

Engaging Citizen Scientists & Landowners Through Bioblitzes

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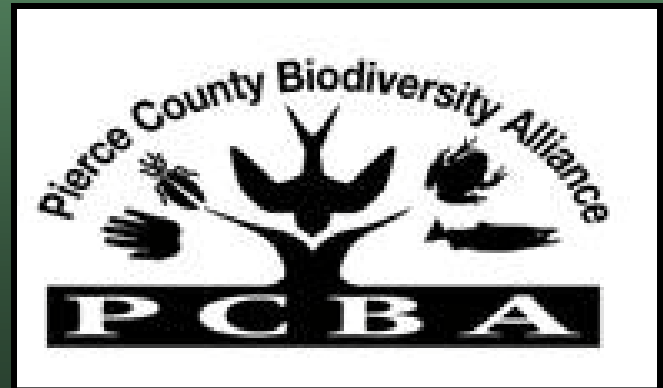
University of Washington
Washington Cooperative Fish &
Wildlife Research Unit
College of the Environment
School of Forestry
NatureMapping Program

Michelle Tirhi

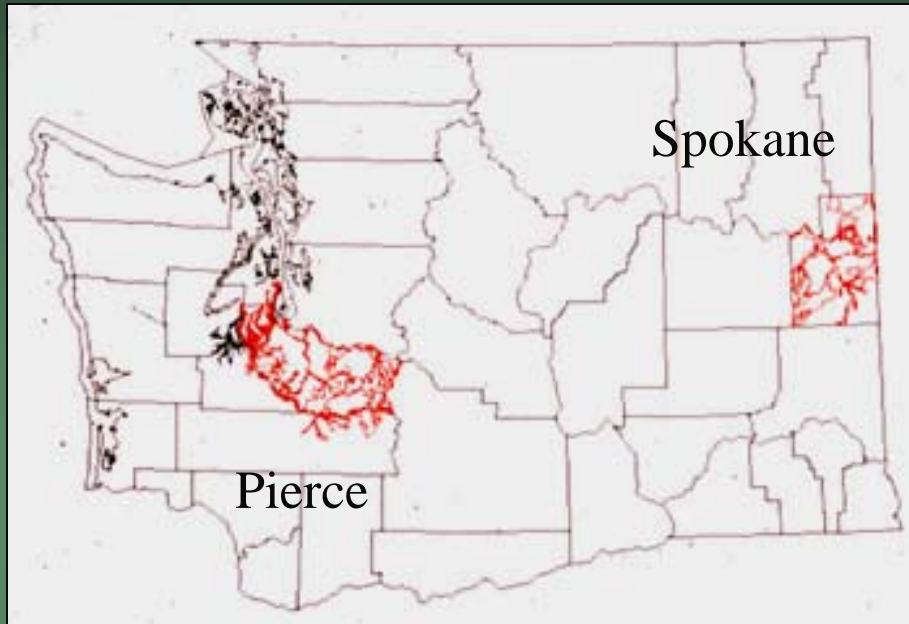
Washington Department of Fish &
Wildlife

Members of the

This is a copy of a presentation given at the
Washington Biodiversity Council Conference,
December, 2007



