Attachment A of this MOU, will be considered in BLM's Rangeland Health Assessment(s) for the applicable allotment(s) and will be used as one source of monitoring data in BLM's evaluation and determination of the status of applicable Rangeland Health Standards (generally Standards 1, 4, 5, 6 and 8 for uplands, Standards 2, 3 and 8 for riparian areas). This

photo monitoring will contribute to BLM's evaluation process regarding whether rangelands are meeting standards, goals, and objectives for the specific allotment.

D. In coordination with ISDA, identify current long-term monitoring sites and evaluate whether these locations are at appropriate locations that are representative of key areas within the allotment(s). If the parties agree that any existing site(s) is/are not truly representative of a key area within the allotment(s), new site(s) may be selected in accordance with BLM policies, including requirements for public involvement.

E. In the event that a permittee is independently collecting photo monitoring data at other locations on public lands, and wishes have such data incorporated into BLM monitoring records, BLM agrees to review and record the site location(s) and data collection methodologies, and document the areas and/or resources the monitoring sites are representative of. BLM agrees to accept and use such photo monitoring data from these recorded location sites for incorporation into Rangeland Health Assessments, when photo monitoring data is provided to BLM annually and consistent with the photo monitoring processes identified in this MOU.

4. <u>Responsibilities of the ISDA:</u> ISDA agrees to:

A. Administer the Photo Monitoring Program by soliciting and working closely with permittees to conduct photo monitoring on public land allotments.

B. Work closely with the BLM to ensure photo monitoring data is collected accurately, in accordance with appropriate monitoring methods described in this MOU, and that the photo monitoring data is incorporated into the Rangeland Health Assessments, evaluation, and determination process for renewing grazing permits on public lands.

C. Through the Photo Monitoring Program, strive to obtain the cooperation and participation with other state agencies, county governments, federal agencies, the University of Idaho, and private landowners in the assessment/evaluation on the condition or health of Idaho rangelands and resource management objectives.

D. Work closely with the BLM State Rangeland Management Specialist on a regular basis to ensure that photo monitoring is being conducted

appropriately and data are being collected in accordance with processes outlined in this MOU.

E. Work closely with permittees to ensure that permittees (or their representatives) are the responsible parties for taking annual photographs and collection of any other necessary data (field notes) at photo monitoring site(s) with assistance from ISDA if necessary.

F. Upon request, provide assistance to permittees with their photo monitoring program.

5. **Term of MOU:** This MOU shall become effective upon the day and date last signed and executed by the duly authorized representatives of the parties to this MOU and shall remain in full force for ten (10) years from the effective date of this MOU. This MOU may be terminated, without cause, by any party to this MOU upon forty-five (45) days written notice, which notice shall be delivered by hand or by certified mail to the principle contacts listed below.

6. **Payment:** This MOU is neither a fiscal nor a funds obligation document. Any endeavor involving reimbursement, contribution of funds, or transfer of anything of value between parties to this MOU will be handled in accordance with applicable laws, regulations, and procedures including those for government procurement. Such endeavors will be outlined in separate agreements that shall be made in writing by representatives of the parties and shall be independently authorized by appropriate statutory authority.

7. **Special Provisions**

A. Freedom of Information Act [FOIA]. Any information collected and furnished to the BLM under this MOU is subject to the Freedom of Information Act (5 U.S.C. 552).

B. Participation in Similar Activities. The MOU in no way restricts any party from participating in similar activities with other public agencies, organizations and individuals.

C. **Third Party Participation in the Program.** While recognizing that the Parties have a responsibility to coordinate, consult, and communicate with many different entities concerning management of lands administered by the BLM, this MOU only addresses the interaction among ISDA and BLM as it pertains to this Monitoring Program.

