

Tips on Weed Mapping With Volunteers

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Finding Volunteers to Conduct Weed Mapping

- Have a clear idea of the type of volunteer you are looking for: someone who is committed, able to work long hours outdoors on the refuge, a quick learner, and interested in learning how to operate handheld computer technology
- Ask existing volunteers if they would be interested in mapping
- Advertise:
 - Refuge newsletter
 - News media
 - Chapters: Native Plant Societies, Audubon
 - Colleges or universities
 - High school science programs
 - Friends of the Refuge
 - Americorps
 - Other?
- Refuge interns

Training

Training should be a gradual process and begin with an introduction to plant ID, invasive plants of the refuge, and the purpose/goals of invasive mapping and control. Avoid training volunteers on the details of desktop WIMS, data transfer, and editing until they become familiar with the field portion. A gradual approach to training can reduce information overload/burnout and reduce the frequency of errors. Some volunteers may go from field mapping to desktop editing very quickly but do not expect this. The time to go from Steps I to IV below may take a couple of months or it may take a year. You have accomplished great things even if volunteers only take part in Steps I and II!

- I. Introduction: invasive plants of concern on the refuge, management and control, why map?
- II. WIMS training and Field Mapping: how to use the GPS and collect data

- III. Mapping Data Imports and Exports: bringing data in from the field and back to the desktop and visa versa
- IV. Data Editing

Conduct a training session once you have a few interested volunteers. Volunteers do best when they each get a chance to at least map 3-4 patches with the GPS. If you are short on GPS units, consider asking another refuge to borrow a couple GPS units or reduce your training class size. The initial training should focus on Steps I and II with a broad overview of Steps III and IV. Use the existing power point presentations provided on the WIMS training CD and alter them to create a training session suited to your needs. Once folks have become proficient at field mapping you can take train them on Steps III and IV. A refuge may decide to only include volunteers in Steps I-II. Whether or not volunteers take part in Steps II and IV, refuge staff should take the responsibility of a final data check of the dataset to identify errors.

Much of the initial investment in a volunteer weed mapping program comes from training. After the initial training, expect to go out into the field with volunteers to map weeds 2-3 times. A small proportion of those who come to training will actually become consistent mappers, expect this. Once you have a solid set of people (even if it's only 1-2 people) you are on your way!

After the initial training, expect that you will be fielding lots of questions. Provide the ability for mappers to contact you from the field to ask questions (phones). The frequency of assistance will significantly decrease over time.

If volunteers are only trained in Steps I and II, ask them to leave sticky notes on GPS units stating that data needs to be downloaded after a field outing. Be sure to upload new data before the next mapper goes out into the field.

Items to provide to mappers "in-training"

- Plant guide that identifies priority species for mapping (examples are included on the WIMS CD)
- Invasive species watch list along with plant guides for early detection species

- Maps/aerials of the general mapping area that participants can take into the field for orientation. These maps can also be used by volunteers to encircle areas that they have surveyed for weeds on a given day (whether or not any weeds are found)
- A document outlining safety issues and ways to reduce native wildlife and plant disturbances (example included on the WIMS CD). This document could also include a guide to sensitive species and how to ID/avoid disturbance.
- List of field equipment - avoids a lot of wasted time: updated WIMS database, GPS, compass, clipboard, pencils, maps, plant guides, troubleshooting guide, safety guide, mapping cheat sheet, field notebook, flagging, hat, water, food, binoculars, sunscreen, refuge phone, fanny pack/backpack, other?

General Topics

- Stress the idea that questions are good...knowledge reduces the frequency of errors and editing time
- Encourage volunteers to map in pairs: safety and reduction of errors (e.g., plant ID, cover estimation)
- Encourage volunteers to coordinate among themselves to plan weed mapping outings (email, yahoo group) (volunteers are always expected to coordinate with the refuge for all weed mapping outings)
- Assess abilities of your volunteers. Some volunteers will be proficient in identification of plants while others may be savvy with the software/hardware. Assess physical capabilities of volunteers: don't send volunteers with limited physical fitness into areas that are hard to access....find areas that suite their level.
- Update your volunteers on mapping progress (at least on an annual basis). Provide maps/reports of accomplishments and what your future goals are. This action keeps volunteers motivated and involved in the process.
- Provide volunteers with a field notebook (rite-in-the-rain) to keep notes on mapping efforts or additional wildlife and plant observations.
- Be open to sending volunteers for training on the use of boats, ATV's, kayaks which will reduce refuge staff time in providing access to remote areas of the refuge. The USFWS can provide many types of training opportunities to volunteers.
- Be aware of local weather conditions (e.g., high tides, high winds, incoming storms, etc.) before sending volunteers out to map.

- **Be REALLY NICE to your volunteers. Tell them how awesome they are. Give them lots of thanks for what they do. Be patient.**
- Be sure to impress the following on your volunteers: "WIMS follows a set of nationally accepted mapping standards established by the North American Weed Management Association (NAWMA). These standards represent a minimum of what should be collected when inventorying and mapping invasive plants on the landscape. They allow for the cross referencing of data which can help facilitate the development of integrated management plans across landscapes based on compatible datasets. For more information about NAWMA and weed mapping standards check www.nawma.org. Shortly after the approval and endorsement of the NAWMA standards, Stohlgren et. al. (2002) published the "Beyond NAWMA Standards". From a data management standpoint Beyond NAWMA suggests field methods to make the original standards more statistically sound and recommends the collection of additional data to enhance overall rigor. A copy of this publication can also be found at www.nawma.org."