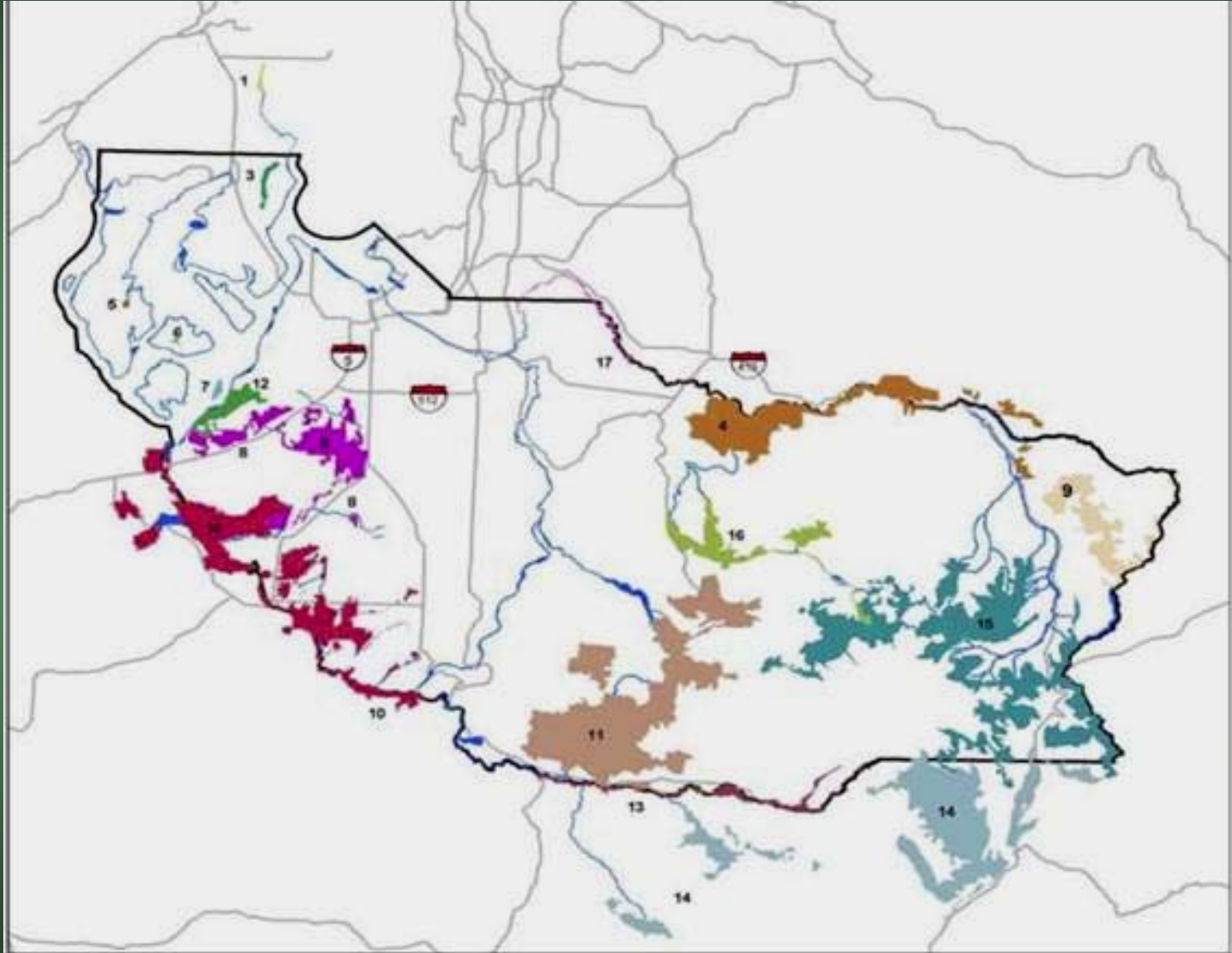
History...



County Biodiversity Networks

- Guide land purchases
- Public education and outreach
- Identify smaller biodiverse areas complementing the larger network
- Integrate other projects and efforts that wouldn't be considered at a larger scale
- **All efforts relate to regional perspective**

Pierce County Biodiversity Management Network



linked with riparian corridors

Pierce County Questions...

- **How do you implement the biodiversity management plan?**
- **What do you tell the landowners?**
- **How do you know the Network is working?**

Answers...

- **Bioblitz**
- *NatureMapping*

A Biodiversity Blitz (BioBlitz) is:

a ***rapid*** biological inventory of all organisms found in a designated area during a limited time-frame usually 24-hours



Preparation...

Decide the type of Bioblitz:

Educational

Inventory Lists

Data for Management

3-6 Months of Planning

Funding

Advertisement

Location for “Science Central”

Food

Supplies:

Volunteer

Experts

Permits/Insurance



Bioblitz Data Management...

