



## Hardware Guidance for Wilderness Mobile



Wilderness Mobile, an application developed by I-Web to digitally capture wilderness campsite monitoring data in the field, is scheduled for release in early summer 2010. Those interested in using this application must either acquire the needed technology or use hardware currently available to them. This paper is intended to walk prospective users of Wilderness Mobile through your potential hardware options.

	<b>OPTIMAL</b>	<b>MINIMUM</b>
<b>OPERATING SYSTEM</b>	Windows Mobile 6	Windows Mobile 5
<b>PROCESSOR</b>	"ARM" architecture. Typically used in chips manufactured by Intel, Marvell and Samsung (it is estimated that ARM processors occupy about 90% of the current market share). Processors using the ARM architecture typically have an "X" in the processor model number, such as "Marvell PXA310."	
<b>RAM</b>	Greater than 64 MB	32 MB (No GPS capability)
<b>SOFTWARE</b>	Microsoft ActiveSync 4.5 (download from <a href="http://www.microsoft.com/downloads/en/default.aspx">http://www.microsoft.com/downloads/en/default.aspx</a> )	

### On-hand Devices

If you are planning to run Wilderness Mobile on a device you already own, be sure to check out the device specifications. For devices running Windows Mobile 5, you can view the processor manufacturer, model number and amount of RAM by clicking on "System Information" under "Settings/System." You can verify the operating system version by clicking on "Settings/System" and then "About." For devices running Windows Mobile 6, the information can be found by clicking on "Settings/System" and then "About."

### New Device Purchase

If purchasing a new unit, consider targeting devices with the highest processor speed and amount of RAM you can afford. Extra RAM or a faster processor can often be purchased for only a slightly increased investment. Determining whether a device meets the minimum requirements can typically be confirmed by reviewing the technical specifications sheet that is provided on the manufacturer's web site.

### Integrated GPS

You do not need to use GPS in order to use Wilderness Mobile, though it is advised. Below are typical options for locating campsites:

1. PDR with integrated GPS; automatically upload coordinates into Wilderness Mobile.
2. PDR with Bluetooth GPS (as separate units); automatically upload coordinates into Wilderness Mobile.
3. PDR with standalone GPS (Garmin); manually input coordinates into Wilderness Mobile.
4. Track your campsites on a map; manually determine and enter coordinates in office.

## **Rugged PDRs**

You do not need an expensive rugged device to collect campsite inventory data. You should, however, evaluate your local conditions and data collection methods (FS or volunteer, etc.) to determine your true long-term costs. The general consensus from the regional representatives on the Wilderness Information Management Steering Team is that the standard devices will perform in the vast majority of conditions as long as care is exercised. Be aware that you may only get 2-3 years of use out of these devices before they succumb to the hazards of field use. The national staff responsible for PDRs suggests those working in very wet (PNW, Alaska) or very dirty and gritty environments (desert SW) seriously consider purchasing a ruggedized version. These devices will typically last many years and often have trade-in value when you are ready to upgrade.

## **Technical Approval**

Be aware that a Technical Approval (TA) is required to purchase most computer hardware, software and peripherals. A Blanket Approval for Trimble devices was authorized mid-February 2010. For information on ordering these devices, see:

<http://fsweb.wo.fs.fed.us/irm/fdamc/purchase/trimble.php>. Currently the agency does not have blanket TAs to purchase other PDRs. Check <http://fsweb.wo.fs.fed.us/irm/asset/ordering/process/technical-approval-granted.php> for updates. Those wanting to buy hardware prior to the issuance of a blanket authority will need to develop their own request, which will be evaluated on a case-by-case basis (<http://fsweb.wo.fs.fed.us/irm/asset/ordering/process/create-technical-approval.php>). TAs typically have a quick turn-around time (2-3 days) for equipment that has received approval in the past. All devices listed below in the Comparison Chart have received approval in past years.

<b><u>PDR Comparison Product</u></b>	<b>GSA \$ *</b>	<b>Weight (lbs)</b>	<b>Battery</b>	<b>Processor Speed</b>	<b>RAM</b>	<b>Integrated GPS***</b>	<b>External Antennae Jack</b>	<b>Rugged Device?</b>
Trimble GEO Series	\$2,245 to \$5,125	1.79	Internal L-ion	520 MHz	128 MB	Yes	Yes	Yes
Trimble Juno SB	\$674	0.54	Internal L-ion	533 MHz	128 MB	Yes	Yes	No
Trimble Nomad 800 GL	\$1,844	1.2	Swap-pable L-ion or AA	806 MHz	128 MB	Yes	No	Yes
HP iPAQ Enterprise 211	\$500**	0.42	Swap-pable L-ion	624 MHz	128 MB	No; Bluetooth GPS compatible	No	No
Dell Axim	N/A	0.39	Internal L-ion	624 MHz	64 MB	No; Bluetooth GPS compatible	No	No

\* Costs current as of March 2010 (subject to change)

\*\* Cost includes protective case, 8 GB memory card, and Bluetooth GPS

\*\* GPS accuracy varies depending on product. In general, Trimble GEO series have an accuracy of 10cm to 3 meters, depending on unit. All other devices listed have an accuracy of 2-5 meters.