

If You Can't Beat them Teach Them:

Utilizing Education for Invasive Monitoring and Removal

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Coordinator, North Cascades Institute**



"A greening of the human mind must precede the greening of the Earth..." M.S. Swaimithson

Fusing the Education, Invasive and Monitoring Edge:

- The Invasive Education Edge
- The Partners
- The Place
- The Project: Education as Removal and Monitoring
 - How Education enhances invasive species management efforts
 - How invasive species management enhances education
 - Limitations of Both




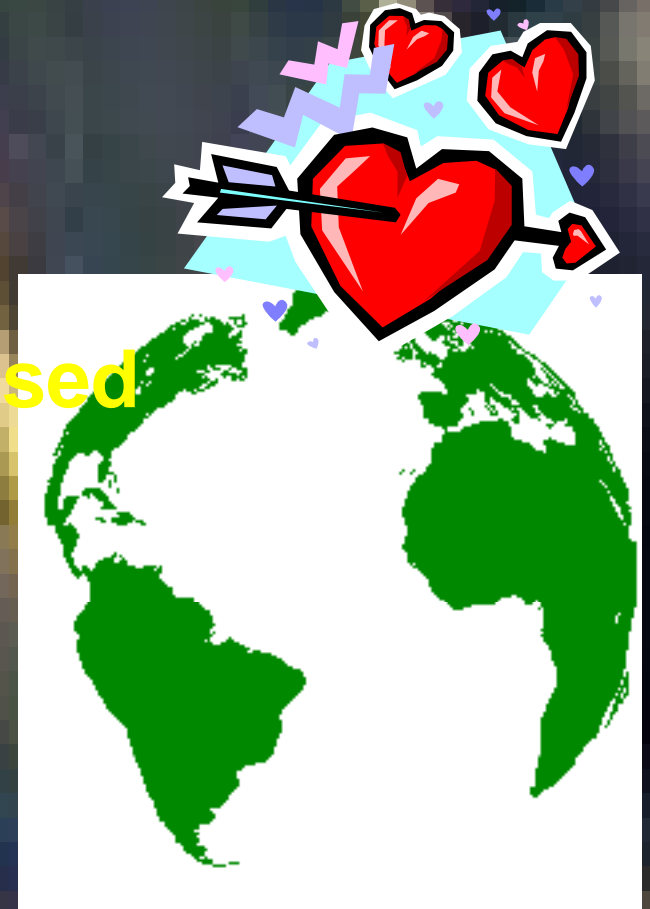
Big Picture 'Stewardship-sphere'

QuickTime™ and a
decompressor
are needed to see this picture.

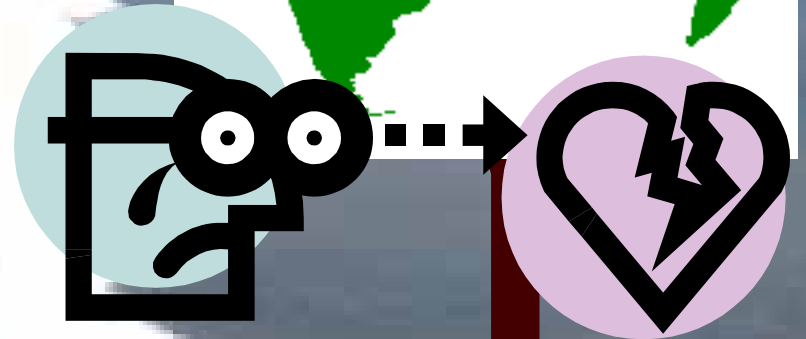
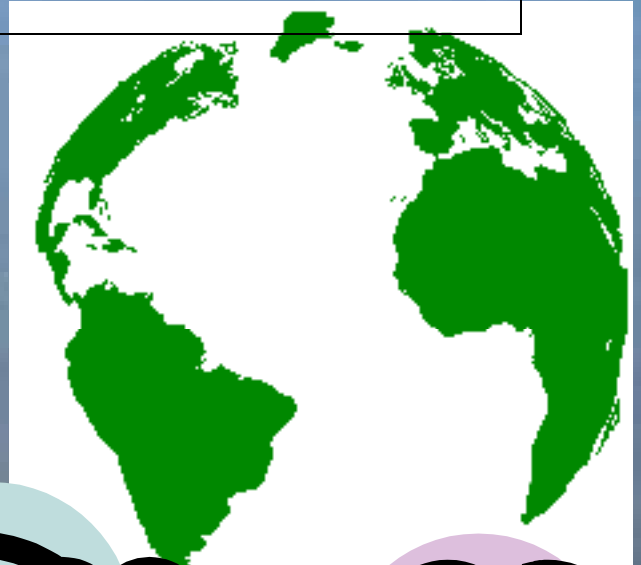
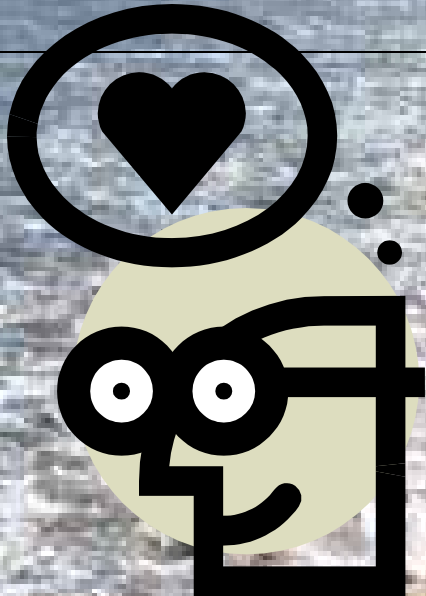
Sea-viewing Wide Field-of-View Sensor (SeaWiFS) data
on potential for education to enhance Net Primary
Production (NPP) for a sustainable weed-free Earth

