Portland Fruit/Nut Tree Report

Portland Multnomah Food Policy Council members

Affiliations are provided for identification purposes and are not intended to represent the formal participation of any agency or organization.

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I. Executive Summary

In August 2007, in response to City of Portland (CoP) staff recommendations, a subcommittee of the Portland/Multnomah Food Policy Council's Food Access Committee began research and analysis of existing CoP policies regarding fruit/nut tree plantings in the public right-of-way. Although the Portland/Multnomah Food Policy Council's scope includes both the City and the County, the scope of this report and analysis centered on the conditions within the City of Portland.

These recommendations were developed in conjunction with staff from The Bureau of Planning and Sustainability, the Urban Forestry Division and the Community Garden Project of Portland Parks and Recreation and various stakeholders. Project goals included the following:

- 1. Highlight current and future opportunities for and benefits of fruit/nut tree plantings.
- 2. Increase public knowledge of appropriate fruit/nut trees to be planted in this region, also serving to reduce planting of inappropriate fruit/nut trees.
- 3. Increase the nursery industry's supply of appropriate fruit/nut trees by increasing awareness of and commitment to demand.
- 4. Recognize food production at the same level of importance as canopy size (carbon sequestering) to reduce city's carbon footprint.

Research in the following areas supports the inclusion of fruit/nut trees in City documents, standards and policies:

- Improve Health and Nutrition
- Reduce Carbon Emissions
- Increase Food Security
- Peak Oil Standpoint

The Portland Fruit/Nut Tree Report describes five primary recommendations and three secondary recommendations:

- 1. Fruit/Nut Tree inclusion within the Citywide Tree Policy Review and Regulatory Improvement Project (CTPRRIP)
- 2. Fruit/Nut Tree inclusion within the Bureau of Environmental Services, Grey to Green Initiative
- 3. Expand current Public-Private Partnerships for Urban Orchards
- 4. Use existing City Urban Forestry programs for outreach and education of fruit/nut Trees.

Secondary recommendations:

- 1. Continue to include appropriate language into existing City of Portland policies and management plans regarding fruit/nut tree selection & appropriateness
- 2. Encourage registration of all newly planted fruit/nut trees
- 3. Recognize fruit/nut tree organizations as potential collaborators

A list of resources and partner organizations is also provided in the Report.

II. Introduction

The original motivating opportunity to create this report was a response to City of Portland staff recognition of language in the Urban Forest Action Plan (Feb 2007) that held opportunity for increased fruit/nut tree plantings in Portland. The statement read, 'Support planting of food-producing trees in appropriate locations'. Lead: Office of Sustainable Development (Goal 3, Outcome B, Livability, Medium Priority, 5 Year Actions).

The food access sub-committee of the Portland Food Policy Council convened several meetings with staff from The Bureau of Planning and Sustainability, the Urban Forestry division and the Community Garden Program of Portland Parks and Recreation, and various stakeholders including Friends of Trees, Home Orchard Society, Portland Fruit Tree Project, to determine and make a formal recommendation to City staff regarding opportunities for planting appropriate fruit/nut tree varieties.

Below is a discussion of related issues including health/nutrition, carbon emission reduction, food security and peak oil. In short, global food prices are on the rise due to fluctuating oil prices and the dependency on petroleum based fertilizers and pesticides. In the coming months and years, Portlander's ability to grow some or all food on a smaller scale may become more important as a means of securing access to healthy and fresh fruits, nuts and vegetables. The following represent our recommendations to proactively meet this demand and bring food production safely into the mix as part of the City's response to a changing environmental and socioeconomic landscape.

