

# Upper Snoqualmie Weed Watchers

*Volunteer Guide, 2013 Field Season*

Thank you for becoming an Upper Snoqualmie Weed Watcher! With your participation, we hope to survey many miles of trails for invasive weeds in the Middle Fork and South Fork Snoqualmie Watersheds. The data and eradication efforts of Weed Watchers will help the Forest Service and Washington State DNR monitor the backcountry and prevent major infestations. Without early detection and control, weeds like yellow archangel, orange hawkweed or Himalayan blackberry can quickly crowd out native species. Uncontrolled, weeds like oxeye daisy will monopolize alpine meadows, English ivy will cover forest canopies and Japanese knotweed will choke creek side vegetation. Your efforts to identify, map and control invasive species along backcountry trails and campsites will make a difference and protect the ecological integrity and natural beauty of the Upper Snoqualmie.

The Upper Snoqualmie Weed Watchers Program is a partnership between King County's Noxious Weed Program, the U.S. Forest Service, Washington State DNR and the Mountains to Sound Greenway.

## Project Contacts

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(Note: from June-September 2013, contact Rachel Allison at 206-373-1598 or [rachel.allison@mtsgreenway.org](mailto:rachel.allison@mtsgreenway.org))

## Upper Snoqualmie Weed Watchers Basic Steps

1. Take a hike (see the trail list on the weed watcher website: <https://green.kingcounty.gov/weedwatcher>)
2. Look for invasive plants!
3. Record data
4. Control weeds or flag them if needed
5. Homework: submit your data on the **Weed Watcher** website



## **STEP 1 – TAKE A HIKE IN THE UPPER SNOQUALMIE WATERSHED**

We ask everyone to commit to surveying at least one trail during the hiking season, but we encourage you to do two or more if possible. You can hike with your friends and family, or pair up with fellow Weed Watchers, but it usually works best to have at least one other person with you.

### **Choosing a trail:**

- Trails vary from short day trips to multi-day overnight trips – just be sure to pick a trail that is appropriate for your physical abilities and experience level.
- We don't expect everyone to hike each trail end-to-end. Just hike as long as you are willing and able and take note of your starting and ending times.
- Can't find a trail that matches your abilities? Trouble deciding? Contact Sasha or Mark and we will troubleshoot!
- Information about which trails have been adopted will be posted on the Weed Watcher website (<https://green.kingcounty.gov/weedwatcher>) and we will send out reminders and updates on what's been done and which trails really need to be done.
- It's ideal if you can choose a trail that is not already adopted by another volunteer, but duplicate hikes can still provide valuable data, especially if they are done at different times in the season. By all means, submit your observations, even if another volunteer has already hiked the trail.

### **What to keep track of:**

Remember to keep track of the distance you drive to and from the trailhead, any non-gas expenses you incur, distance you survey on the trail, and the hours you spend on the survey, travel and data entry – all of this information will be tracked and documents the valuable contributions of our volunteers!

### **What to bring on your hike:**

#### ***Survey supplies***

1. **Topo map of trail and area** – We recommend using the corresponding Green Trails Map for your adopted trails.
2. **GPS unit with extra batteries** – Any GPS unit should do, even if it doesn't have fancy software. Some smartphones with GPS capabilities can give you locations even when out of range for cell service. However, this should be tested before you go into the field. Smartphones often have limited battery life and should usually be considered a backup.
3. **Survey data sheets and weed checklist** – in case of inclement weather, you can always jot notes in a waterproof notebook.
4. **Weed ID card and/or guidebooks(s)**
5. **Camera** – Digital photos of weeds (or potential weeds) and weed watchers in action are most welcome! See "Weed portrait tips" on page 4.
6. **Weeding tool, garden gloves and garbage bag for eradication** (optional) – A simple dandelion digging tool or a hori hori can be helpful to remove weeds and roots. Be sure to review protocol for "To pull or not to pull".
7. **National Forest Recreation Pass for parking at Forest Service Trailheads or Discover Pass for parking at State DNR or State Parks trailheads** – Free day passes are available from Sasha for weed watcher volunteers. After three days of surveying on forest service trails, you are eligible for a free Annual Northwest Forest Pass. Unfortunately, we can't offer free annual Discover passes at this time, so you will need to request a volunteer day pass for each day you plan to go out unless you have your own annual pass.
8. **Noxious weed flagging, a sharpie and a cutting tool** – bring along some flagging (as well as a knife or scissors to cut to size) to mark infestations where control is not possible or is questionable. Write on the flagging with a permanent marker the weed name, date, and location of the weed patch if it's not obvious. Be sure to mention the flagging in your trail survey notes.