D. **Principle Contacts.** The Parties' principal contacts for this MOU are:

(i) **United States Department of the Interior, Bureau of Land Management**

Idaho State Office, BLM
Rangeland Management Specialist – Dominika Lepak
1387 S. Vinnell Way
Boise, Idaho 83709
(208) 373-3810
dlepak@blm.gov

(ii) **Idaho State Department of Agriculture**
Rangeland Program Specialist - John Biar
2270 Old Penitentiary Road
Box 790
Boise, Idaho 83701
(208) 332-8566
john.biar@agri.idaho.gov

8. General Provisions

A. **Amendments.** Any party may request changes in this MOU. Any changes, modifications, revisions, or amendments to this MOU which are mutually agreed upon by the Parties to this MOU shall be incorporated by written instrument, executed and signed by all Parties to this MOU.

B. **No Enlargement of Rights.** This MOU is not intended to, and does not, create any right, benefit or trust obligation, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, instrumentalities, or entities, its officers, employees or agents, or the State of Idaho, its departments, agencies, instrumentalities, or entities, its officers, employees or agents, or any other person.

C. **Entirety of MOU.** This MOU, consisting of 9 pages, represents the entire and integrated agreements between the Parties and supersedes all prior negotiations, representations and agreements, whether written or oral.

D. **Prior Approval.** This MOU shall not be binding upon any parties unless this MOU has been reduced to writing before performance begins as described under the terms of this MOU, and unless this MOU is approved as to form by all Parties.

E. **Severability.** Should any portion of this MOU be judicially determined to be illegal or unenforceable, the remainder of the MOU shall continue in full force and effect, and any of the Parties may renegotiate the terms affected by the severance.

F. **Sovereign Immunity.** The State of Idaho, ISDA, and BLM do not waive their sovereign immunity into this MOU, and each fully retains all immunities and defenses provided by law with respect to any action based on or occurring as a result of this MOU.

G. **Third Party Beneficiary Rights.** The Parties do not intend to create in any other individual or entity the status of third party beneficiary, and this MOU shall not be construed so as to create such status. The rights, duties, and obligations contained in this MOU shall operate only between the Parties to this MOU and shall ensure solely to the benefit of the Parties to this MOU. The provisions of this MOU are intended only to assist the parties in determining and performing their obligations under this MOU.

H. **Indemnification.** Each party to this MOU shall assume the risk of any liability arising from its own conduct. None of the Parties agree to insure, defend, or indemnify any of the other parties.

Signatures The parties to this MOU, through their duly authorized representatives, have executed this MOU on the dates set out below, and certify that they have read, understood, and agreed to the terms and conditions of this MOU as set forth herein.

The effective date of this MOU is the date of the signature last affixed to this page.

IDAHO STATE DEPARTMENT OF AGRICULTURE

Celia Gould

Celia Gould, Director

7/17/14

Date

U.S. DEPARTMENT OF THE INTERIOR, BUREAU OF LAND MANAGEMENT

Timothy M. Murphy

Timothy Murphy, Acting Idaho State Director

06/30/2014

Date

ATTACHMENTS

Attachment A: Photo Monitoring Methods

Attachment B: Study Location and Document Data Form

Attachment C: Study and Photograph Identification

Attachment D: Photo Identification Label

Attachment A: Photo Monitoring Methods:

The following is a brief guide to establishing and monitoring photo monitoring sites, and is not meant to replace approved BLM technical references. For additional guidance, refer to Interagency Technical Reference 1734-4, Sampling Vegetation Attributes [(1996) TR 1734-4].

General Description: Photographs can be valuable sources of information in portraying resource values and conditions. Comparing repeat photography of the same site taken over a period of years furnishes visual evidence of vegetation and soil changes. General landscape photographs can be taken at photo plots or photo points. Photo plots include a permanently marked plot on the ground that is photographed from a close distance, in addition to the landscape photograph(s).

In some situations, photo points or plots may be the primary vegetation monitoring tool, while in other situations they are used in conjunction with other qualitative and quantitative monitoring methods.