Invasive Plants + Education =

 An approach to both place-based environmental education and ecological restoration



????????????????????



FUSING THE EDGE



Forest edges: varied growth

+



When Edges Meet



**= Exchange of knowledge,
ideas, and resources**

**Increased resilience
during stress**

Strength in Partnerships



North Cascades Institute
*Connecting People, Nature & Community
Through Education*



National Park Service

National Park Service
U.S. Department of the Interior

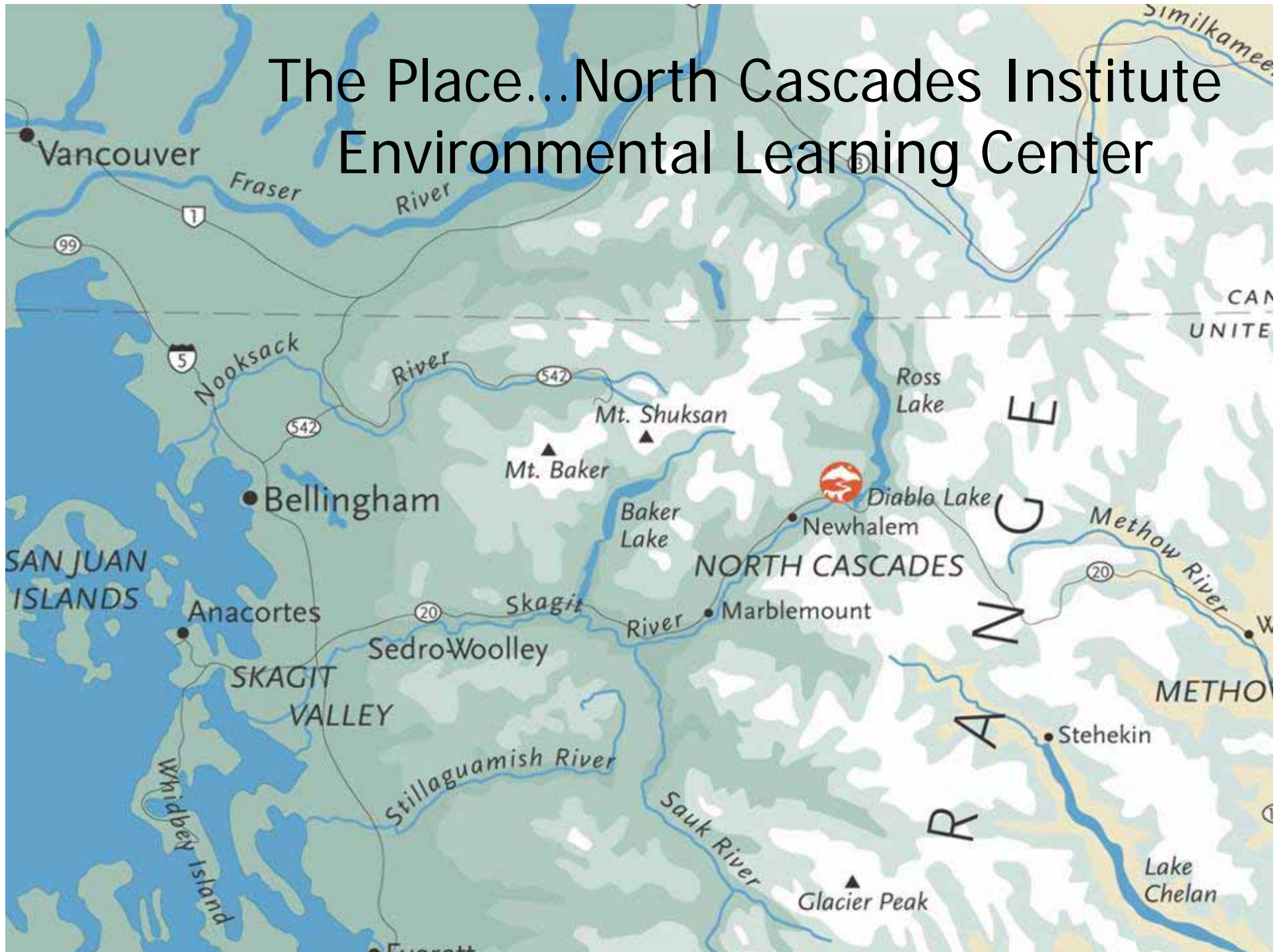


WESTERN
WASHINGTON UNIVERSITY



UNIVERSITY OF
WASHINGTON

The Place...North Cascades Institute Environmental Learning Center





- Project Goals:

- Restore the Site

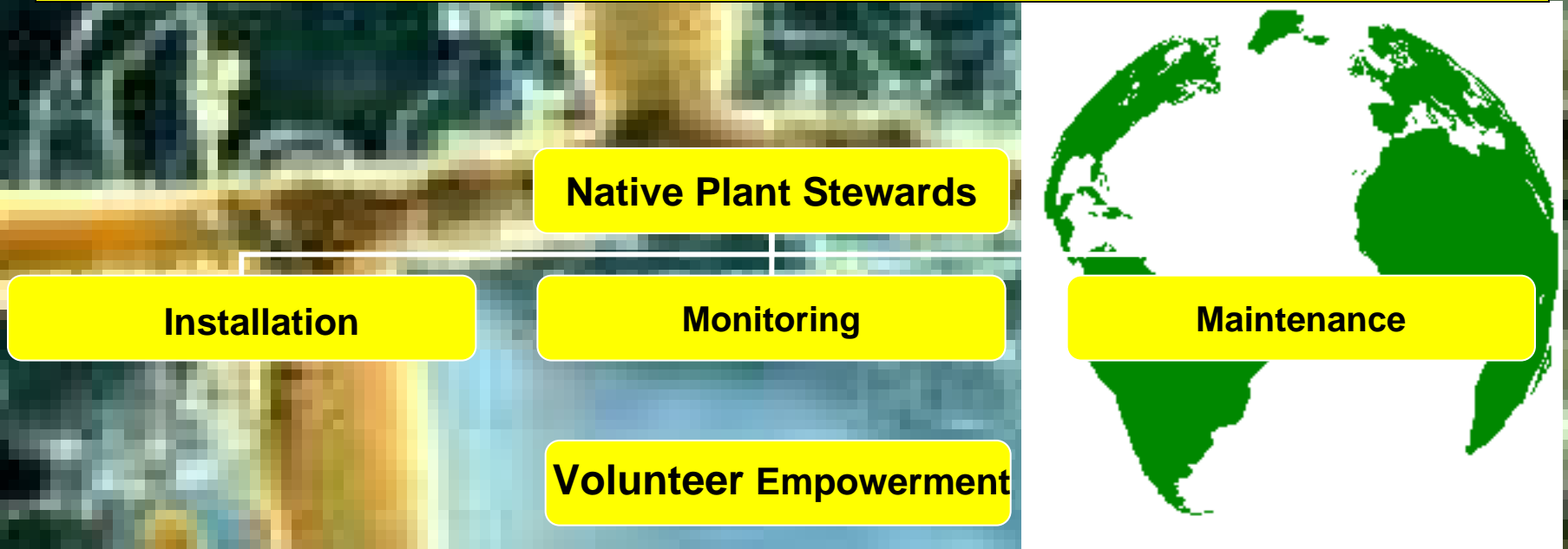
- Apply the best invasive species management techniques available