9. **Cardboard and newspaper** – when you find a new species or one you don't recognize, in addition to taking photos, you can collect a plant specimen, lay it flat on newspaper between sheets of cardboard, and include a label with location, date, your name, and other useful notes such as flower color and habitat. If it turns out to be a new invasive, this specimen will be very important. Also, if there is any doubt about what species it is, this specimen can help us be sure.

### **Ten Essentials**

The Ten Essentials are items everyone should carry on all backcountry trips. The Pacific Northwest is a beautiful place that can be wild and unpredictable. Being prepared for anything is essential. This is as important on short, local trips as it is on long, backcountry trips. It is easy to forget first aid kits and warm layers on short trips, but a short trip can quickly turn to a long trip if you get lost or injured. The Ten Essentials developed by The Mountaineers started as a list of ten simple items, and is now a systems approach that guides you in preparing for any trip in any season. The two basic questions are: (1) Can you respond positively to an accident or emergency? (2) Can you safely spend a night or more out?

Here is a list of The Ten Essential systems:

1. Navigation (map & compass)
2. Sun Protection (sun glasses, sun screen, lip balm)
3. Insulation (extra clothing)
4. Illumination (flashlight or headlamp, spare bulb & batteries)
5. First-Aid Supplies (gauze, tape, etc.)
6. Fire (firestarter, matches, lighter)
7. Repair Kit (knife, duct tape, tools, spare parts)
8. Nutrition (extra food)
9. Hydration (extra water, water purification)
10. Emergency Shelter (tarp, garbage bag, or ultralight bivy)

### **STEP 2 – LOOK FOR INVASIVE PLANTS**

Get familiar with the species of concern and bring along the quick reference weed card and possibly a guide book or two (depending on how much weight you are willing to carry!).

#### *Recommended guidebooks*

[Northwest Weeds: The Ugly and Beautiful Villains of Fields, Gardens & Roadsides by Ronald J. Taylor](#)

[Plants Of The Pacific Northwest Coast: Washington, Oregon, British Columbia & Alaska by Jim Pojar](#)

[Plants of Southern Interior British Columbia and the Inland Northwest by Robert Parish](#) (east of Cascade Crest)

[Wildflowers of the Pacific Northwest by Turner & Gustafson](#)

[Wild Plants of Greater Seattle by Arthur Lee Jacobson](#)

#### **What species to look for:**

Depending on where you hike, we may be interested in different weed species. The weed checklist will give you a guideline on which species are a high priority in different areas, but if you are in doubt, you can always collect data on all non-native plants. Too much information is better than too little in this case.

#### **Where to look:**

The parking lot and trailhead will likely have the most weed species. Unless you have tons of time, you may want to skip this area, or leave it for the return trip, since this is the easiest area for Greenway or agency staff to access. The main area of focus for weed watchers is along the trail itself as well as off-trail areas that are disturbed, such as campsites and social trails.

Some people find it easiest to collect weed survey data on the return trip, when you are more familiar with what you will see, and focus on identifying the species and enjoying the views on the way in.

It might be helpful (and fun) to keep a list of all the plant species you encounter (native and non-native) and take a photo of each new species to help you stay focused and to become aware of new species as you go.

As you hike further into the backcountry, weeds may be uncommon if not altogether absent – however keep a close lookout at areas where “disturbance” has occurred – rockslides, trail edges, campsites, informal social trails and areas that receive stock use are particularly popular weed hangouts.

#### **What to do if you can't ID a plant or it's really unusual:**

If you aren't sure about a species name, make sure to take photos, write down notes on location and habitat and possibly collect a plant specimen to take back to be identified. If you find an unusual species for the area, it's also a good idea to collect a specimen and take lots of photos.

#### **Collecting a specimen:**

To collect a plant specimen, pull up a representative plant including any flowers or fruit and at least part of the root if possible, shake off the dirt, lay it flat on newspaper or other absorbent paper between sheets of cardboard tied together with string or tape, include a label with location, date, what you think it is, your name, and other useful notes such as flower color and habitat. You can also simply put it in a plastic bag and carry it back, but sometimes it's hard to keep the plant protected while hiking. If it turns out to be a new invasive for the area, this specimen will be a very important record. Also, if there is any doubt about what species it is, this specimen can help us be sure. Contact Sasha about how to deliver your plant specimen.

### **STEP 3 - RECORD SURVEY AND WEED DATA**

For each trail you survey, we will ask you to track and report two types of data: 1. An overall summary of your survey, and 2. Information about any weeds found. GPS units are incredibly helpful for providing accurate location data, but an alternate method for recording data is to mark your topographic map with infestation locations. Maps can be mailed or delivered to Sasha.