When using repeat photography for monitoring, it is vital to

1. Use consistent techniques;
2. Identify the date and location with the picture;
3. Take the picture at the same stage of plant growth each consecutive year; and
4. Include the same skyline in the landscape picture with the previous photo taken.

Equipment:

The following equipment is required for collecting repeat photography at established photo monitoring sites.

- Photo Identification Label (See Attachment D)
- Frame to delineate the 3x 3-foot, 5- x 5-foot, or 1- x 1- meter photo plots. Frames can be made of PVC pipe, steel rods, or any similar material (see TR 1734-4, Illustrations 1 and 2, pages 34 – 35).
- Four rods to divide the 3- x 3-foot and 1- x 1- meter photo plot into nine square segments
- Digital camera with removable SD memory card, or 35-mm camera with a 28-mm wide-angle lens and film
- Small step ladder (for 5- x 5-foot photo plots)
- Felt tip pen with waterproof ink

- Geographic positioning system (GPS) unit (optional)
- For established, sites, site location information, including photographs taken in previous years
- Yellow or orange spray paint (optional, to remark plot markers)

In addition to the equipment required for collecting repeat photography at established photo monitoring sites, the following equipment is needed for the establishment of new permanent photo plots:

- Stakes of ¾ - or 1-inch angle iron not less than 16 inches long
- Hammer
- Tape measure
- Compass
- Study Location and Documentation Data Form (See Attachment B)
- A 6' steel T-post and post driver
- A GPS unit is highly recommended when setting up a new site

Establishing a Site: New sites for cooperative monitoring may be established in coordination with permittees, BLM, ISDA and any other interested parties. The site selection process is outlined in TR 1734-4 (pages 3-4).

Once a site has been identified, document its location so that it can be relocated in future years. If possible, determine the site coordinates using a GPS unit, and record the coordinates on the Study Location form. If GPS data is not available, a map, legal description and detailed written directions should be created and filed with the photos Study Location form to assist with site relocation.

Use a T-post approximately 50 feet away from the photo point as a marker to assist in relocating the site. Record the distance and compass bearing from the T-post to the photo point, and any other instructions that will assist others in finding the site in subsequent years.

Generally a 3 X 3-foot square frame is used for photo plots; however, a different size and shape frame may be used. Where new studies are being established, a 1-meter x 1-meter photo plot is recommended. Angle iron stakes (or digger bars) are driven into the ground at two diagonal corners of the frame to permanently mark a photo plot (see illustration 2, Sampling Vegetation Attributes, Interagency Technical Reference 1996). Paint the stakes with bright-colored permanent spray paint (yellow or orange) to aid in relocation. Repaint these stakes if needed when subsequent pictures are taken.

If a linear design is used, general view pictures may be taken from either/or both ends of the transect. The points from which these pictures are taken are determined at the

time the studies are established. Document the location of these points on the Study Location and Documentation Data Form to expedite relocation (see Attachment B).

Proceed with taking the necessary photos and collecting any supporting notes or data, as described below.

General View Photos: General view photographs are taken from a permanent reference point and visually portray dominant landscape vegetation. Photographs that include a distinctive and permanent landmark in the background or horizon are easier to relocate and accurately replicate. The photograph must include a legible photo card identifying the site location and photo date, a reference point in the foreground (fencepost, boulder, etc.) and a distant landmark on the skyline.

1. The Photo Identification Label is placed in an upright position so that it will appear in the foreground of the photograph (see attachment D).
2. To take general view pictures, stand at the selected points and include the photo label, a general view of the site, and some sky in the pictures.
3. Take a picture of a study site from the nearest road at the time of establishment of the study to facilitate relocation.

Plot Photos: Close-up plot photos show the soil surface characteristics and the amount of ground surface covered by vegetation and litter. Close-up photographs are usually taken of permanently located photo plots. Copies of previous photographs taken from photo points should be brought to the field to assist in finding the photo point and to ensure that the same photograph is retaken. Photographs should be taken at approximately the same time each year to assist in interpreting changes in vegetation.