Taxonomic Groups Inventoried

Slugs

Birds

Herps

Mammals

Diving

Terrestrial Invertebrates

Aquatic Invertebrates

Plants

Trees

Invasive plants

Micro-organisms

Fungi

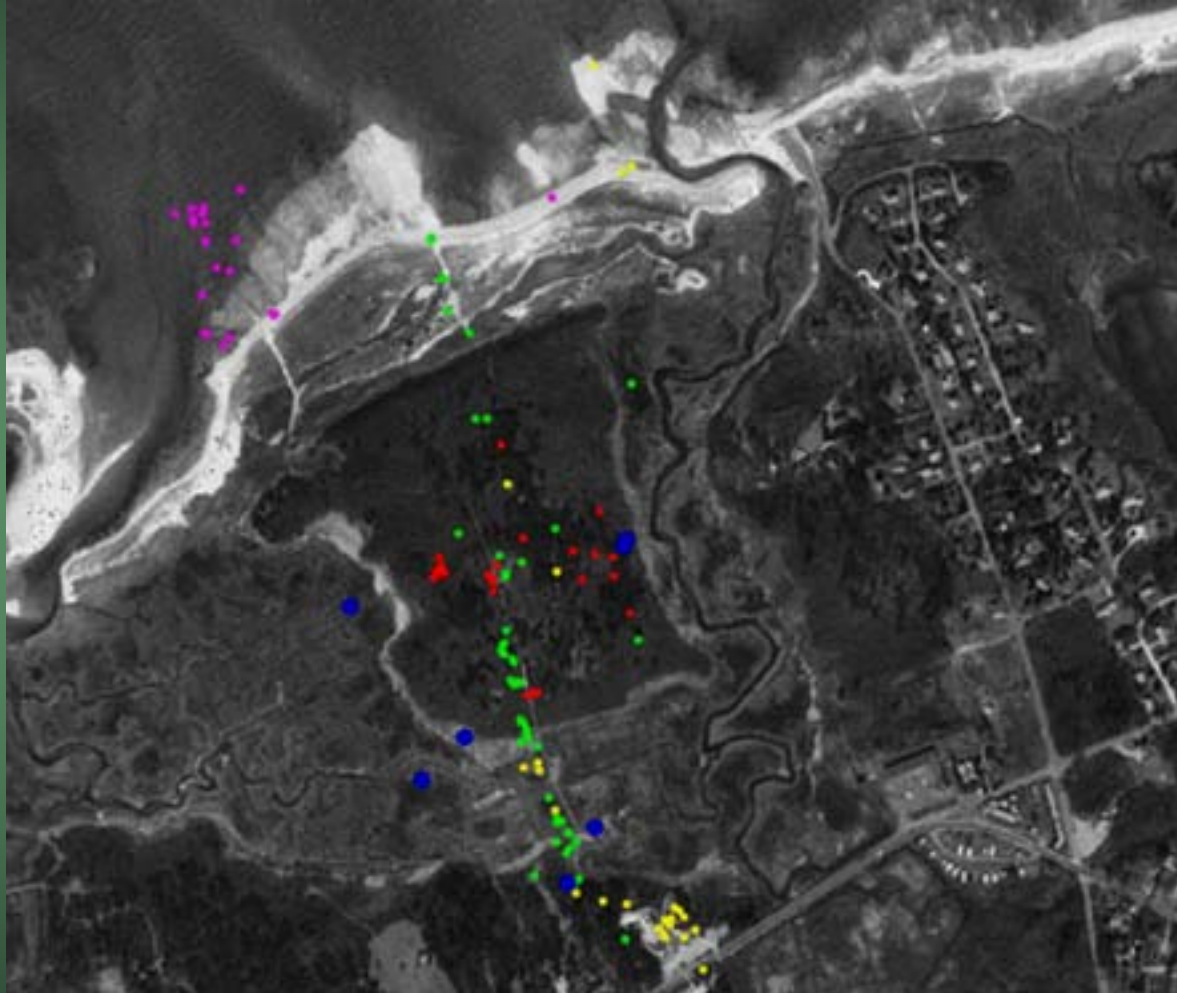
Hymenoptera (Bees)

Bryophytes (Ferns)



Central Park – invasive plants

Bioblitz Data Management...



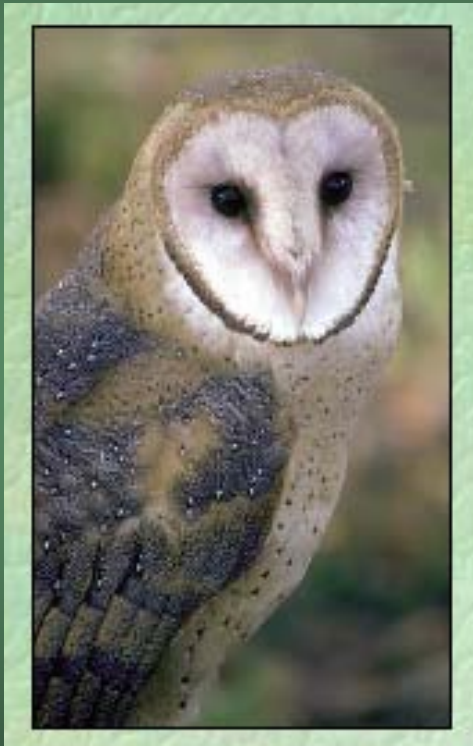
NatureMappers inventorying the nearshore were out in low tide.