#### **Survey data:**

We call the first type of data the “survey ticket” or survey summary data and it includes the following pieces of information:

1. **Trail or Site Name** – this should match the name on the trail list. If it's not listed, let us know and we can add it.
2. **Survey Date** – this is the date you started the survey. If you returned or stayed out for multiple days, please include that in the survey notes.
3. **Surveyed By** – the name of the person who wants to be the contact person for this data. If there were more people doing the survey, please enter their names in the survey notes.
4. **Start Latitude and Longitude** – point on trail where you started looking for weeds (start of hike), in decimal degrees (please include negative on longitude as in the example below and include as many decimal spaces as provided by your GPS)
  - a. For example: N 47.50254, W -121.65797
  - b. **IMPORTANT:** Some GPS units use a different format (like degree minutes or degree, minutes and seconds) and you will need to convert to decimal degrees. A useful converter is: <http://www.directionsmag.com/site/latlong-converter/>
5. **End Latitude and Longitude** – point on trail where you stopped looking for weeds (end of hike), in decimal degrees
6. **Description of Area Surveyed** – text description of where you started and stopped surveying, e.g. started at trailhead and stopped at lake.
7. **Distance Surveyed** – number of miles over which you looked for weeds, that is, distance between start and stop point.

8. **Distance Controlled** – number of miles over which you controlled all or most of the weeds found, even if the weeds were scattered over that distance. If you controlled only some weeds or only over part of the surveyed area, just estimate what distance you did control weeds.
9. **Travel Miles** – this is the number of miles you drove to get to the start of your survey (we will calculate the equivalent mileage expense contributed from this)
10. **Volunteer Hours** – please include all volunteer time including travel, data entry and survey time and multiply by the number of people volunteering (this is really important to show the volunteer contribution)
11. **Expenses** – the total amount of money you spent on survey-related things such as trail pass and maps (we can't reimburse you but again this shows your volunteer contribution to the program)
12. **Expense Description** – just a brief note on what was included
13. **Survey Notes** – this includes anything we should know about your trail survey including who else went, interesting weeds, problems with the trail or other issues, or anything else of interest
14. **Found Weeds? (yes or no)** – this isn't a question on the field form, but it is on the online version

#### Weed data:

As you survey, each time you find a population of a high priority weed species (or any non-native species once you are within the wilderness boundary), we would like the following information.

1. **Weed Code** – please use weed code from checklist (if species is not on the checklist, just write the whole name in the notes field and enter it as OTHER when you enter your data)
2. **LAT/LONG** points, in **decimal degrees**
  - a. For example: N 47.50254, W -121.65797
  - b. **IMPORTANT:** Some GPS units use a different format (like degree minutes or degree, minutes and seconds) and you will need to convert to decimal degrees. A useful converter is: <http://www.directionsmag.com/site/latlong-converter/>
  - c. If you take bearings or locations by map and compass, please be sure that you have adjusted for the appropriate magnetic declination.
3. **Weed Location** – note where the weed patch is located, e.g. trailside, 100 feet from stream crossing, down hill on east side of trail, etc. If you don't have a lat/long point, try to be specific so we can pinpoint the location on a map.
4. **Size of Infestation** –square feet
  - a. Infestations or patches are defined as stopping if there are no more of that species within approximately 100 feet of the outer most plant or based on terrain and other observations (e.g. divided by a river)
  - b. Minimum of 5 square feet
  - c. For linear infestations, calculate from length times width, but give total
    - i. e.g.  $50 \times 2 = 100$
    - ii. if on both sides, include that in notes and calculate area as length x width x number of sides, e.g.  $50 \times 2 \times 2 = 200$
5. **Percent Cover** – estimate what percentage of the infested area is covered by the weed species (as seen from above); if there is only one plant, estimate percent cover of the single plant over 5 square feet (for trees you can use 10 square feet)
6. **Growth Stage** – use the most advanced stage of the population (e.g. if a few plants are in flower but most aren't, use F)
  - a. Only foliage, no flowers or fruit = **V**
  - b. Buds forming, no flowers open = **B**
  - c. At least some flowers open, no seeds or fruit = **F**
  - d. Some seeds or fruit = **S**
  - e. Plants dying back and going dormant, leaves yellowing or brown = **D**
7. **Habitat**
  - a. Use "road" only for roads open to cars, otherwise use trail
  - b. If the habitat is distinctive, give that instead of trail
    - i. e.g. forest, wetland, rocky slope, river shore, meadow, campground, etc.

8. **Control Date** – note the date you pulled or dug up the plants or, if you know they were sprayed during the current season, note the spray date or the date you made the observation if you don't know what date they were sprayed.
9. **Method** – this is the control method (pulled, dug up, sprayed, injected, etc.)
10. **Controlled Area** – the square feet of the area you removed (could be the same or less than the size of the infestation, depending on whether you were able to control it all)
11. **Notes** – photo taken, weed flagged, monitor visit to a known site, status of infestation being monitored – none seen, controlled for season, partially controlled, not controlled

**Weed portrait tips:**

A dark background behind a plant really helps with post-survey identification for tricky species. Take pictures of different parts of the plant and at least one “full body shot”. Pay careful attention to key identifying characteristics. Use your camera’s macro setting to get better close up shots! It’s also great to have photos of the surrounding area and the overall weed population and to have something in the photo for scale.