1. The Photo Identification Label is placed flat on the ground immediately adjacent to the photo plot frame (see attachment D.)
2. The camera point or the location from which the close-up picture is taken, should be on the north side of the photo plot so that repeat pictures can be taken at any time during the day without casting a shadow across the plot (Illustration 3, page 36, Sampling Vegetation Attributes, Interagency Technical Reference 1996).
3. To take the close-up pictures, stand over the photo plot with toes touching the edge of the frame. Include the photo label in the photograph.

Repeat Photography: When repeat pictures are taken in following years, follow the same process used in taking the initial pictures. Previous photos should be brought to the field to assist in relocating the site, and replicating the view shown in the photograph as closely as possible. Include the same area and landmarks in the repeat general view pictures that were included in the initial pictures.

Field Notes: Recorded field notes to supplement photographs are also helpful. General observations concerning the sites on which photos are taken can be important in interpreting the photos. Factors such as rodent use, insect infestation, animal concentration, fire, vandalism, or other site uses can have considerable impact on the vegetation and soil resources. This information should be recorded and documented while taking the photograph for the specific year.

Timing: Monitoring photos should be taken from the same designated point at approximately the same time each year (during the same stage of plant growth each year). Photo monitoring may also be conducted at specifically agreed-upon times during the year, such as when livestock are removed from a pasture, to meet specific monitoring objectives.

ATTACHMENT B: Study Location and Document Data Form

Page ____ of ____

Study Location and Documentation Data

Study Method			Study Number
Allotment Name & Number Pasture			Pasture
District			Field Office
Ecological Site			Plant Community
Date Established	Established by (Name)	Map Reference – GPS Coordinates	
Elevation	Slope	Exposure	Aerial Photo Reference
Township Range Section ¼ ¼ ¼			scale: ___ inches Equals one mile
Key Species 1 2 3			
Distance and bearing between reference post or reference point and the transect location stake, beginning of transect, or plot			
Distance and bearing between location stake and bearing stake			
Transect Bearing			Vertical Distance Between Ground & Aligned Tape
Length of Transect			Plot/Frame Size
Sampling Interval			Total Number of Samples
Notes (Description of study location, diagram of transect/plot layout, description of photo points, etc. If more space is needed, use reverse side or another page.)			

Note: Depending on the study method, fill in the blocks that apply when a study is established. This documentation enables the examiners to conduct follow-up studies in a consistent manner to provide comparable data for analysis, interpretation, and evaluation.

ATTACHMENT C: Study and Photograph Identification

The following guidance is provided for reference only, and does not supersede local study and photograph identification systems already in use at Idaho BLM field offices.

A. Numbering Studies. Studies should be numbered to assure positive identification. These numbers can also be used to identify photographs. Following are three alternative schemes for numbering studies:

Numbering Scheme 1. Consecutive numbers may be assigned to studies within an allotment. For example, Mooncreek #1 and Moon Creek # 2 would be studies Number 1 and 2 within the Mooncreek Allotment. A disadvantage to using the names of allotments in a numbering scheme is that these names can, an often do, change.

1. Numbering Scheme 2. Studies may be numbered based on their location within a township, range, and section. A 10-character number can be assigned in the following manner:

   a. The first three characters are the township (03S), the second three are the range (27W), and the next two are the section (08), and the last two are simply a series number (01) assigned to a study based on the number of studies located within a section.

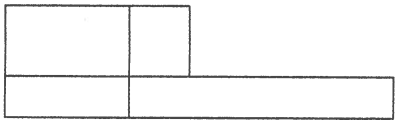
   b. The numbers for studies located in Section 8 would be 03S-27W-08-01, 03S-27W-08-02, and so forth.

   c. Depending on the local situation, this scheme can be modified by adding characters to the code where there are fractional townships or ranges, where there are more than 99 sections/tracts within a township, and/or where there is more than one public land survey principal meridian and baseline within the area of jurisdiction.

