OVERVIEW

Agricultural History
Farmland Inventory Methods
Fisheries
Labor and Wages
Food Deserts
Urban Agriculture
Plans and Policies
Food Hubs
Green Restaurants
AGRICULTURAL HISTORY

Sources: Shutterstock
• Three of four counties currently have designated, protected agricultural zones.
• Aerial historic photographs of study areas
• Selected study areas:
  • King County: Green River Valley
  • Snohomish County: Snohomish River Lowlands
  • Pierce County: Puyallup River Valley

Source: King County GIS data and Pierce County GIS data, WAGDA; Snohomish County GIS data, PSRC
Snohomish County 1944

Source: 1944 US Army Corps of Engineers survey, University of Washington Map Library; agricultural zone from Snohomish County GIS data, WAGDA
Snohomish County 1991

Source: NW-91 Aerial Photo Collection, University of Washington Map Library; agricultural zone from Snohomish County GIS data, WAGDA
Snohomish County 2002

Source: 2002 USGS Aerial Photo Collection, University of Washington Map Library; agricultural zone from Snohomish County GIS data, WAGDA
King County
1944

Source: 1944 US Army Corps of Engineers survey, University of Washington Map Library; APD outline from King County GIS data, WAGDA
King County
1989

Source: SP-89 Aerial Photo Collection, University of Washington Map Library; APD outline from King County GIS data, WAGDA
King County
2002

Source: 2002 USGS Aerial Photo Collection, University of Washington Map Library; APD outline from King County GIS data, WAGDA
Pierce County 1944

Source: 1944 US Army Corps of Engineers survey, University of Washington Map Library; ARL and Rural Farm zone outlines from Pierce County zoning layer provided by PSRC
Pierce County
1994

Source: 1944 USACE Aerial Photo Collection, University of Washington Map Library; ARL and Rural Farm zone outlines from Pierce County zoning layer provided by PSRC
Pierce County
2002

Source: 2002 USGS Aerial Photo Collection, University of Washington Map Library; ARL and Rural Farm zone outlines from Pierce County zoning layer provided by PSRC
Each county has a different approach to protecting critical agricultural lands, creating a county-by-county patchwork to address the same regional problem.

Source: King County GIS data and Pierce County GIS data, WAGDA; Snohomish County GIS data, PSRC
FARMLAND INVENTORY METHODS
Introduction

• Counties inventory farmland through different methodologies

• Hard to compile, hard to compare

• These differences create issues for regional data collection, making it difficult to make regional policy decisions
• Open space tax classifications
• Community outreach for determining land cover and land use
• Windshield surveys
• Focus on GMA agricultural resource land
Recommendations

• Create a forum for discussion between managers regarding inventory methods and data types

• Determine baseline data that could be collected in each county
DISCUSSION
Why Are Vessels Important?

Average Annual Expenditures

Crabber = $550,000

Purse Seiner = $220,000

Source: Martin Associates, The 2007 Economic Impact of the Port of Seattle (February 2009), Prepared for Port of Seattle.
Why is it Important to Count Vessels?

Economic Impact at Fisherman’s Terminal

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2007</th>
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</thead>
<tbody>
<tr>
<td>Commercial vessels</td>
<td>370</td>
<td>250</td>
</tr>
<tr>
<td>$ spent locally</td>
<td>$79.7 million</td>
<td>$43.8 million</td>
</tr>
<tr>
<td>Jobs supported</td>
<td>5,524</td>
<td>3,424</td>
</tr>
</tbody>
</table>

Sources: Number of vessels from phone interview with Washington State Department of Licensing (2003, 2007) and interview with Ray Giometti, Fishermen’s Terminal Operations Manager (May 4, 2011). Other data in table from Martin Associates, The 2003 Economic Impact of the Port of Seattle (September 2004), Prepared for Port of Seattle; Martin Associates, The 2007 Economic Impact of the Port of Seattle (February 2009), Prepared for Port of Seattle.
## Different Accounting Methods

<table>
<thead>
<tr>
<th>State of Washington</th>
<th>Fisherman’s Terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washington Dept. of Fish and Wildlife</td>
<td>Port of Seattle</td>
</tr>
<tr>
<td>3524 jobs</td>
<td>3424 jobs</td>
</tr>
<tr>
<td>$65.1 million</td>
<td>$79.7 million</td>
</tr>
<tr>
<td>Value of Fish</td>
<td>Operation, Maintenance and Repairs</td>
</tr>
</tbody>
</table>

### Price per Pound of Sockeye Salmon (2010 dollars)

![Graph showing price per pound of Sockeye Salmon from 1950 to 2010](price_graph.png)

• Fisheries offer an opportunity for economic development

• Central Puget Sound fleet is decreasing

• More data is needed to determine the economic impact of fisheries
Economic Clusters and the Food System

The Food System
~140,000 jobs

Specialty Foods
15,166 jobs

Tourism
68,566 jobs


Jobs data from in 2001
### How Many Farmworkers?

