



United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Wyoming State Office
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In Reply Refer To:
9210 (931) P

June 19, 2007

Information Bulletin No. WY-2007-020

To: Field Managers
From: State Director
Subject: Technical Fire Mapping Specifications

Please find the field reviewed final Wyoming Technical Fire Mapping Specifications attached.

For technical information please contact Esther Trevino-Neasloney at 307.775.6239.

/s/Mary Trautner
Acting

1 Attachment:
1 - Technical Fire Mapping Specifications (4 pp.)

May 2, 2007

Subject: Technical Specifications for Mapping Fire Perimeters, Treatment Areas,
and Fuels Projects using GPS

Prepared by: Mike Londe

General specifications:

1. Activities related to fire and treatment activities have a large impact on other resource management needs. Every effort needs to be made to map or locate these activities and submit them for inclusion in the Wyoming GIS database where this information is then available for specialist to reference.
2. Bureau policy is that fire or other activities smaller than 10 acres can be mapped as point features. Areas larger than 10 acres should be mapped as polygons. This mapping can be most efficiently done by GPS methods though other methods are allowable.
3. The State Office or each of the Field Office have a minimum of 4 resource grade Trimble GPS receivers available for use. These can be used for either point location or polygon mapping. These can be used to map polygons as small as 0.5 acres. Point locations for small fires should be taken near the center of the feature and can be determined with either Trimble receivers or Garmin type recreational GPS receivers.
4. Points or Polygons mapped with Trimble GPS systems should use the attached data dictionary. This data dictionary is based on the National Wildfire Coordinating Group **GIS Data layer Standard**. Copies of this data dictionary are available from Mike Londe or Esther Trevino-Neasloney. This data should also be submitted to the GIS specialist if a Garmin type receiver is used to determine the position for a small fire.
5. It will be up to each zone FMO to determine how this mapping will be accomplished. Technical assistance is available through the Wyoming State office if workload or other needs prevent timely collection of this data or its submission. Mike Londe should be contacted for questions on GPS or other mapping or for field assistance. Esther Trevino-Neasloney should be contacted for GIS assistance or questions.

Technical Specifications:

1. The Trimble receivers should be configured with the following settings. This will ensure that the receiver will operate successfully on either the ground or in the air. These settings can be entered directly on the receiver or uploaded through a special configuration file.

- PDOP = 12
 - SNR = 4 or 35 depending on the version of Terrasync used
 - Elevation Mask = 12 degrees
 - Logging rate for point or areas = 1 second
2. Files should be post processed, if possible, before exporting to the GIS. Copies of the raw (.ssf) GPS file should be retained.
 3. Point positions collected with Garmin type receivers should be averaged, if possible, to reduce the positional error.
 4. Tracklogs of Garmin receivers used to collect points or polygons should be saved before and after collection. The time and date of collection needs to be noted. DNRGarmin can be used to download waypoints and tracklogs and convert them to shapefiles.
 5. Real time correctors such as WAAS or the Coast Guard DGPS corrector should be enabled if the receiver supports it.
 6. Data should be exported as ArcInfo Shapefile (.shp) or as an ArcInfo coverage in the following setup:
 - UTM coordinates in meters
 - Zone 12 if west of 108° west longitude, Zone 13 if east of 108° west longitude.
 - NAD 1983 / CORS96 datum
 - All attributes.
 - Additional attributes that should be generated and exported if using the Trimble Pathfinder office software are area and 2D perimeter for polygons. Correction status and date should be exported for both point and area features.
 7. Submit the raw GPS file to Mike Londe or Esther Trevino-Neasloney if an export file can not be generated.
 8. GIS export files should be sent to Esther Trevino-Neasloney in the State Office.

