

VIRGINIA COOPERATIVE EXTENSION The Extension Agent GPS Program

Virginia Cooperative Extension (VCE), in partnership with the Virginia Geospatial Extension Program, the Virginia Tech Department of Forestry, and the Virginia Tech College of Natural Resources, has announced a program to provide GPS receivers and GPS supporting software to the 107 local extension offices and the Agriculture Research and Extension Centers in the Commonwealth of Virginia through the *Extension Agent GPS Program*. The *Extension Agent GPS Program* will provide valuable tools and training to enhance the capabilities of Virginia's extension agents and specialists. GPS receivers will provide both direct and indirect benefits to Virginia's citizens through VCE. The *Extension Agent GPS Program* will enable extension agents to obtain more accurate information to support the needs of their local constituents. Potential applications to be supported by the *Extension Agent GPS Program* include:

- Crop insurance declarations
- Measuring lots for Animal I.D. Program
- Estimating pesticide/fungicide program application needs
- Estimating fertilizer application needs
- Rotational grazing plans
- Estimating lengths of fence lines
- Evaluating soil compaction issues over time
- Estimating production yields
- Supporting urban tree inventories
- Identifying drainage issues in fields
- Estimating areas of proposed riparian zones
- Identifying point and non-point pollution sources
- Estimating area (acreage) for timber harvests
- Establishing and locating silviculture research plots
- Livestock tracking
- Tracking the potential diffusion of other animal diseases, including avian influenza



In addition, it is anticipated that the Extension Agent GPS Program will generate indirect benefits throughout Virginia. By providing more accurate area measurements of agricultural fields, for example, farmers will be able to more accurately estimate fertilizer or herbicide application rates, or to more accurately support the delineation of riparian buffer zones as well as support other best management practices. These measures can potentially result in reduced agricultural runoff, and improvements in water quality.

The *Extension Agent GPS Program* is not only intended to support the day-to-day application demands of the agriculture and natural resource (ANR) extension agents. Family and community sciences, food, nutrition and health, and 4-H program areas will also have direct access to the *Extension Agent GPS Program*.

It is anticipated that the program will also serve to encourage the adoption and application of additional geospatial tools (i.e. geographic information systems [GIS] remote sensing imagery) by the extension community and their constituents. In addition, the Program can facilitate the vertical integration of the extension agent's day-to-day activities with partnering state agencies and federal programs (e.g., NRCS, Homeland Security).

In addition to providing a GPS receiver in every county extension office, the *Extension Agent GPS Program* also provides funding for a GPS Lab Kit. The GPS Lab Kit contains 11 GPS receivers and training material to support public educational needs of Virginians. The GPS Lab Kit will be available on a check-out basis to extension agents, extension specialists, or university faculty and staff for the purposes of providing workshops and training.

Several criteria were taken into account to identify an appropriate GPS receiver to support the *Extension Agent GPS Program*. Extension agents, for example, require a GPS receiver that calculates area measurements "on the fly" to support their application needs. Other evaluation criteria were assessed as well. In summary, an appropriate GPS receiver to support this program must:

- be user-friendly
- be relatively inexpensive
- be durable and waterproof
- be able to collect and store multiple waypoints and tracks
- support the calculation of perimeter measurements
- support application scalability (integrating GPS data with desktop GIS software, ArcIMS application(s), or connecting the unit to a handheld GIS [iPAQ] platform)

The Garmin Etrex Legend GPS receiver was identified as an appropriate GPS receiver to support the *Extension Agent GPS Program*. This GPS receiver calculates area measurements "on the fly", is user-friendly, durable, and relatively inexpensive. In addition, the unit supports application scalability, which will support the future needs of Virginia's extension community. This GPS receiver, for example, can be fully integrated with desktop GIS software, web-mapping GIS applications, as well as handheld devices (i.e. iPAQ's).

The GPS receivers will be distributed to extension agents through a circuit of regional GPS workshops in Spring, 2004. Through the "train the trainer" model, trained extension agents will provide training to their fellow extension agents at their local offices, as it is anticipated that there are additional application demands associated with local offices. In addition, other local extension personnel will be provided with follow-up training opportunities through the Geospatial Extension Program. Additional information about the Extension Agent GPS Program is available online:

http://www.cnr.vt.edu/gep/GPS_Workshops

Workshops to support the Extension Agent GPS program will be held at the following locations from 10:00 am – ~2:30 pm:

- **May 6 - Rappahannock CC**, (Glenns Campus) Room #131
- **May 25 - Central VA CC**, (Lynchburg) Merritt Hall, Room #5137
- **May 27 - UVA-Wise (Wise)** Darden Hall, Room #B010
- **June 3 - Tidewater CC** (Virginia Beach) Advanced Technology Center: Room #H-179
- **June 8 - Danville Regional Center for Applied Technology and Training** (Old Sears Building/Galileo Magnet School)
- **June 10 - Virginia Tech** (Blacksburg) CEARS Lab, Cheatham Hall, Room #217A
- **June 11 - Piedmont CC** (Charlottesville) Main Building, Room #823

Extension agents should preregister for a workshop at least two weeks prior to the workshop. Online registration and additional information is available through: http://www.cnr.vt.edu/gep/GPS_Workshops

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