<table>
<thead>
<tr>
<th>Farmworker Survey</th>
<th>Number</th>
<th>Annual Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Agricultural Worker Survey</td>
<td>3,564 migrant and seasonal workers</td>
<td>$10,000-$12,499</td>
</tr>
<tr>
<td>Washington Employment Security Department</td>
<td>5,510 agricultural workers</td>
<td>$21,446</td>
</tr>
<tr>
<td>Washington Farmworker Housing Trust</td>
<td>Unknown workers</td>
<td>$15,612</td>
</tr>
</tbody>
</table>

Hourly Living Wage in the Central Puget Sound

Source: Pennsylvania State University, Living Wage Calculator
Hourly Living Wage in the Central Puget Sound

Source: Pennsylvania State University, Living Wage Calculator

One Adult, One Child

- **Living Wage**:
  - King County: $16.31
  - Kitsap County: $16.57
  - Pierce County: $16.93
  - Snohomish County: $17.50

- **Poverty Wage**:
  - $8.75

- **Minimum Wage**:
  - $6.68

Source: Pennsylvania State University, Living Wage Calculator
Food Processing Wages in 2009

4,740 out of 8,260

Food Retail Wages in 2009

123,470 out of 145,600

• Coordinated food system partnerships
• Food hub employment
• Food system trade associations
• Career ladders
• Paid medical leave
• Living wages
• Farm succession initiatives
DISCUSSION
FOOD DESERTS

Source: Shutterstock
What Is a Food Desert?

“An area in the United States with limited access to affordable and nutritious food, particularly such an area composed of predominantly lower-income neighborhoods and communities.”

2008 U.S. Farm Bill
Factors considered:

1. Low income
2. Proximity to grocers
3. Transit access
Example: Pierce County
Income levels

Source: Pierce County GIS data, WAGDA
Grocer locations

Source: Pierce County GIS data, WAGDA; 2008 Food & Nutrition Service database
Proximity to grocers

Source: Pierce County GIS data, WAGDA; 2008 Food & Nutrition Service database; Pierce Transit
Food Deserts — Percentage of blocks with low income and low access

Source: Pierce County GIS data, WAGDA; 2008 Food & Nutrition Service database; Pierce Transit
Transit Access — Impact of transit service on grocery accessibility

Source: Pierce County GIS data, WAGDA; 2008 Food & Nutrition Service database; Pierce Transit
Estimated Food Desert Population Outside of Walking Distance*

*not accounting for population distribution

<table>
<thead>
<tr>
<th></th>
<th>Percent of Census Block as Food Desert (%)</th>
<th>Population</th>
<th>Percent of Total Population (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>King</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-75</td>
<td></td>
<td>50,879</td>
<td>2.6</td>
</tr>
<tr>
<td>75-100</td>
<td></td>
<td>74,515</td>
<td>3.9</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>125,394</td>
<td>6.5</td>
</tr>
<tr>
<td>Snohomish</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-75</td>
<td></td>
<td>17,212</td>
<td>2.4</td>
</tr>
<tr>
<td>75-100</td>
<td></td>
<td>26,243</td>
<td>3.7</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>43,455</td>
<td>6.1</td>
</tr>
<tr>
<td>Pierce</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-75</td>
<td></td>
<td>28,912</td>
<td>3.6</td>
</tr>
<tr>
<td>75-100</td>
<td></td>
<td>79,097</td>
<td>9.9</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>108,009</td>
<td>13.6</td>
</tr>
<tr>
<td>Kitsap</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-75</td>
<td></td>
<td>7,562</td>
<td>3.0</td>
</tr>
<tr>
<td>75-100</td>
<td></td>
<td>23,221</td>
<td>9.2</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>30,783</td>
<td>12.3</td>
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</table>
## Estimated Food Desert Population Outside of Transit Service and Walking Distance*

