

September 30, 1998

SUBJECT: Preparation of Wetland Delineation Surveys Using  
Global Positioning System (GPS) Equipment

TO WHOM IT MAY CONCERN:

This policy statement addresses the use of GPS equipment for surveying Section 404 of the Clean Water Act wetland delineations for the Norfolk District Corps of Engineers within the Commonwealth of Virginia. Identification and delineation of wetlands must follow the criteria described in the "1987 Corps of Engineers Wetland Delineation Manual" and all subsequent guidance. It is highly recommended that all wetland delineations performed in the field be reviewed and confirmed in writing by the Norfolk District Corps of Engineers Regulatory Branch prior to survey. This policy statement is applicable only in the development of those certifiable wetland boundary surveys which utilize GPS equipment.

Following are suggested procedures for preparing GPS surveys for verification and certification by a representative of the Norfolk District Regulatory Branch, including all Field Offices:

- a. GPS surveying is most useful for extensive wetland delineations on large tracts of land.
- b. The GPS unit must produce a 2D RMS sub-meter accuracy at each survey point. This accuracy will only be achievable by utilization of differential GPS techniques (either real-time or post-processed).
- c. In the event vegetation prevents the effective use of GPS methods for any particular wetland delineation, establishment of a separate baseline will be required. This baseline will be tied to the Virginia Coordinate System of 1983, North or South Zone (1994 Adjustment) and each point of intersection (PI) will be clearly marked on the ground. The wetland line will be referenced to this baseline by station and perpendicular offset measured to the nearest 0.1 ft. When this occurs, the plat should indicate locations that have been surveyed in this

manner. The following survey certification statement should be placed on the GPS survey plats:

"This certifies that this copy of this plat identifies as wetlands and waters all waters and wetlands regulated pursuant to Section 404 of the Clean Water Act as determined by the undersigned on this date. Unless there is a change in the law, or our published regulations, this determination may be relied on for a period not to exceed five years from this date. The determination was made utilizing the 1987 Corps of Engineers Wetland Delineation Manual."

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U.S. Army Corps of Engineers

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Title

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Date

- d. The wetland survey plat must be submitted for certification on legal size or smaller paper, or on a CD-ROM disc. It is recommended that a large scale, blue line copy of the survey be presented to the Corps for verification purposes. The plat must contain the following information:
1. An identification of the location and extent of wetland limits within the property boundaries. Acreage not examined for wetlands should be clearly indicated. Coordinates cited should be Virginia Coordinate System of 1983, North or South Zone (1994 Adjustment) and should identify the survey unit measurement employed (i.e. U.S. survey feet; International survey feet).
  2. An identification of "404 waters and/or wetlands" by using text, symbols, or shading.
  3. Consecutively numbered wetland points or line segments.

4. An identification of the GPS reference point (a fixed point at a known location) used in the DGPS real-time or post processed survey to which the survey is tied, also in Virginia Coordinate System of 1983, North or South Zone (1994 Adjustment).
  5. A table listing VA grid coordinates. List the distances between consecutively numbered surveyed wetland points or the linear distances of the line segments.
  6. As a measure of accuracy, one or more property corners and/or monuments may be located by the GPS survey and compared to the existing metes and bounds property survey.
  7. The seal and signature of a Licensed Land Surveyor.
  8. A brief description of the GPS equipment used to certify the survey's level of accuracy.
  9. A north arrow.
  10. A vicinity map.
  11. A correctly worded certification statement.
- e. The surveyed wetland-upland line will be field verified by a representative of the Corps accompanied by the surveyor who prepared the information. When feasible, distances between selected GPS survey points will be measured for accuracy. All errors must be corrected before the plat certification will be signed.

If you have any questions please call the Corps District Office or the field office servicing your geographic area.

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