



Clearing the Way

A Guide to Invasive Species Removal and
Ecosystem Restoration





Rise to the Challenge

Water covers about 70 percent of the Earth's surface; therefore, it may appear that we have an abundant supply. However, 97 percent of that supply is salt water, and 2 percent is fresh water frozen in glaciers. That leaves only 1 percent as a readily usable resource for drinking, cooking, bathing, agriculture, industry, recreation, and other needs.

This limited supply of fresh water and our dependence on it mean that we must use this resource wisely. Every human being plays an important role in caring for water. It is our responsibility to manage our local, regional, and national waters respectfully. We invite you to rise to EarthEcho's Water Challenge: **check** your local resources; **share** your data on EarthEcho's global database; and TAKE ACTION to **protect** your waters!



This guide outlines how YOUth can take action to **protect and restore** local water resources through **invasive species removal**. Follow this step-by-step guide to confidently plan, host, and capture the impact of invasive species removal events in your own community!



Before you dig in

Before you can remove invasive species, it's important to first understand what they are, which ones are affecting your area, and where your efforts are most needed. This section will help you build a strong foundation for planning your invasive species removal event. Please note: this guide focuses specifically on invasive plant species and does not cover the removal or management of invasive animals.

Ecosystems and Invasive Species 101

There are many different types of species found in an ecosystem, including indigenous, introduced, and invasive species. Indigenous species are produced, growing, living, or occurring naturally in a particular region or environment. Introduced species are organisms that are not native or natural to a habitat which have been accidentally or purposefully brought to a new habitat (also known as exotic species). When introduced species grow without any natural checks and balances to an extent that causes harm to the environment, economy, or human health, they are called invasive species. Not all introduced species are invasive, but all invasive species are introduced.

Examples of invasive plants in the United States are garlic mustard, Japanese knotweed, and water chestnut. Unlike many native species, invasive plants often have shallow root systems, which can lead to increased erosion, shoreline damage, and decreased water quality.

 [Learn more about the differences between species!](#)

Gather Intel in Your Area

Now that you understand why invasive species are harmful, find out which ones are in your community. To understand more about invasive species in your area visit your local nature centers, conservation boards and/or parks departments websites.

Research the removal techniques for each invasive species in your area! Make note of the best time of year to remove them, if there are safety concerns (thorns or spikes), what method is best for removal what tools you may need, and how to properly dispose of them.

 [United States](#), [Britain](#), [Europe](#), [South Africa](#), [Australia](#), [New Zealand](#)

 Check [iNaturalists Map of introduced species](#). Be sure to confirm they are also invasive!

Identify a Location In Need

Once you know what you're looking for, the next step is to find a location in your community that could benefit from some extra care and invasive species removal. Look for areas that could use help like parks, nature trails, stream banks, school yards, etc! Before moving forward with any of the planning make sure:

1. You have permission! Contact landowners, parks departments, or schools before planning anything
2. The area has invasive species that you can identify
3. The site is safe and easy to access



Make a Plan!

Now that you know what needs to be done and where the invasive species are, it's time to create a solid plan to bring your event to life.

1 Date and Time

Give yourself at least 3–4 weeks to plan your event. Most events last between 1–3 hours. Consider the best time of year for removal, depending on what invasive species you want to tackle. In spring and summer, plants are young and easier to spot and pull. In the fall, certain species are easier to remove when mature. Be sure to remove them before they mature and spread seeds.

 **Tip:** Always set a **rain date** as a backup in case of bad weather!

 **Tip:** Check the **weather forecast** and choose a **time of day** that will be comfortable for volunteers—early morning or late afternoon often works best in warmer months.

2 Recruit Volunteers

Use your network to gather friends, classmates, community groups, or local organizations to build your invasive species removal team. Partnering with local conservation groups like nature centers, watershed alliances, local parks, gardens, or naturalist clubs, and/or your local conservation department can help expand your reach and impact!