III. Justification: The multi-perspective benefits of fruit and nut trees for human and environmental health

Improve Health and Nutrition

o Research shows that eating more fruits and vegetables is good for health. In addition to decreasing the risk of many chronic diseases, fruits and vegetables are naturally low in fat and help people feel full on fewer calories. Consequently, eating fruits and vegetables helps people maintain a healthy weight. 2005 statistics found that in Oregon, 43% of men and 29% of women are overweight, and 25% of men and 24% of women obese. Obesity rates are even higher for the economically disadvantaged. The Dietary Guidelines for Americans recommend 4½ cups of fruits and vegetables per day for most adults. Approximately 26% of Oregon adults eat five or more servings of fruits and vegetables a day, only half of the recommended amount. Almost all Oregonians need to eat more fruits and vegetables for a healthy diet.

Reduce Carbon Emissions

- o *Carbon Sequestration:* A small tree may sequester approx 28 lbs of CO2 where as a larger tree will sequester about 263 lbs annually. Small trees (25ft) have an economic net benefit of \$11.73, and larger trees (46ft) of \$51.46, including environmental and other benefits. ⁴
- o *Reduced Food Miles:* Pear trees grow to about 30ft, considered a small tree by the above standards. A truck-full of pears that travels 900 miles from San Diego by road will add 4,725 lbs of CO2 to the atmosphere. If those same pears were grown locally, there would be little to Zero CO2 added to the atmosphere. In fact, locally grown pears would become a *net sequestration* of CO2 given the canopy effects of these small trees. Larger fruit trees with larger canopy would have even greater benefits.⁵

Increased Food Security

2006 Census of Multnomah County shows 15.6% of individuals falling below 100% of the federal poverty guidelines (FPG) of \$21,000 for a family of 4. This statistic would likely be much higher if the FPG's ,which have not been modified in years, were reflective of a more realistic basic budget of \$45,274 for a family of 4.6

- 5,000 lbs of locally grown tree fruit was picked in 2008 by the Portland Fruit Tree Project (PFTP), 75% of which was distributed to approximately 1000 low income households. The PFTP estimates this amount will double in 2009 and again in 2010, as they expand their services and capacity. Increasing the opportunities for locally grown fruit trees would continue to provide a significant resource for this under-served community.
- o "Rising food prices will put added demand on food assistance programs. At the same time the costs of food assistance will rise and donations may falter as a result of a broader economic downturn. The effectiveness and adequacy of the food assistance and emergency food distribution system will suffer without targeted efforts to bolster its resources..."

From the Peak Oil Standpoint

The availability of oil is decreasing. "Peak oil will increase the cost of growing, transporting, processing and distributing food, and the costs of food to the consumer will rise. Foods that are highly dependent on fertilizer inputs, transported over long distances, require time-sensitive refrigerated transport or are highly processed will experience the most significant cost increases....Rising fuel prices will increase pressure to transport food that is currently shipped by truck or air to rail or ship/barge. Some foods that are extremely time sensitive in shipping or that do not have enough value per unit weight or volume may not be shipped at all (i.e. fruits and vegetables)".

IV. A list of appropriate trees for the Portland Metro Region

A list of trees appropriate for this region has been compiled by collaborative efforts between Friends of Trees (FOT), the Home Orchard Society, Portland Parks and Recreation Community Garden Program, the Portland Fruit Tree Project and independent experts as part of this policy creation. In 2007-2008, one hundred and seven total fruit trees were procured and promptly sold to the public by FOT. In 2008-2009, one hundred and two were procured by FOT and are selling rapidly. According to FOT, the demand outweighs the current supply of appropriate size and type of nursery stock.