*not accounting for population distribution*

<table>
<thead>
<tr>
<th>County</th>
<th>Percent of Census Block as Food Desert (%)</th>
<th>Population</th>
<th>Reduction of Food Desert Population (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>King</td>
<td>50-75</td>
<td>29,292</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>75-100</td>
<td>46,372</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>75,664</td>
<td>40</td>
</tr>
<tr>
<td>Snohomish</td>
<td>50-75</td>
<td>11,070</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>75-100</td>
<td>19,349</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>30,419</td>
<td>30</td>
</tr>
<tr>
<td>Pierce</td>
<td>50-75</td>
<td>16,744</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>75-100</td>
<td>49,017</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>65,761</td>
<td>39</td>
</tr>
<tr>
<td>Kitsap</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
• Urban cores tend to have greatest access.
• Urban peripheries face food access challenges.
• Transit lines have a substantial effect on food access.
• Bring together community groups and government to best address local concerns and context.
• Policy considerations may improve access.
  • Coordinate transit systems with food retail
  • Promote community level programs
Going Beyond the P-Patch

• To share national examples of urban agriculture
• To review comprehensive plans for the five metropolitan cities in the region
• To determine what urban agricultural activity is happening in the region
• To determine how urban agriculture has been counted and surveyed across the region
• To propose a new methodology for identifying potential sites for food urban production
Understanding Urban Agriculture

**PRODUCTION**
- Small-scale private production
- Municipal leadership
- Institutional services
  - Food access interventions
  - Commercial production
  - Birds and bees

**SPATIAL APPLICATIONS**
- Single-family home
- Corporate campus
- Municipal campus
- University campus
  - Schoolyard
  - Restaurant
  - Prison
  - Hospital
  - Park
  - Balcony
  - Alleyway
  - Right-of-way
  - Rooftop
  - Vacant lot
  - Infrastructure corridor
  - Edible landscaping

**OBJECTIVES**
- Grow food
- High yield
- Food security
- Community building
- Education
- Demonstration
- Job training
- Income generation
Comprehensive Plan Coverage

- Where is urban agriculture discussed?
- Where could it be included?
  - Bellevue
  - Bremerton
  - Everett
  - Tacoma
  - Seattle

Downtown Element
Theme 2.3E
Grow Community Through Food Security
<table>
<thead>
<tr>
<th></th>
<th>BELLEVUE</th>
<th>BREMERTON</th>
<th>EVERETT</th>
<th>SEATTLE</th>
<th>TACOMA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong># of Gardens</strong></td>
<td>2/0</td>
<td>2/0</td>
<td>4/1</td>
<td>75/9</td>
<td>19/4</td>
</tr>
<tr>
<td><strong>Managed by</strong></td>
<td>City Parks Department</td>
<td>City Parks Department and Port of Bremerton</td>
<td>Various Neighborhood Associations</td>
<td>P-Patch Trust, Department of Neighborhoods and independent organizations</td>
<td>Metro Parks Service, neighborhoods and independent organizations</td>
</tr>
<tr>
<td><strong>Plot Size (sq. ft.)</strong></td>
<td>400</td>
<td>200 – 400</td>
<td>150 – 21,750</td>
<td>100 – 400</td>
<td>20 – 700</td>
</tr>
<tr>
<td><strong>Price/Square Foot</strong></td>
<td>$0.15</td>
<td>$0.11</td>
<td>$0.20</td>
<td>$0.16 – 0.34</td>
<td>$0.05 – 0.47</td>
</tr>
<tr>
<td><strong>Smallest Garden</strong></td>
<td>Crossroads Garden</td>
<td>Port of Bremerton</td>
<td>Port Gardner Neighborhood Garden</td>
<td>Pelican Tea</td>
<td>Yakima Ave Garden</td>
</tr>
<tr>
<td></td>
<td>4,000</td>
<td>unknown</td>
<td>704</td>
<td>1,000</td>
<td>approx. 700</td>
</tr>
<tr>
<td><strong>Largest Garden</strong></td>
<td>Lake Hills Greenbelt</td>
<td>Blueberry Park</td>
<td>Snohomish River Valley Garden*</td>
<td>Thistle Garden</td>
<td>Le Grande Garden</td>
</tr>
<tr>
<td></td>
<td>31,000</td>
<td>9,600</td>
<td>300,000</td>
<td>152,250</td>
<td>7,500</td>
</tr>
</tbody>
</table>
Identifying Potential Sites

Identify all parcels

Exclude “low likelihood” sites

Rate sites on physical potential (track specific)

Rate sites on need/demand

Site-specific aerial analysis
“The county should develop incentives that support local food production and processing to reduce energy use, increase food security and provide a healthy food supply.”

King R-662
“The county shall promote the expansion of agricultural enterprises such as agritourism, specialty and niche agriculture and especially greenhouses and hydroponic farming on [certain areas.]”