The aerial photo was taken at high tide.

Most people stayed on the path leading to the beach

Cape Cod

Purpose of a Washington State BioBlitz



- Confirm WA-GAP's predicted species on *private* lands within the network
- Engage and educate the local public
- Publicly showcase the ecological importance of the area
- Establish baseline data for future research and conservation initiatives
- Educate and empower the local community on becoming stewards of their surrounding environment

Science Central





Taxa Teams -
expert led

The *NatureMapping* Program

Training Workshops

➤ *Before...*

- Property owners
- Volunteers
- Technicians – NatureTracker units

➤ *After...*

- Property owners
- Local community



The *NatureMapping* Program

Data Management

➤ *Data Collection:*

NatureTracker data collection software on PDA/GPS for all taxa

➤ **Native & Non-native**

- Fish
- Invertebrates
- Plants

➤ *Data Repository:*

Statewide database



Pierce County Biodiversity Management Areas Bioblitzes



Crescent Valley

Major habitats:

Lake, stream,
estuary with
riparian forest

800 acres

454 landowners

Major habitat: Riparian forest

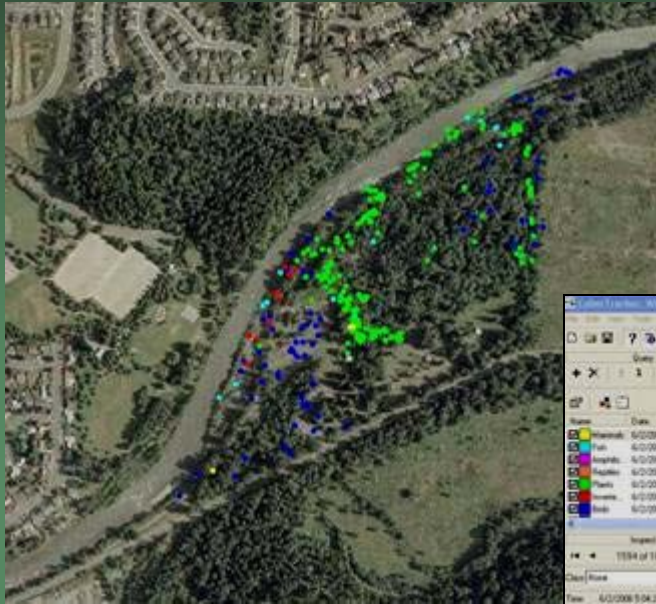
1,593 acres

47 landowners

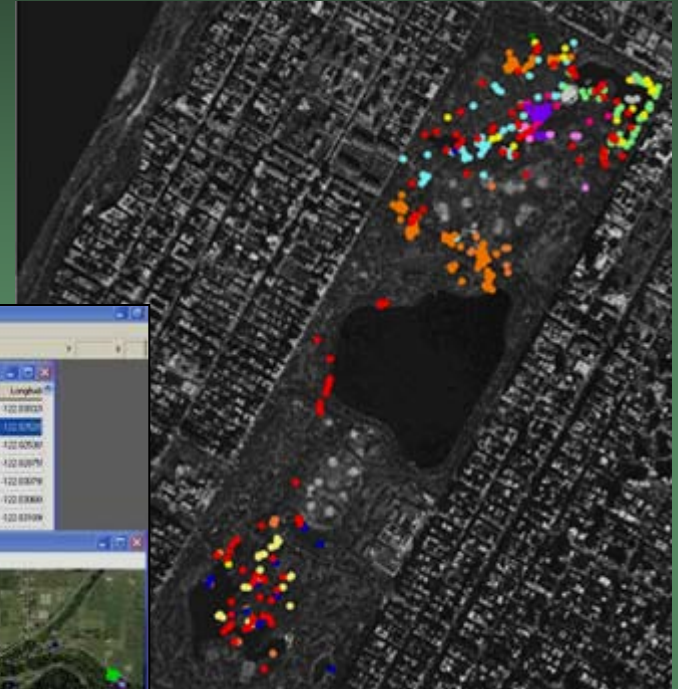


Lower White River

Bioblitz Data Management...