- Educate the Public through an Invasive Species Monitoring Program

- Participants acquire knowledge and understanding of the art and science of applied restoration ecology

- Provide Model Research Practices and Education Programs for the public and professionals

North Cascades Institute Stewardship Model



**Connect to the Land, Learn From the Land, Act
on the Land's Behalf = Enhanced Stewardship**

Restore the Site...One plant at a time

What do we do now that the plants are in the ground?!?

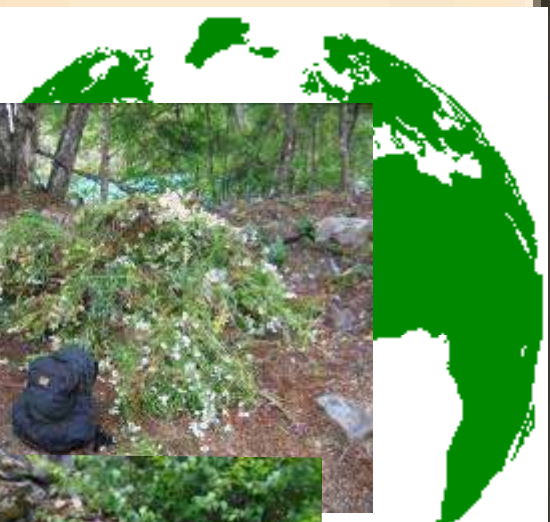
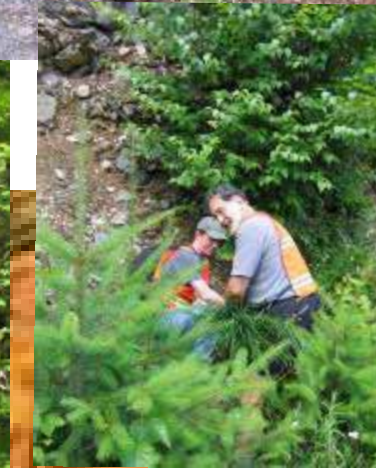


BEFORE

AFTER

The Dirt on Invasives: Volunteer Education Monitoring Program

...Weeds, Seeds, and Bears, oh my!