 **Tip:** Recruiting help from local organizations may lead to local experts attending your event!

When recruiting volunteers, it can be helpful to assign roles and responsibilities, such as photographer, invasive species identifier, sign-in lead, etc. This will ensure that everyone has a purpose and will make the event more organized!

3 Spread the Word

Use flyers, social media, and community centers to spread the word. Include clear instructions and event details, such as date, time, how to sign up, what to bring, what to wear, and who should attend the event.

 **Tip:** Use RSVP tools like Google Forms or [SignUp Genius](#) to track interest and contact information. This helps you to get a better understanding of how many people will be there and also gives you contact information to send updates!

Bonus: Reach out to the local press to share information about your event! Be sure to tag @earthecho in any social media posts!



Event Day Checklist

After your initial research and event planning, it's now time to host your invasive species removal event. Here are some steps to have a successful day:

☐ **Meeting & Sign In**

Designate a central meeting spot, like a pavilion or table, for volunteers to gather. During check-in, have volunteers sign in and fill out any paperwork, such as waivers or photo releases.

Tip: If you're partnering with a local community organization, they will usually have the releases and waivers you need.

☐ **Welcome, Kick Off & Overview**

Once everyone has arrived, welcome the group and set the tone for the day. Take a few minutes to explain the importance of invasive species removal and the impact it has on protecting and restoring your local environment. Be sure to review the plan for the day and any guidelines and safety tips.

Tip: Start your event on time. It's important to remember that participants have dedicated their free time to help, so be respectful, even if some people are running late.

☐ **Identification & Removal Techniques**

Before heading into the field, demonstrate how to properly identify the invasive species you'll be removing. You can also provide printed sheets on how to ID invasive plants for extra measure. Once identification is clear, show the correct removal methods, whether it be pulling, digging, or cutting. Be sure to remind everyone how to avoid spreading seeds or plant fragments.

☐ **Divide into Groups**

Split volunteers into small groups of 2-5 people and assign each group an area to work on. If possible, have experienced team members assigned to each group to help lead identification or have them float between groups to assist! Encourage volunteers to take breaks and stay hydrated.

☐ **Take Photos**

Celebrate your hard work! Take a group photo (with those who've given photo permission) and capture before-and-after shots of the site to showcase your impact. It's always great to get "action shots" of the group working, too!

☐ **Clean Up**

Once removal is complete or you have reached the hours set aside for your event, be sure to gather all invasive species and tools. Track and record how much area was cleared and note any findings. Leave the site better than you found it!

☐ **Report**

Use the Habitat Restoration Data Sheet to document the invasive species removed, the size of the area cleared, and any other efforts taken. Log your data at monitorwater.org and be sure to share your impact with any agency that helped support your work!

☐ **Thank your volunteers**

A little appreciation goes a long way! Follow up with volunteers via social media and send an email to thank them for their dedication. Share photos and highlight the positive impact they made!



Habitat Restoration Data Sheet

This sheet is designed to help you track and record your habitat restoration accurately, making it easier to report your findings.

Be sure to take **BEFORE** and **AFTER** pictures.

When complete, add your **Water Protection Data** to **MonitorWater.org**

Date of Event

TOTAL # of participants

Location of Event

AGES: 0-10 years

11-14 years

15-17 years

18+ years

Did you remove any invasive species? *yes/no* (circle one) Number removed?

What types of invasive species did you remove? (list below)

Did you plant any native species? *yes/no* (circle one)

Number planted?

What types of native species did you plant? (list below)

Approximately how much habitat was restored?

Be sure to record in square feet or square meters



EARTHECHO
INTERNATIONAL

Stay Connected!



Stay up to date with EarthEcho International, the Water Challenge, and our youth programs by following us on social media!

Education@EarthEcho.org
www.EarthEcho.org

[@EarthEcho](https://www.instagram.com/EarthEcho)