Snohomish LU 7.C.5
Plan and Code Language

- Standard food systems vision/goal
- Basic, adaptable comprehensive plan language and resolutions
- Widely relevant, model code language for cities
Encourage the development of designated neighborhood centers so as many of the city's residents as possible are within approximately ½ mile of a grocery or convenience store and a transit stop. Such centers should be separated by at least ½ mile from existing or planned neighborhood commercial areas.

Policy LU 3.5 (Olympia, Washington)
Open Space/Parks

Encourage and support community gardens as important open space resources that build communities and provide a local food source.

Policy OS-8 (Berkeley, California)
DISCUSSION

Food Deserts

Urban Agriculture

Plans and Policies
FOOD HUBS

Source: Jenny Ngo
“A centrally located facility with a business management structure facilitating the aggregation, storage, processing, distribution, and/or marketing of locally/regionally produced food products.”

- USDA working definition
About Food Hubs

• More than 100 across the United States
• Mostly wholesale operations, average $1 million in annual sales
• More than half were started in the last five years
Why Food Hubs?

- Demand for local food
- Challenges for small and midscale farmers
- Central Puget Sound regional context
- PSRC goals on Agriculture and Economic Development

Source: 2007 Census of Agriculture, U.S. Department of Agriculture
The Wedge

- Opened in 1979 in Minneapolis, MN
- Employs 260 people
- Total annual sales of $42 million in 2010

- Puget Sound region and the Everett Public Farmers Market
Key Considerations

- Demand for locally and regionally grown food
- Careful market analysis
- Support for farmers
- Creativity with funding
- Look for innovative business opportunities
Introduction: *Road Map to Greener Restaurants*

- Road Map that incorporates the 3 major tenets of sustainability
- Checklist with recommendations
- Emphasis on local incentives and resources
# Introduction

## Food Sourcing

- Do you serve the same menu year-round?
- What percentage of entrees are vegetarian?
- Are products that cannot be produced locally or regionally traded fairly?
- Do you know where and how your meat and dairy are raised?
- Do you use conventionally raised chicken or eggs?
- Do you serve beer, wine, or liquor that is produced locally?
- Do you serve fish that are on the ‘avoid’ section of the Seafood Watch?
- How much meat, cheese, and produce is raised, made, and/or grown in the region?
- What percentage of food that you serve is organic?
- Is any of the food served produced on-site?

## Water

- Do you serve water only by request? Do you let your customers know about your water-saving efforts? Have you conducted a water assessment?
- Are your kitchen faucets and appliances low-flow or high-efficiency?
- Are your bathroom faucets low-flow or high-efficiency? Are your toilets and urinals rated for high water efficiency?
- Does your restaurant have exterior space that is landscaped?
- Do you collect roof runoff?

## Energy and the Built Environment

- Can you reduce your energy use?
- Can you reduce your appliance energy use?
- Where does your furniture come from?
- Have you considered reducing transportation impacts?
- How are you reducing your Heating, Ventilation, Air Conditioning (HVAC) impacts?
- Do you produce your own energy?
- Thinking of remodeling?
Does your restaurant have exterior space that is landscaped?

TAKE ACTION!

☐ Xeriscape (use native plants and/or plants that do not require extra water on a regular basis).

☐ Use water-efficient irrigation and only water when necessary, or install a sensored system.

☐ Consider growing produce or starting a restaurant or chef’s garden.

☐ Install a green roof/garden roof.

INCENTIVES

Saving Water Partnership, Seattle and Participating Local Water Utilities
Rebates of $300-$450 are offered for sensored irrigation systems.
http://savingwater.org/outside_sprinklers.htm

RESOURCES

Seattle Urban Farm Company consults with clients to set up small scale gardens.
http://www.seattleurbanfarmco.com/

Saving Water Partnership, Seattle and Participating Local Water Utilities lists landscape or irrigation contractors.
http://savingwater.org/outside_sprinklers.htm

Built Green, Master Builders Association of King and Snohomish Counties, is a network of architects, builders, subcontractors, suppliers and real estate agents.
http://www.builtgreen.net/members.html

Northwest EcoBuilding Guild Green Pages provide a directory of sustainable building professionals, techniques, strategies and products for the Northwest.
http://www.ecobuilding.org/gp

Seattle Tilth is a nationally recognized non-profit educational organization dedicated to inspiring and educating people to garden organically and conserve natural resources. One of their services is the Landscape Consultation Service, for both edible and decorative landscapes.
Findings and Conclusions

- Wide range of recommendations
- Many low cost, simple strategies
- Policy support for green restaurants?

Source: Eva Ringstrom