Data Dictionary:

This data dictionary file is set up for feature collection using Trimble GPS receivers. Data collected by conventional mapping, plotting on topographic maps or air photos, or derived from satellite or IR data will require different attribute values for the method and the attribute table will need to be created in the GIS.

```
"BLM_WY_Fire", Dictionary
"Fire Point Location", point, "events less than 10 acres", 1, seconds,
30, Code
  "UNIT_ID", menu, normal, "admin unit at fire point of origin",
normal, Label2
    "BLM-BFD"
    "BLM-CAD"
    "BLM-COD"
    "BLM-KRD"
    "BLM-LND"
    "BLM-NCD"
    "BLM-PDD"
    "BLM-RAD"
    "BLM-RSD"
    "BLM-WOD"
  "FIRE_NUM", text, 8, normal, "Number assigned to fire by field
area", normal, Label1
  "FIRE_NAME", text, 50, normal, "Name of fire assigned by agency",
normal
  "CAUSE", text, 55, normal, "Cause of fire", normal
  "Comments", text, 50, normal, "Fire related comments", normal
  "DATE", date, auto, ymd, manual, normal, "Collection date of
location", normal
  "TIME", time, auto, 24, manual, normal, "collection time in 24 hour
clock", normal
  "POC_Name", text, 50, normal, "point of contact name", normal
  "POC_email", text, 50, normal, "email address of collector", normal
  "POC_OPHONE", text, 10, normal, "office phone number of collector",
normal
  "POC_CPHONE", text, 10, normal, "cell phone of collector", normal
  "Area", numeric, 2, 0.00, 1000000.00, 1.00, normal, "Area in acres",
normal
  "EVENT_TYPE", menu, normal, "event type", normal
    "Wildland fire"
    "Area command"
    "WF resource benefit"
    "prescribed fire"
    "Mech Fuels Treatment"
    "Chem Fuels treatment"
    "Biologic Fuels benef"
    "other"
  "EVENT_TYPE_COMMENT", text, 50, normal, "used if event type is
"other"", normal
  "C_method", menu, normal, normal
    "GPS-air"
    "GPS-vehicle"
    "GPS-atv"
    "GPS-walked"
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        "GPS-combo"
        "other"
    "C_method_comment", text, 50, normal, "used if Collection method is
other", normal

"Fire Perimeter", line, "events larger than 10 acres", 1, seconds, 1,
Code
    "UNIT_ID", menu, normal, "admin unit at fire point of origin",
normal
        "BLM-BFD"
        "BLM-CAD"
        "BLM-COD"
        "BLM-KRD"
        "BLM-LND"
        "BLM-NCD"
        "BLM-PDD"
        "BLM-RAD"
        "BLM-RSD"
        "BLM-WOD"
    "FIRE_NUM", text, 8, normal, "Number assigned to fire by field
area", normal
    "FIRE_NAME", text, 50, normal, "Name of fire assigned by agency",
normal
    "CAUSE", text, 55, normal, "Cause of fire", normal
    "Comments", text, 50, normal, "Fire related comments", normal
    "DATE", date, auto, ymd, manual, normal, "Collection date of
location", normal
    "TIME", time, auto, 24, manual, normal, "collection time in 24 hour
clock", normal
    "POC_Name", text, 50, normal, "point of contact name", normal
    "POC_email", text, 50, normal, "email address of collector", normal
    "POC_CPHONE", text, 10, normal, "cell phone of collector", normal
    "Area", numeric, 2, 0.00, 1000000.00, 1.00, normal, "Area in acres",
normal
    "EVENT_TYPE", menu, normal, "event type", normal, Label1
        "Wildland fire"
        "Area command"
        "WF resource benefit"
        "prescribed fire"
        "Mech Fuels Treatment"
        "Chem Fuels treatment"
        "Biologic Fuels benef"
        "other"
    "EVENT_TYPE_COMMENT", text, 50, normal, "used if event type is
"other", normal
    "C_method", menu, normal, normal, Label2
        "GPS-air"
        "GPS-vehicle"
        "GPS-atv"
        "GPS-walked"
        "GPS-combo"
        "other"
    "C_method_comment", text, 50, normal, "used if Collection method is
other", normal

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