- o Pears: 4-way, 'Bartlett' Dwarf, 'Bartlett' Semi-Dwarf, 'Red Bartlett' Dwarf, 'Red Bartlett' Semi-Dwarf
- o Figs: 'Brown Turkey', 'Oregon Prolific', 'Desert King'
- o Plums: 'Shiro' Japanese, 'Beauty' Semi-dwarf
- Snowcloud Serviceberry
- o Mulberry: White, Spanish, Weeping
- Apples: 'Enterprise' Semi-Dwarf, 'Jonagold' Semi-Dwarf, 'Akane', 'Chehalis', 'Liberty', 'Prima',
 'Tydeman Red' (apple scab resistant)
- O Asian Pears: 'Chojuro' Semi-Dwarf, 'Hosui', 'Kosui', 'Shinseiki'
- o Persimmons: 'Chocolate' and 'Fuyu'
- Chestnuts: 'Colossal Chinese'
- Walnuts
- o Pineapple Guava (edible flowers and potentially might set fruit)
- o Blueberries: 'Duke', Blueray', Bluecrop', 'Legacy', 'Darrow'
- o Ribes: Currants and gooseberries
- o Grapes: 'Vanessa', 'Price', 'Interlakken' and 'Himrod'
- o Kiwis: 'Haward', 'Ananasnaya'

V. Case study: A review of numbers.

To further illustrate the implication of additional fruit/nut trees, the following case study is provided:

- o A conservative estimate of annual yields and heights of several recommended fruit/nut trees at maturity are: Mulberry-100 lbs (80ft.), Chestnuts- 250 lbs (50ft), Persimmons-400 lbs (20ft).
 - If each year, 25% or 400 trees planted were fruit/nut trees (200 Mulberry, 100 Chestnut and 100 Persimmon), then at maturity, a minimum of 85,000 pounds of fresh produce could be introduced into our local food system each year. A reduction of imported foods during the growing season would conserve large amounts of fossil fuels and reduce carbon emissions.
 - These same 400 mature trees could sequester, conservatively, 81,700 lbs of CO2 through their canopy alone. ³
 - Harvested fruit allowed for sale could provide significant income. For example, local growers can sell chestnuts at profitable prices, up to \$5.00/lb. retail, a \$1,250.00 profit per mature tree.

VI. Current Policy and Regulatory Environment

The City of Portland's Bureaus are involved in some capacity with the regulation and management of trees and tree policies on public and private land. This Report does not recommend changes to Title 33 or other City code, but highlights these sections and policies for cross-referencing.

- Ocity Code Title 33: Zoning Code: Landscaping and Screening Standards -33.248.010: This chapter recognizes the aesthetic, ecological and economic value of landscaping and requires its use for many purposes, including: To preserve and enhance Portland's urban forest; promote the reestablishment of vegetation in urban areas for aesthetic, health, and urban wildlife reasons; aid in energy conservation by providing shade from the sun and shelter from the wind; mitigate for loss of natural resource values.
- Portland Comprehensive Plan Assessment (Draft, April 1, 2008): Highlights the need for access to healthful and locally-grown food in the sections: Environment, Opportunities: Public Health and Safety as well as Sustainability, Current Condition and Trends: Food.
- The Bureau of Planning and Sustainability's work that relates to urban forestry includes:
 Supporting, planting and maintaining trees to improve local air quality, sequester carbon and reduce greenhouse gases, thereby slowing climate change.

VII. Primary Recommendations

As a result of this research, the Subcommittee has identified five Primary Recommendations. These recommendations build upon existing City programs to provide strong opportunities for potential implementation.

- 1. Inclusion of Fruit/Nut Trees in the Citywide Tree Policy Review and Regulatory Improvement Project (CTPRRIP):
 - o Create a simplified Fruit/Nut Tree Brochure and Poster for widespread distribution
 - Collaborate with fruit/nut tree related organizations to create brochure and poster that can
 be used by Grey to Green initiative, the Neighborhood Tree Liaison Program, the
 Portland Fruit Tree Project, Friends of Trees, and placed on BPS website as a basic
 resource to increase public and industry awareness and benefits of fruit/nut trees and
 shrubs
 - Brochure and Poster can include appropriate fruit/nut tree and shrub selection for the region, maintenance and safety.