2. Numbering Scheme 3. Studies may be numbered based on their location relative to the initial point of survey (principal meridian and baseline governing public land survey).

   (a) Under this scheme, the first character is a letter assigned to a principal meridian and baseline quadrant. Using the initial point of the survey as the center point, the northeast quadrant (townships located to the north and east of the initial point) is coded "A". The northwest, southwest, and

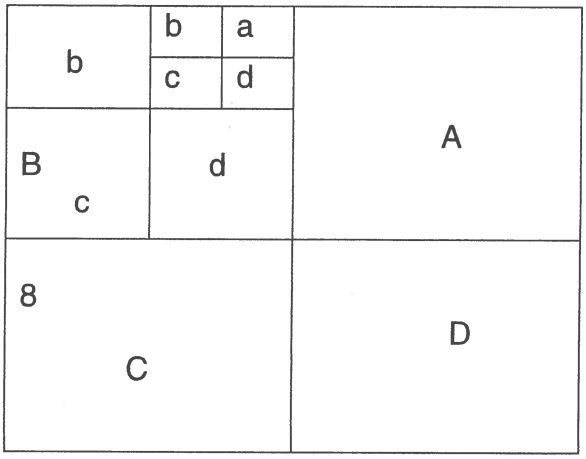
southeast quadrants are coded "B", "C", and "D", respectively. For example:



Salt Lake Meridian
(initial point)

(b) The next characters are the townships numbers (3, 16, etc.) followed by the range number (7, 32, etc.) and the section number (8, 21, etc.).

(c) The next three characters are used to identify the subdivisions within a section (down to 10 acres) in which a study is located. These subdivisions have letter designations as follows:



(d) The last character(s) is (are) simply a series numbers (1, 2, 3 . . . 10, 11, etc.) assigned to a study based on the number of studies located within the smallest subdivision.

(e) For example, Studies 1 and 2 located in the SE1/4NE1/4NW1/4 of Section 8, Township 3S, R12E would be numbered (D-3-21)8Bad-1 and (D-3-21)8Bad-2.

(f) Depending on the local situation, this scheme can be modified by adding characters to the code where there are fractional townships or ranges, where there are more than 99 sections/tracts within a township, and where there is more than one public land survey principal meridian and baseline within the area of jurisdiction.

B. Identifying Photographs. In most cases, the number that has been assigned to a study is the number used to identify the photographs associated with that study. Following is a description of three labels that can be used to include the study number in the photographs:

1. Label 1. The Photo Identification Label included as Appendix C can be copied and used to identify photographs. This label provides space for documenting the date, number, and location (Field Office, Allotment, and pasture) of a study. A large black felt-tip pen should be used to print the information on the label.
2. Label 2. A slotted sign board with a black felt background and movable white plastic letters can be used as a photo identification label. Room permitting, the user may include any information desired on such a label. A 9- x 12-inch board with slots running lengthwise at a spacing of ¼ -inch and 1-1/2-inch white letters makes a highly visible label for most photographs.

3. Label 3. A placard on which identifying characteristics can be entered can be developed to meet local field needs. The placard can be constructed of heavy white cardboard on which such things as Date, "T" (township), "R" (range), Section Number, etc. are preprinted. The specific identifying information can be hand printed on the mylar with a heavy grease pencil or other readily removable, highly visible, marking material. After taking the desired photographs, the mylar can be wiped clean and the placard reused for the for other photographs. A more permanent placard can be constructed of plywood and painted enamel white (or light blue to prevent glare). The grease pencil markings can be wiped from the enamel surface and the placard reused for other photographs. Caution must be exercised in the placement of the placard to prevent glare from the mylar or enameled surface.

   NOTE – Labels can be placed flat on the ground immediately adjacent to photo plots for close-up photographs.
   - Labels can be placed in an upright position in the foreground of general view photographs.

Attachment D: Photo Identification Label (Photo Card)

DATE_____

NO._____

FO._____

ALLOT._____

PAST._____