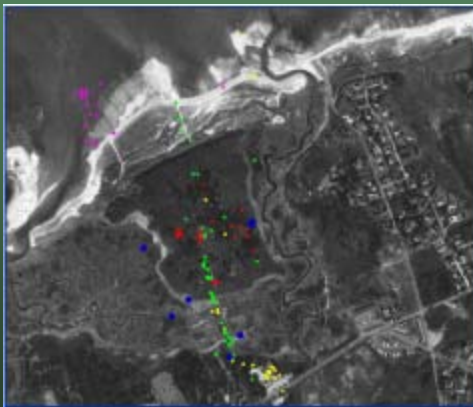
Auburn



Central Park

Observed	Tracked	Date	Mammal	Bird	Latitude	Longitude	
1594	40	Track 4	6/2/2006	Eastern Cottontail		47.1715778	-122.0383333
1595	40	Track 4	6/2/2006	American robin		47.1716031	-122.0267081
1596	40	Track 4	6/2/2006	European starling		47.1706462	-122.0269795
1597	40	Track 4	6/2/2006	White-throated sparrow		47.1704862	-122.0307979
1598	40	Track 4	6/2/2006	Evening grosbeak		47.1703963	-122.0386669
1599	40	Track 4	6/2/2006	Violet-green swallow		47.1703969	-122.0374708

Lower White River



Cape Cod



City of Roy

Crescent Valley Bioblitz



June, 2005

Total Participants: 50

Total Teams: 6

Length: 24 hours

News Coverage:

2 newspapers

1 TV

Cost: \$8,148

Funding: WDFW ALEA

Grant, Pierce County

Conservation District, Pt.

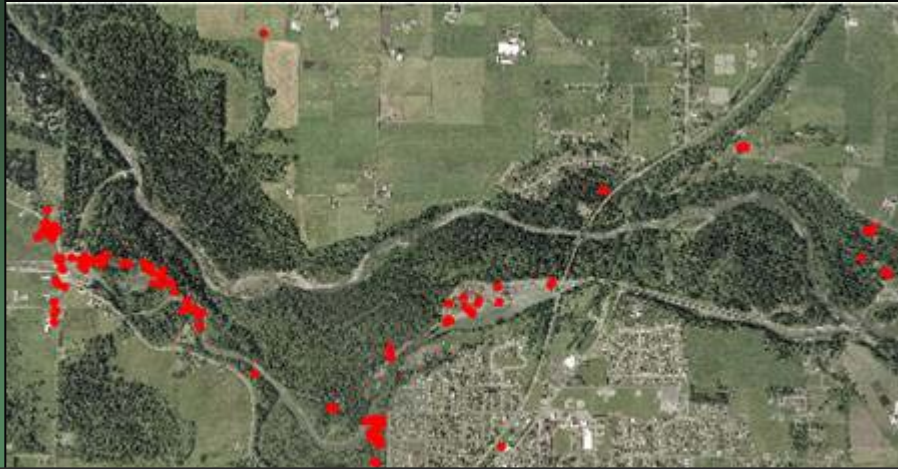
Defiance Zoo & Aquarium

Conservation Grant

Costs - examples

- Travel reimbursement (10 participants handed in their paperwork) - \$374.00
- Staff support - 160 hours over 2 months (\$4,899.20)
- Banners (\$169.73)
- Fuel (\$145.98)
- Stamps for flyers (\$93.21)
- Equipment rental:
 - Tables/chairs (\$415.07)
 - U-Haul van rental (\$124.57)
 - Food and Ice (\$379.17)
 - Catered lunch (\$375.00)
 - Display supplies (\$71.22)
 - Brochures (\$8754)
 - Totes (\$87.54)
 - Markers, Nametags, Laminating pouches, misc supplies (\$104.00)

Lower White River Bioblitzes



June, 2006

Total Participants: 100

Total Teams: 20

Length: 24 hours

News Coverage:

5 articles-3 newspapers

1 - TV coverage

Cost: \$17,300

Funding: Washington Biodiversity
Council

Earth Day – April 2007

Total Participants: 40

Total Teams: 8

Length: 12 hours

News Coverage:

2 newspapers

Cost: \$2,550

Funding: EPA Regional

Initiative Grant



Crescent Valley Predicted/Observed Species

Predicted and Observed Species for the Crescent Valley					
Biodiversity Management Area (BMA)					
<u>PREDICTED SPECIES</u>	✓	<i>Bioblitz data</i>	<i>Winter bird survey</i>	<i>NatMap workshop 4/2007</i>	<i>Seen on McNussen property</i>
<u>AMPHIBIANS</u>					
Bullfrog		X			
Ensatina		X			
Long-toed salamander					
Northwestern salamander		X	X	X	
Pacific treefrog (Chorus frog)		X	X		
Red-legged frog ⁽³⁾		X	X		
Roughskin newt		X			
Western toad ^(3,6)					
<u>BIRDS</u>					
American bittern					
American coot			X		
American crow		X	X	X	X
American goldfinch		X	X		X
American robin		X	X	X	X
American wigeon			X		
Anna's hummingbird			X	X	
Bald eagle ^(3,4,6)		X	X	X	X
Band-tailed pigeon ⁽⁴⁾		X			
Barn swallow		X			X

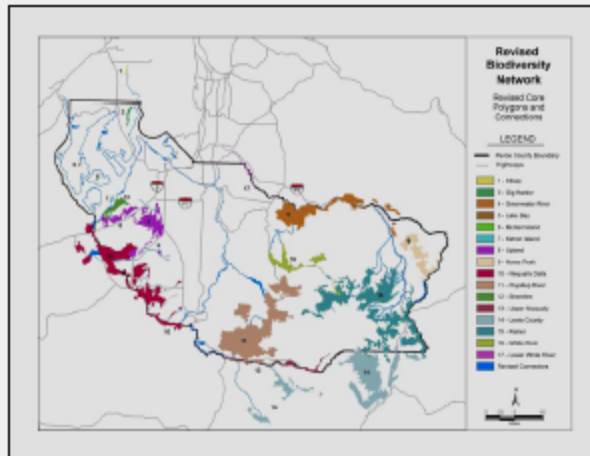


Specific reports for each of the land owners

Communities Use of Data

Pierce County Biodiversity Network Implementation Report to the Community

A Work in Progress of the
Pierce County Biodiversity Alliance
(Pierce County Planning and Land Services, University of
Washington, Washington Department of Fish and Wildlife, MetroParks
Tacoma)



What is Biodiversity Planning?

Biodiversity planning is a method used to identify land areas that provide for a biologically diverse representation of species. This planning method considers long-term ecosystem health and establishes a goal of maintaining adequate habitat to ensure the continued viability of a diversity of species within an ecoregion.

Crescent Valley Biodiversity Management Area (BMA) Stewardship Plan - July 2007

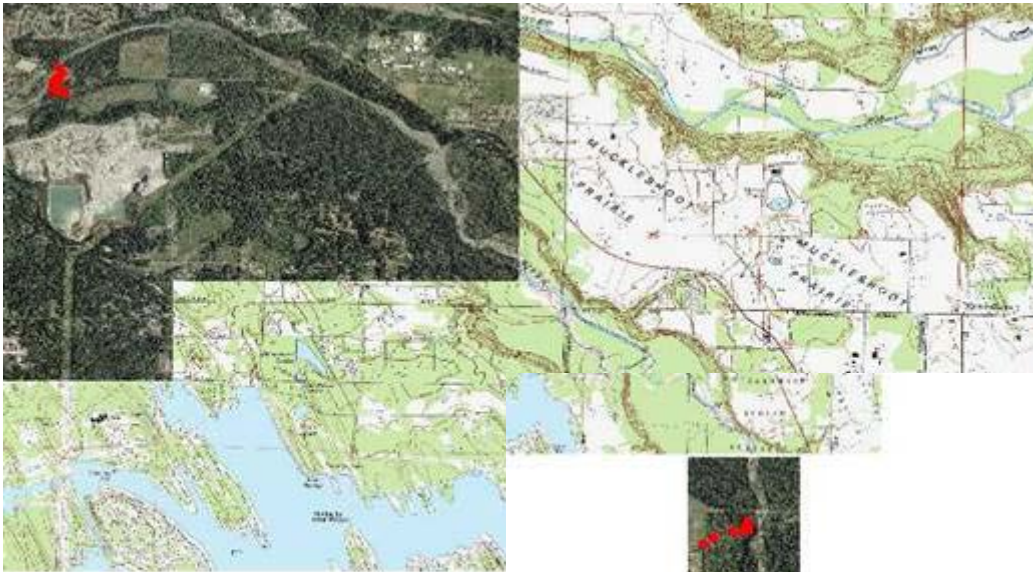
Crescent Valley Biodiversity Management Area (BMA) Stewardship Plan