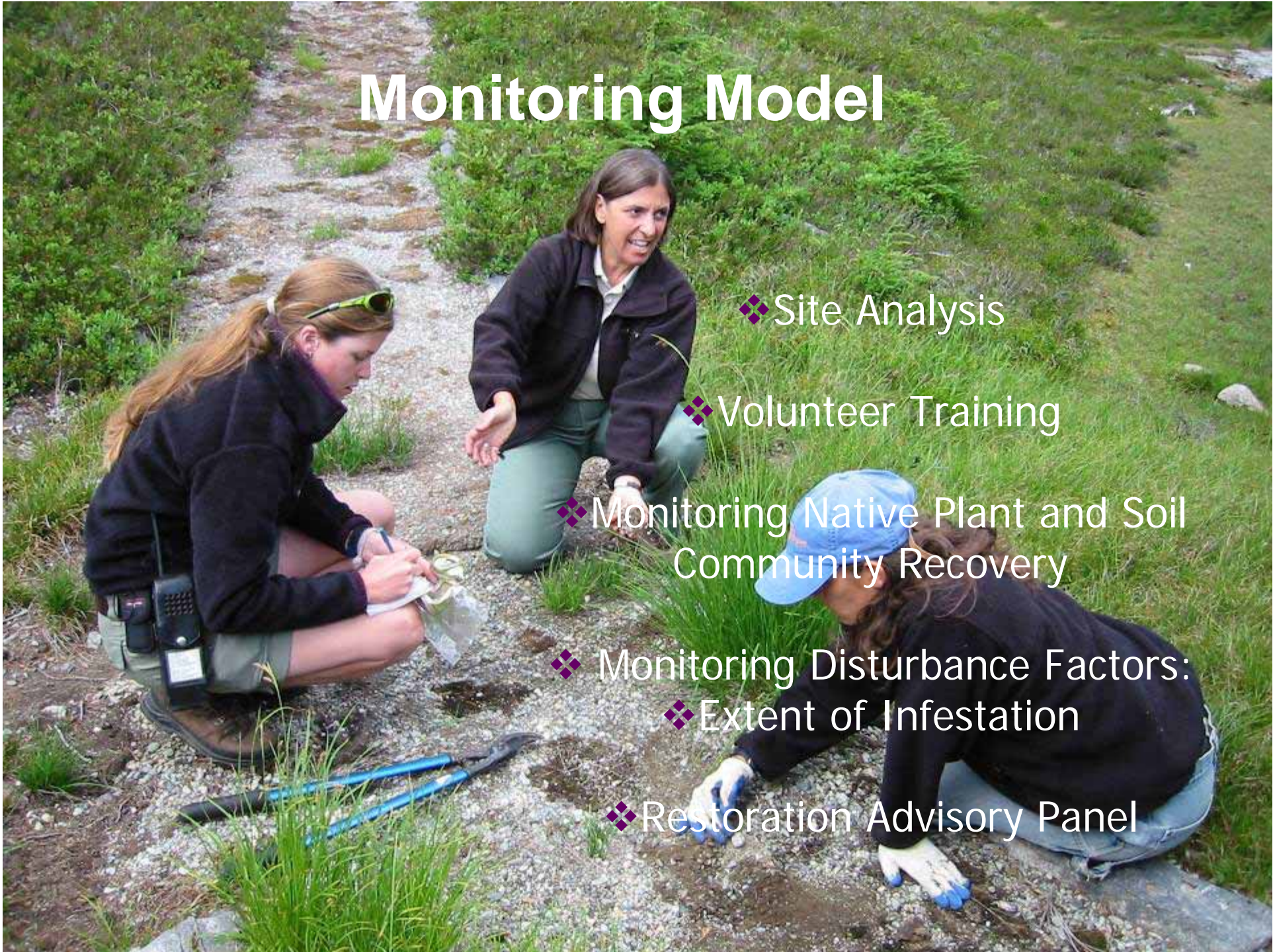


BEFORE

AFTER

Monitoring Model

- ❖ Site Analysis
- ❖ Volunteer Training
- ❖ Monitoring Native Plant and Soil Community Recovery
- ❖ Monitoring Disturbance Factors:
 - ❖ Extent of Infestation
- ❖ Restoration Advisory Panel



How Invasive Species Management Enhances Education Efforts

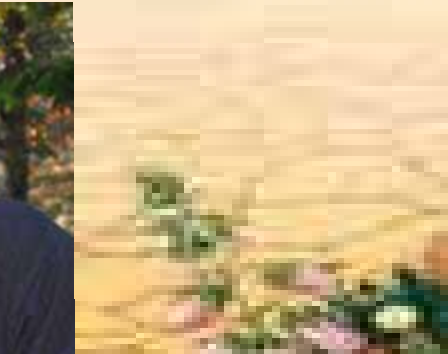
Where we have been...



BEFORE

AFTER

How Education Enhances Invasive Species Monitoring and Removal



BEFORE

AFTER

- **Where we have have been in 10 months time?**

- 720 Total Participant Service Days
- 798 Total Participant Program Days
- 305 Total Stewards (32 returning, 5 groups returning)
- 364 Total Participants
- 3,863 volunteer service hours
- \$108,696 value of in-kind services
- 16,937 plants planted