**STEP 4 – CONTROL WEEDS OR FLAG THEM IF NEEDED**

When possible, we encourage volunteers to manually control weeds, especially in remote areas where it can do the most good. When you don't have time or for weeds that are better controlled by chemical treatment, we have official “noxious weed flagging” to mark infestations of high-priority weeds (see weed check list).

If you use flagging, please write with a permanent marker the weed name, date and location of the weed patch if it isn't obvious. Also, please make a note on your survey form that you flagged the weed location so we know to get back there to control the weed and remove the flagging.

**Before you pull or dig a weed, consider a few elements:**

*“To pull or not to pull?”*

1. **Positive ID** – You need to be certain that it is not a native look alike.
2. **Effective Control** – Manual control needs to be an effective control method for the species, the size of the population, and the site. If you are in a remote area and worry the weeds will go to seed before they are controlled, you can dig them up but be sure to collect enough information so that the Forest Service or DNR can put the site in their treatment schedule for next year.
3. **Practical** – You need to have the tools, ability, and time to remove the plants entirely without damaging other vegetation.
4. **Coordination** – Try to find out if a control activity is likely in the near future for the site; don't pull flowers if they are needed by someone to locate the plants for control or remove one or two plants by the trail if they are needed to locate a larger infestation; however, if no one is likely to be back to that location this year, preventing plants from seeding would be a good thing to do.

## STEP 5 – HOMEWORK (SUBMIT YOUR DATA)

All data can be submitted through the Weed Watcher online portal. You can also download Excel versions of the data form and submit your data that way. If you need help with the data entry system or the spreadsheet forms, just contact Sasha and she can help you. If you would rather not submit your data electronically, you can always mail the trail survey sheets and maps marked with infestation locations to Sasha (see contact information on first page).

**Steps for submitting trail survey data online at <https://green.kingcounty.gov/weedwatcher/>**

1. Register and create a user ID (if you didn't do this already)
2. Choose the "Trail Weed Watchers" link
3. Go to "Adopt a Trail" – choose your trail from the drop down menu
4. Fill out the "Trail site survey ticket form" – This is where you enter general info about your survey such as date, miles, volunteer hours, etc.
5. If you did not find any weeds, select that box and click **SUBMIT** and you are done.
6. If you did find weeds, just click **SUBMIT**.
7. Select the weed found from the drop down list (you will do this step for each weed site).
  - a. If it is a **high priority species**, the weed data form will open and you can enter all the weed data fields and then click **Add Survey Data**
  - b. If it is a **low priority species**, the form doesn't automatically open and you can just click **Add Survey Data** and you are done. Just enter low priority species once per trail.
  - c. If you want to enter the location data for a low priority species (because it was within the wilderness boundary or for any other reason), click the "Add location data for this weed" box and the data form will open.
8. Optional – Email any data files (GIS shapefiles or data spreadsheets) and/or digital photos to Sasha at [sasha.shaw@kingcounty.gov](mailto:sasha.shaw@kingcounty.gov).

## Weed Watchers Photo Log

Share photos of weeds, suspected weeds or other good finds on the trail by posting to the Weed Watchers Photo Log! <http://wildweedwatchers.wordpress.com/> We will work together to identify invasive species.

Anyone can create a blog post by sending an email to [hohu704nabi@post.wordpress.com](mailto:hohu704nabi@post.wordpress.com) (yes, it's a wacky address – it's tricky so that the uninitiated do not spam our blog!). Please use the following format:

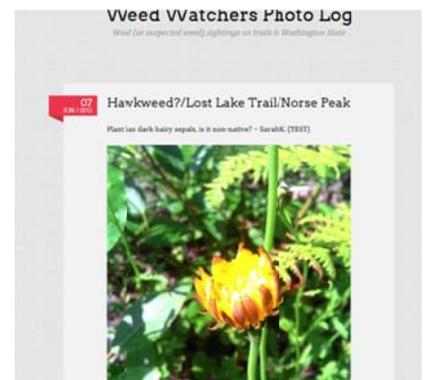
**To:** hohu704nabi@post.wordpress.com

**Subject:** Knapweed/Summit Lake Trail/Clearwater Wilderness

*The subject line of your email should contain the name of the plant- guessing is fine!- or "Unknown" / the name of the trail/the area you found it*

**Attachments:** (attach your photo(s) to the email and they will show up in the post

**Body:** Any text you type will appear in the body of the post. This is where you will want to describe the plant in detail and ask any questions. Others will be able to comment on your post and help identify the plant of concern. Please sign at least your first name and remove email signatures from your message.



Example blog post email:

