

Your Property and Climate Change: What you can do.

**Urban & Community Forestry Climate Preparedness & Response** 

October 29, 2012

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http://www.kingcounty.gov/forestryCPR http://www.kingcounty.gov/climate





The Urban and Community Forestry Climate Preparedness and Response program is funded in partnership between King County, the National Wildlife Federation, and the USDA Forest Service, Urban & Community Forestry Program. The USDA is an equal opportunity provider and employer.



October 29th Agenda:

12:05-12:25: Project background and website overview

12:25-12:40: Question and Answer; Volunteers try GIS tool and take forest health assessment

12:40-1:00: General audience input for getting the word out

1:00-1:30: Developing the communications/outreach plan





A resource for King County landowners and others interested in the relationship between climate change and forests

# LEARN

- How climate change will impact your property and forest and how to reduce these impacts
- How local forests absorb and store climate pollution

# **EXPLORE**

- Analyze your property for its existing climate change related characteristics using a map based GIS tool
- Get custom guidance by taking a simple forest health assessment resulting in recommendations just for you

# **GET CONNECTED**

- Local resources and expertise to help you take action to enhance your forest
- Incentives and partners that can help you protect your land
- Trainings and opportunities to learn how to plant trees, identify and remove invasive weeds, and more!





#### General Guidance

1 Overview

2. How Forests Reduce Local Climate Change Impacts

3. Take Action on Your Forest

#### The Forest and Climate Change Connection

Healthy forests play an exceptional role in responding to climate change because they:



Absorb and store climate pollution



Reduce local climate change impacts





#### General Guidance

How Forests Reduce Local Climate Change Impacts

- □ Climate Pollution, Climate Change and Forests
- Flooding, Climate Change and Forests
- Water Resources, Climate Change and Forests
- Salmon, Climate Change and Forests
- Forests and Climate Change
- Biodiversity, Climate Change and Forests





#### General Guidance

■ Salmon, Climate Change and Forests

The Challenge: Salmon survival

- Salmon are not only an icon to the King County region, but they are an important natural
  resource that supports commercial, sport, and tribal identities and economies. According to
  the NOAA National Fisheries Science Center, in 1996, fish caught by Washington
  commercial fishers were worth an estimated \$148 million. In addition, recreational anglers
  spent approximately \$700 million on fishing related expenses, which translated into over
  15,000 Washington jobs.
- The best available science indicates that <u>climate change impacts</u> on the freshwater period of salmon lifecycle are <u>mostly negative</u>. These impacts include increased winter flooding, (which can kill young salmon) and decreased summer stream flow with warmer river water temperatures, which can inhibit the spawning success of returning adult salmon.

The Role of Forests: Keeping streams cool, clean and productive

 Healthy forests do many things to help support salmon including filter water pollution, keep water cool, shade salmon eggs and young salmon, and provide critical habitat for bugs that feed young salmon.







# General

#### For All Sites - Yards to Forests

- Guidance 

   Plant New Trees
  - Remove Invasive and Noxious Weeds

  - Plant Climate Change Resilient Species



Resources for each action are structured in this common format:

Grow Food

What When Climate Benefits

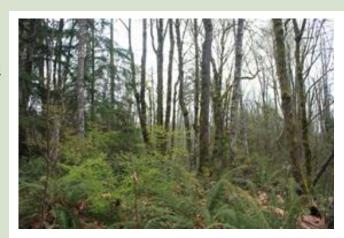
How

A quick overview
Under what circumstances you should consider the action
Information about how the action relates to climate change
Information on local programs that can **help you** take the action

For Forests

- Develop and Implement a Forest Management Plan
- <u>Thin Dense Forests</u>
- Restore Declining Red Alder Forests
- Protect your Land from Forest Fire









### General Guidance

What When Climate Benefits How

#### How

The preferred approach for weed control involves selecting from a range of possible control methods to match the management requirements of each specific site and species. The goal is to maximize effective control and to minimize negative environmental, economic and social impacts.

For all control methods, the best results will occur when methods are employed repetitively over several growing seasons. If chemical removal is necessary, make sure to follow the directions carefully.

**Mechanical removal:** Some invasive and noxious weeds – like blackberries - can be removed by pulling at the root or cutting at the base. Some species – such as field bindweed or St. Johns Wort – require removing the root system to effectively kill them.

Chemical or herbicidal removal: Using mechanical techniques is recommended when possible, but for some weeds like Giant Hogweed, which can cause ultraviolet radiation upon contact with skin, you may have to rely on herbicides. The seed banks of Giant Hogweed may contain over 1000 seeds per bloom, and eradication using chemicals is the only highly effective method.

Maintain plant cover: After removing invasive plants, replant with native species so that the weeds don't have a chance return.

\*Go back to the site of the invasive or noxious weeds once a year for five years for removal in addition to planting natives.

- Garlic mustard Manually, pull the plants after they begin to bolt until they are through the flowering and while the seed
  pods are still green (usually between April and June). Mowing will not control garlic mustard unless it is repeated
  throughout the growing season.
- <u>Policeman's helmet</u> Hand pulling is effective at all stages of life since the plant has shallow roots. Mechanical control using brush cutting tools is also effective and will reduce the risk of erosion that could happen with hand pulling.

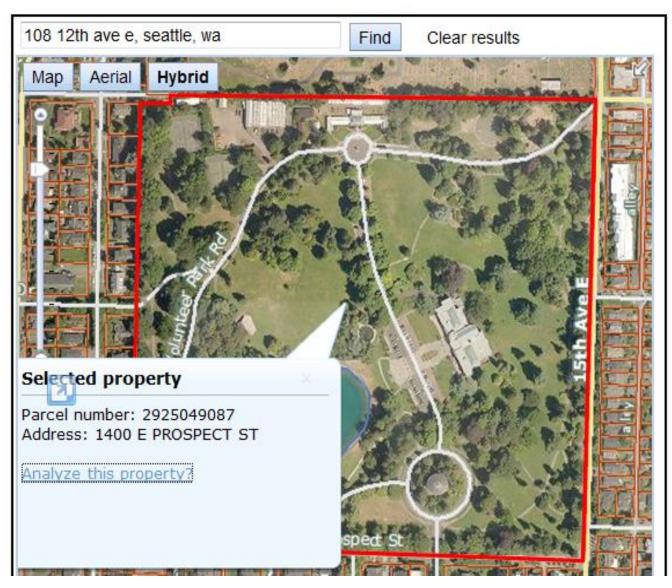
#### To Learn Details, Explore these Resources:

- <u>King County Noxious Weed Control</u>: See photos and descriptions of individual weeds to identify and get further information on specific removal instructions.
- · King County Best Management Practices: Get recommendations on specific weed removal.





Geographic Information System Tool





Geographic Information System Tool Users are provided:

- •What the characteristic represents
- •Why the characteristic is important (related to climate change)
- •Where the data comes from

#### Carbon

17727.0 MTCO2e (total) 114.0 MTCO2e per acre

Above average carbon amount
The average tree height is 41.2 feet

#### Development pressure

The nearest undeveloped parcel is under Moderate development pressure.

#### Wildlife Habitat Network(s)

A wildlife habitat network is 0.3 miles away to the East

#### Protected areas

80.0% of land within 1/2 mile is protected from development





#### Forest Health Assessment

7.	Do you l	have invasiv	e or noxio	us species	on your	property?
	60.00					

- O No
- Yes
- O Not sure

#### Are any of the weed species County Class A noxious species?

- Giant hogweed
- Garlic mustard
  - Policeman's helmet

#### or invasive species?

- Knotweeds
- Scotch broom
- Poison Hemlock
- Himalayan blac
- Bittersweet nigh
- Herb Robert
- Old man's bear
- English ivy
- Morning glory
- Yellow archang



Scotch Broom

#### 8. Which best describes the soil?

- Dark, carbon rich, well drained soil.
- Light colored sandy or rocky soil drains fast.
- Silty or clay rich soil that doesn't drain quickly.



#### Forest Health Assessment - Tailored and Prioritized Recommendations

1 Develop and Implement a Forest Management Plan

#### 2 Restore Declining Red Alder Forests

#### 3 Improve Tree Health

#### When

If some trees on your property appear to be dying or are dead, take action to make your trees healthy. Tree health can be affected by weather, disease, insect or animal damage. Symptoms may include:

- · tree and needles that appear yellow, brown, or red or if needles are dead or covered in honeydew.
- · stumps or roots seem to be rotting or dried out.
- trees may appear to have been attacked by insects such as beetles or animals such as beavers

#### **Climate Benefits**

Healthy trees not only provide a habitat for wildlife, but store large amounts of carbon in an organic form - in trunks, roots, and leaves. A healthy tree also plays an important role in flood control- one medium sized tree can absorb 2,380 gallons of rain annually!

#### How

To better gauge what challenges may be affecting your trees health, please see specific descriptions and images below:

If your trees are affected by:

- Root rot Rotting stumps, crown fade, and broken rotted roots
  - To lessen the effects of root rot on your land, removal of the rotted trees is recommended. When
    planting new trees, completely remove all old stumps and roots. For further information on root rot:

    ODF Root Rot Management (external link, Acrobat pdf)



# Why is Forestry CPR "Climate Smart"?

- Healthy forests:
  - are less vulnerable to the impacts of and reduce the impacts from climate change
    - e.g. forest fires, drought, pest infestation, extreme weather
  - provide habitat buffer zones and wildlife corridors
    - important to the protection of ecological function and biodiversity
  - store more carbon
  - provide diverse environmental, economic and health benefits
    - e.g. flood risk reduction, healthy ecosystems for salmon, cooling value and healthy places for people and wildlife

A bridge between reducing emissions and preparing for impacts

# Next Steps

- Outreach, engagement, promotion of the website
- National Wildlife Federation is sharing and promoting the tool as a model

 Longer term plan is to work to connect landowner climate action to the King County Public Benefit Rating System Program property tax incentive program



## **Questions/Suggestions?**



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