- Distribute brochure to all regional nurseries and landscape architects to encourage propagation of and thus increase availability of appropriate fruit/nut trees and food producing shrubs for region.
- Post on City of Portland website for easy access.

o Support the funding and production of the City Tree Project's Tree Manual

- The Tree Manual, if funded, will compile city requirements and information related to trees in a single user-friendly document. The Tree Manual will contain a strong educational component along with technical standards and best management practices for tree planting, care, protection, and removal. The information in the tree manual could be updated more frequently than city codes to address new information and community priorities relating to trees, including food trees.
- o Support creation of a Fruit/Nut Tree section in the Tree Manual that raises public awareness of the benefits of fruit/nut trees as a local, healthy food source.
 - Fruit/Nut Section of Tree Manual to include:
 - List of appropriate fruit/nut tree options for homeowners, businesses, and institutions (e.g., schools) seeking information about suitable yard trees
 - Including a carefully selected list of fruit/ nut trees in the manual and brochure would encourage people to plant only the most appropriate fruit/nut trees, and discourage the planting of inappropriate trees.
 - Outline permit application process and guidelines for those interested in planting fruit trees as street trees in planting strips wider than 6 feet with overhead power-lines.
 - Specific guidelines for planting and maintenance of fruit/nut trees.
 - Encourage planting of other food producing foliage such as shrubs, i.e. raspberries and blueberries.
- As outlined in the Zoning Code and the proposed new citywide Tree Title, add that landscaping and trees serve as a "provision of food for wildlife and people".
- 2. Include Fruit/Nut Trees within the Bureau of Environmental Services, Grey to Green Initiative
 - Promote fruit/nut trees as option for the 33,000 Yard Trees to be planted as part of initiative over the next 5 years.
 - As part of this initiative, include the Fruit/Nut Tree Brochure as an educational tool.
 - Post fruit/nut tree information to the City of Portland public website.
 - Target goal: 33% yard trees are fruit trees.
- 3. Expand current Public-Private Partnerships for Urban Orchards
 - Increase quantity of urban orchards, via partnership/expansion through new and existing programs.
 - Urban orchards could produce thousands of pounds of quality food for Portland communities. Once established, trees will produce year after year for decades, while also providing benefits of urban canopy and wildlife habitat. Planting numerous trees at individual sites (Urban Orchards) maximize efficiency of maintenance and harvest of fruit/nuts
 - Promotion in Public Spaces:
 - Designate public land from Portland Parks, Water Bureau, County Digs, and/or Diggable City inventory to be used as urban community orchards in Partnership with Portland Fruit Tree Project (PFTP). PFTP will plant, maintain and harvest community orchards, and distribute fruit to food

banks and low-income community members. Community Orchards will also serve as demonstration/educational sites.

- Promotion in Private spaces:
 - Encourage citizens, churches, schools, hospitals, corporations to grow food for public consumption.
- 4. Use existing City's Urban Forestry programs for outreach and education
 - Incorporate Fruit and Nut Trees into the Neighborhood Tree Liaison Program (NTLP) administered by Portland Parks & Recreation
 - The NTLP trains volunteers to be local leaders who promote proper tree care and serve as a resource for his/her neighborhood on tree issues. A 10-session course covers general tree care, tree biology, tree planting, preservation, and identification. Once trained, liaisons work with PP&R staff on tree projects in their neighborhood.
 - Include information on fruit/nut tree care, selection and safety as part of the educational process for homeowners and community members. (BPS Fruit/Nut Tree brochure recommended above could be used for this purpose)
 - Collaborate with related community organizations (PFTP, Portland Community Gardens, Home Orchard Society, and Friends of Trees) to incorporate Fruit Trees as the main topic for one of the sessions of NTLP training.
 - Hold training for city Tree Inspectors on information outlined in the fruit/nut tree section
 of the Tree Manual (mentioned above), for the purpose of communicating with home and
 business owners regarding fruit/nut tree selection & appropriateness, planting,
 maintenance, health and safety.
 - Consider including a representative for the voice of Fruit/Nut Trees on the Urban Forestry Commission