Crescent Valley Alliance



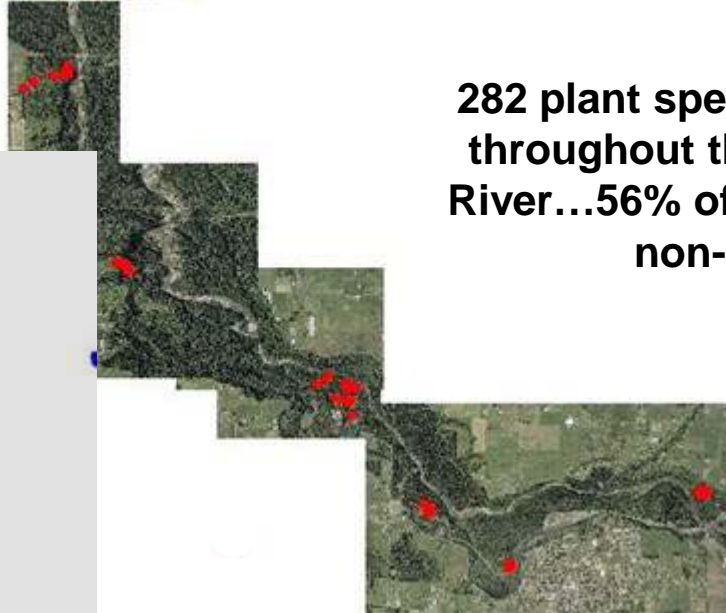
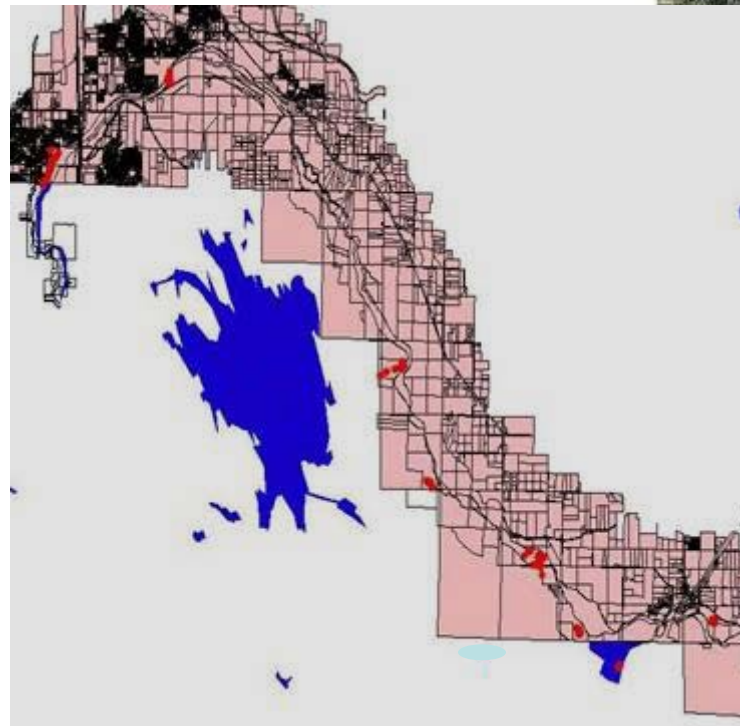
Develop plans to take to their community leaders



Lower White River Native and Non-native Plant List

Prepared for Puget Sound
Energy and Cascades Land
Conservancy

282 plant species were found
throughout the Lower White
River...56% of the plants were
non-natives



Bioblitz data were collected at the
locations marked in red

For more information:

<http://depts.washington.edu/natmap/bioblitz>