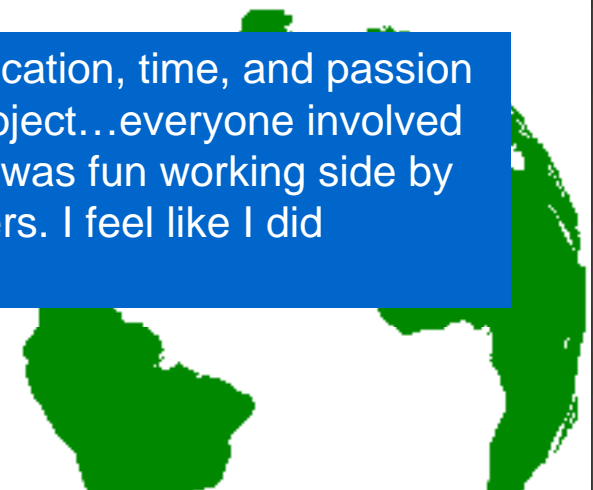
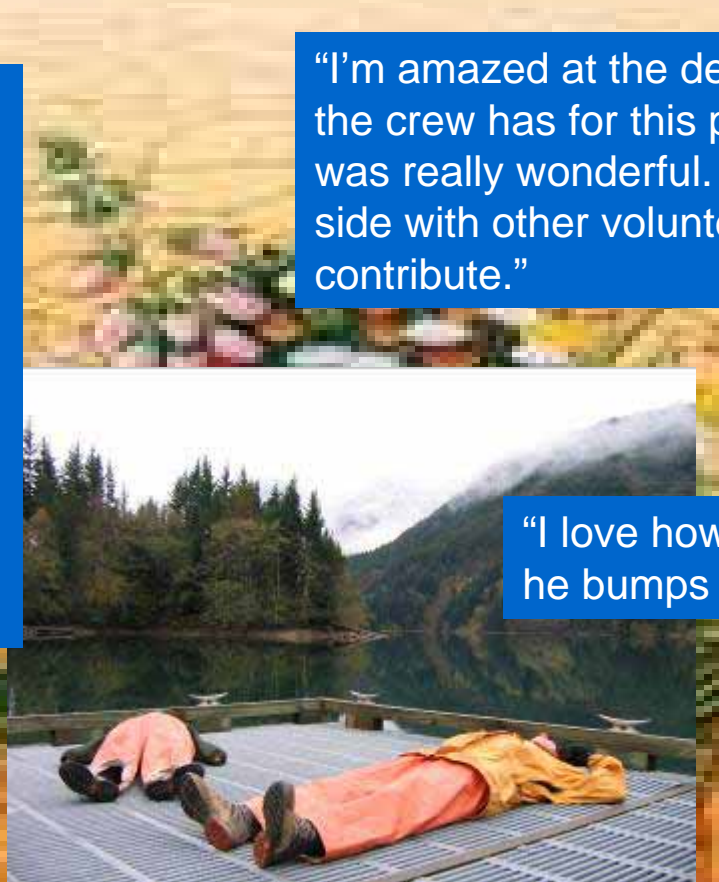
Native Plant Stewards

Where we have been...Reflections from the Field

“Invasive species seem to be overtaking flora at an alarming rate. In attending this workshop, I hope to gain a better understanding on the species that are endemic to the North Cascades and what can be done to deter their establishment.”

“I’m amazed at the dedication, time, and passion the crew has for this project...everyone involved was really wonderful. It was fun working side by side with other volunteers. I feel like I did contribute.”

“I love how Mike excuses himself when he bumps into a plant.”



BEFORE

AFTER

Does Education Work?

The Sites are Conserved and Restored which includes

- ❖ Biodiversity of sites comparable to the reference, in alignment with management goals
- ❖ Indigenous species are present
- ❖ Functional communities exist
- ❖ Physical environment supports conservation and restoration efforts
- ❖ Restoration integrates with the landscape
- ❖ Threats eliminated (for example, invasive species)
- ❖ Site resilient to periodic stresses
- ❖ Stewardship language not compromised

Education Efforts Successful when...

- Programs meet and/or exceed our operational goals and are within budget means
- Education supportive of management and Monitoring protocols
- A core group of volunteers are recruited and involved in on-going projects and programs
- Programs receives adequate funding for initial and long-term operation, including funding for supplies, transportation, and personnel costs
- Participants seek further involvement without our prompting
- Volunteers are involved with training of new volunteers or become assistant project leads
- When complaints are minimal and smiles are abundant

Challenges

Designing Long-term Monitoring and Management Protocols with multiple stakeholders

Sustained funding, volunteer support

Determining sites 'Restored' and education supportive of management goals.

Adapting with Disturbance



Opportunities

Engaged and committed volunteer audience willing to:

- Assist with invasive species management at Learning Center and throughout the Park
- Recruit and train other volunteers, provide program feedback
- Assist with coordinating volunteer programs
- Support outreach, publicity, and fundraising efforts
 - Increased ability for volunteer support in all program/operations of Institute
- Cross-pollinate programs
- Get needed and necessary work done while having fun!





**Most of all...BE SAFE BE
KIND, HAVE FUN!**

**“It’s Like Driving a Car at
Night. You never see
further than your
headlights, but you can
make the whole trip that
way.”**

–E.L. Doctorow

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