VIII. Supportive Actions

This research also supports the following three additional actions:

- 1. Continue to include appropriate language into existing CoP/County policies & management plans regarding fruit/nut tree selection & appropriateness
 - o Urban Forest Action Plan, Management Plan & Canopy Report
 - o City Comprehensive Plan
 - o Climate Change plan
- 2. Encourage registration of all newly planted fruit/nut trees
 - o Encourage city to adopt registration form used by Portland Fruit Tree Project (PFTP) in order to determine whether trees will be harvested by owner or PFTP.
 - The PFTP's mission is to increase equal access to fresh, healthy food and foster stronger communities by empowering neighbors to share in the bounty and care of urban fruit and nut trees while promoting community knowledge-sharing and self-sufficiency through education in food preservation and fruit tree cultivation.
 - Gives one more level of accountability to address harvesting needs, even if property owner changes.
 - Publicize registration through the City of Portland website
 - Support PFTP in order that all newly planted fruit trees get registered and existing trees in ROW causing nuisance get attended to.
- 3. Recognize fruit/nut tree organizations as potential collaborators

- o Friends of Trees
- o Portland Fruit Tree Project
- Neighborhood Tree Liaison Program
- o Portland Community Gardens
- Home Orchard Society
- o Growing Gardens

IX. Existing Organizations and Programs Whose Work Would Support This Initiative

o Friends of Trees

Annual fruit tree give-away, neighborhood tree plantings, tree care education

Contact: Brighton West, Program Director

503-282-8846 ext. 19

brightonw@friendsoftrees.org

Home Orchard Society

Provide resources and educational events for home-scale fruit cultivation. Maintain demonstration orchard in Clackamas County

Contact: Karen Tillou, Orchard Director

503-338-8479

arboretum@homeorchardsociety.org

Neighborhood Tree Liaison Program (Portland Parks & Recreation)

Trains volunteers to promote proper tree care and serve as a resource for his/her neighborhood on tree issues.

Contact: Karl Dawson

kdawson@ci.portland.or.us

503-823-1650

Oregon State Extension

Provide relevant, research-based education and outreach to the public of Clackamas, Multnomah, and Washington Counties about horticulture and household pests. This information promotes sustainable practices that minimize risks to human health and the environment.

Contact: Weston Miller

weston.miller@oregonstate.edu

503-650-3124

Portland Community Gardens

Provide workshops on fruit tree care. Plant and care for fruit trees in Community Gardens.

Contact: Leslie Pohl-Kosbau, Director

503-823-1612

pkleslie@ci.portland.or.us

Portland Fruit Tree Project

Organize volunteers to harvest and distribute fruit from existing fruit trees, provide education in tree care, future plans for community orchard plantings.

Contact: Katy Kolker, Director

503-284-6106

katy@portlandfruit.org

X. References

- 1. www.healthoregon.org/hpcdp/physicalactivityandnutrition
- 2. Behavioral Risk Factor Surveillance System-2005, http://apps.nccd.cdc.gov/brfss/race.asp?cat=OB&yr=2005&qkey=4409&state=OR
- 3. http://www.healthypeople.gov/data/midcourse/html/focusareas/FA19Objectives.htm.
- 4. McPherson, E. Gregory, et al. Western Washington and Oregon Community Tree Guide. Benefits, Costs and Strategic Planning. Center for Urban Forestry Research, USDA Forest Service, Pacific Southwest Research Station. 2002 pp 28&30.
- 5. Estimates from the Bureau of Planning and Sustainability
- 6. http://www.organiclinker.com/food-miles.cfm
- 7. Oregon Food Bank staff and resources, Portland, OR
- 8. Portland Fruit Tree Project staff and resources, Portland, OR
- 9. Portland Peak Oil Task Force Report-Draft, Dec 2006
- 10. Home Orchard Society staff and resources, Portland, OR