

ATTACHMENT 1—PIBO Implementation Monitoring (IM) Protocol for Establishing Designated Monitoring Areas (DMAs)

I. Selecting the DMA site

For the PACFISH and INFISH Monitoring Program, DMAs should meet the following criteria:

- **The site should represent typical livestock use**
 - Select a length of stream within the pasture that is representative of use, not an ‘average’ for the whole stream. For example, if one-fourth of the stream is expected to be grazed and three-fourths not to be used, select a DMA to represent the livestock use in the one-fourth of the stream rather than a site representing an average level of use across the whole stream.
 - Select the DMA assuming that if proper management occurs at the site, the remainder of the pasture or use area will also be managed within requirements. Thus, livestock management that meets endpoint indicator standards at the DMA would result in meeting standards in the remainder of the pasture.
- **Once an area is selected that is representative of livestock use along the stream, use the following guidelines to pinpoint the monitoring location:**
 - Select a monitoring site that is most critical in influencing listed fish species, (e.g., within spawning habitat, juvenile rearing habitat).
 - The site should be influenced principally by livestock grazing. Avoid areas where impacts to listed fish species are compounded by other activity types (e.g., recreation) or by non-USFS or BLM livestock grazing activities.
 - Select sites where channel conditions have the potential to respond quickly to changes in management. These changes should be measureable. Generally avoid sites that are impervious to disturbance (e.g. rock-armored channels) or those intentionally established for concentrated use (e.g. water gaps). Neither would show quick enough change in response to changes in pasture use and, therefore, would not be useful for adaptive management or Effectiveness Monitoring.

Other Considerations:

No livestock access or use: DMAs must be established in grazed pastures, regardless of amount of livestock use, unless that pasture has been formally removed or unallocated from grazing. Little or no livestock use in stream/riparian areas, whether due to use by sheep, temporary non-use, rest, or physical barriers such as exclosures or canyon rims, is still considered a management strategy, and consequently should be documented through IM. The

effects of rest from grazing need to be analyzed **along with** effects of higher grazing intensities to obtain the complete picture of grazing impacts on PACFISH/INFISH watersheds.

Use an ID Team: DMAs, as well as their associated endpoint indicators, are best identified by an interdisciplinary team, including specialists knowledgeable in fish habitat requirements, channel processes, riparian vegetation, and livestock grazing management.

II. Mapping the DMA

- Step 1. Record the UTM coordinates at the downstream end of the reach using GPS. Also record the projection (e.g., NAD27).
- Step 2. Permanently monument the downstream end of the DMA reach using post, marker, rebar, etc.
- Step 3. Take photos looking upstream and downstream at the downstream end of the reach.
- Step 4. Prepare a site map or sketch with distinctive features of the site, or delineate the reach on a high-resolution aerial photograph (e.g., National Agricultural Image Project – NAIP). Write out directions so future workers can find the site.
- Step 5. Using GPS, measure the upstream UTM coordinate on-site (optional, but useful), or record the thalweg distance from the downstream monument to the upstream end.

III. Measuring DMA Indicators

- Step 1. Measure the reach using the same distance used by the PIBO EM Project: 120 meters thalweg length.
- Step 2. Measure IM indicators (e.g., stubble height, bank alteration, woody browse) on both sides of the stream reach.
 - Use an established protocol (e.g., MIM, Interagency Tech Reference, R1 Protocol).

IV. Questions & Answers

- **What if I want to move a DMA site where EM is located due to construction of beaver dams, channel alteration by floods, or because the site is no longer representative of grazing?** If a new DMA location is being considered, consult the PIBO EM coordinator (Eric Archer) or your IM Core Team member before proceeding.
- **What if the reaches which are representative of livestock use do not coincide with any reach that is sensitive with respect to listed fish habitat?** Select the reach that is representative of livestock use.

- **If the watershed does not contain ESA-listed fish, do I still need a DMA?**
Implementation monitoring is required in those Category II pasture use areas being monitored by the PIBO EM Project.

- **When do I have to use the IM Database?** All IM data collected at EM Project DMAs must be entered into the IM Database. Data such as PACFISH/INFISH standards and guides compliance, use supervision, spot checks, DMA monitoring results, fence integrity, livestock access evaluations, unauthorized use, and any other kind of implementation monitoring relevant to livestock management of the pasture can be entered into the IM database.