

## **APPENDIX R**

### **GEOGRAPHIC AND SPATIAL DATA REQUIREMENTS**

To ensure that GIS layers developed from surveys and contracts in support of Camp Pendleton natural resource management activities are compatible with baseline data and existing data, the AC/S Environmental Security (ES), Information Systems (IS) Branch has established the following guidelines. These guidelines should be included in all applicable scopes of work.

#### **R.1 GEOGRAPHIC DATA DELIVERY FORMAT**

Geographic information prepared for Camp Pendleton for inclusion in the Base's Arc/Info-based (v.7.1.1) Geographic Information System (GIS) shall be delivered in one of the following formats:

- Arc/Info Export, double precision (preferred) (Arc/Info is produced by Environmental Systems Research Institute (ESRI), Redlands, Calif.)
- Federal Geographic Data Committee "Spatial Data Transfer Standard" (FGDC SDTS)

Alternative delivery formats may be approved if it is determined that the format will not compromise the spatial accuracy or structure of the delivered data and the proposed format changes are agreed to in advance.

All geographic data shall be stored in State Plane coordinates, North American Datum of 1983 (NAD 83). All vertical measurements shall be based on the National Geodetic Vertical Datum of 1988 (NGVD88). Map features shall be stored in U.S. survey foot measure. Each 'Map Layer' or 'Coverage' shall have a projection file.

Attribute data stored in external databases, those separate from the internal Arc/Info attribute tables, shall be recorded in a Microsoft Access or dBase-compatible format (DBF).

#### **R.2 GEOGRAPHIC DATA STRUCTURE**

All geographic or spatial information shall be developed in a structure consistent with the latest release (currently v1.8) of the Tri-Services Spatial Data Standards (TSSDS). Modifications or additions to the TSSDS are to be made only after consultation with the IS Branch. Modifications to the Standard may be approved if it is determined that TSSDS do not adequately address subject datasets. Copies of the TSSDS may be obtained either through the Internet or on CD-ROM by contacting:

Director, U.S. Army Engineer Waterways Experiment Station  
CADD/GIS Technology Center

3909 Halls Ferry Road  
Vicksburg, MS 39180-6199  
(800) 522-6937  
<http://tsc.wes.army.mil>

### **R.3 GEOGRAPHIC DATA DOCUMENTATION**

All geographic or spatial information shall be documented in a manner consistent with those standards published by the FGDC in "Contents Standards for Digital Geospatial Metadata, June 1994." Copies of the Standard may be obtained by contacting:

FGDC Secretariat  
c/o U.S. Geological Survey  
590 National Center  
Reston, Virginia 22092  
(703) 648-5514  
<http://fgdc.er.usgs.gov>

### **R.4 GEOGRAPHIC OR SPATIAL DATA DELIVERY**

Small datasets (<1.44 megabytes, UNIX-compressed) shall be delivered on a High Density, Double-sided 3.5 inch diskette. The diskette shall include an ASCII text file labeled README.TXT. The README file is to describe the contents of the diskette (e.g., file names, data dictionary, file contents, etc.) and any other pertinent information that may be required by the project proponent.

Large geographic datasets (>1.44 megabytes, UNIX-compressed) shall be delivered on helical-scan 8mm data cartridge or CD-ROM (in accordance with current ISO Standards). The contractor shall include information and the means required (if necessary) for the retrieval of the archived data from the tape.

### **R.5 GEOGRAPHIC OR SPATIAL DATA COLLECTION METHODOLOGY**

Unless otherwise addressed, the contractor developing data shall consult with the government (appropriate AC/S Environmental Security, Camp Pendleton staff) concerning specific protocols and collection methods prior to commencement of field investigations.

### **R.6 MISCELLANEOUS**

Digital geographic maps, related data, and text documents shall be included for review in the draft and final contract submittals. These reviews shall include a visual demonstration of the data on one of the computer systems located at the AC/S ES IS Branch. Actual loading of data shall be conducted by AC/S ES IS Branch staff.

Data shall be analyzed for subject content and system compatibility. Review comments to data and text shall be incorporated by the contractor prior to approval of the final submittal.

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