



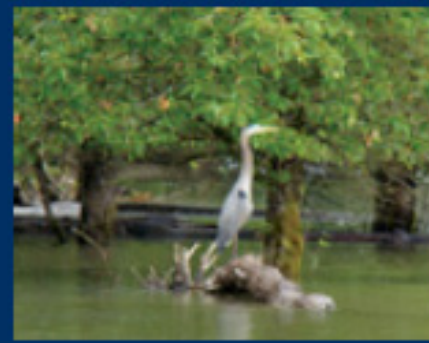
West Hayden Island Project

Health Analysis
November 13, 2012



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West Hayden Island Health Analysis

November 2012



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Acknowledgements

Lillian Shirley, Director, Multnomah County Health Department

Sonia Manhas, Director of Policy and Planning, Multnomah County Health Department

We appreciate the contributions of:

Oregon Public Health Institute, *Steve White*

Upstream Public Health, *Heidi Guenin and Tia Henderson*

Bureau of Planning and Sustainability, *Rachael Hoy*

Multnomah County Health Department, *Amy Gredler and Claire Nystrom*

Graphic Design by *Kristen MacDonald*



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Project Process

- 2008:** City initiated project due to CRC and Hayden Island Plan, project scoping
- 2009:** IGA with Port, Community Working Group
- 2010:** Foundation Studies, Resolution 36805, Revised IGA, WHI AC formed, public involvement summit meeting
- 2011:** WHI AC meetings, additional study scopes and consultant hiring, Concept Plan, open houses, Council briefing
- 2012:** Additional studies completed (Cost/benefit, harbor lands inventory, HINRI, health, etc.), WHI AC meetings, open houses, PSC briefings, draft annexation proposal published August 14



City Council Resolution 36805

- Directed BPS to develop a proposal for annexation of WHI
- Directed BPS to develop a concept plan to protect at least 500 acres of open space, and identify no more than 300 acres for future deep water marine terminal



Public Involvement & Input

- 22 Advisory Committee meetings
- 30 HILP and HiNoon meetings
- 10 other neighborhood and homeowner association meetings
- 15 meetings with interest groups and other parties
- 9 open houses and office hour sessions
- 20 other presentations, briefings, technical work sessions, tours, etc.



Advisory Committee

- Susan Barnes, Oregon Department of Fish and Wildlife
- Andrew Colas, Colas Construction, NAMC
- Andy Cotugno, METRO
- Pam Ferguson, Island Resident
- Don Hanson, BPS Planning & Sustainability Commission
- Chris Hathaway, Lower Columbia River Estuary Partnership
- Brian Owendoff, Portland Business Alliance
- Emily Roth, Portland Parks and Recreation
- Sam Ruda, Port of Portland
- Bob Sallinger, Audubon Society (*resigned 6/12*)
- Bob Tackett, NW Labor Council
- Victor Viets, Island Resident



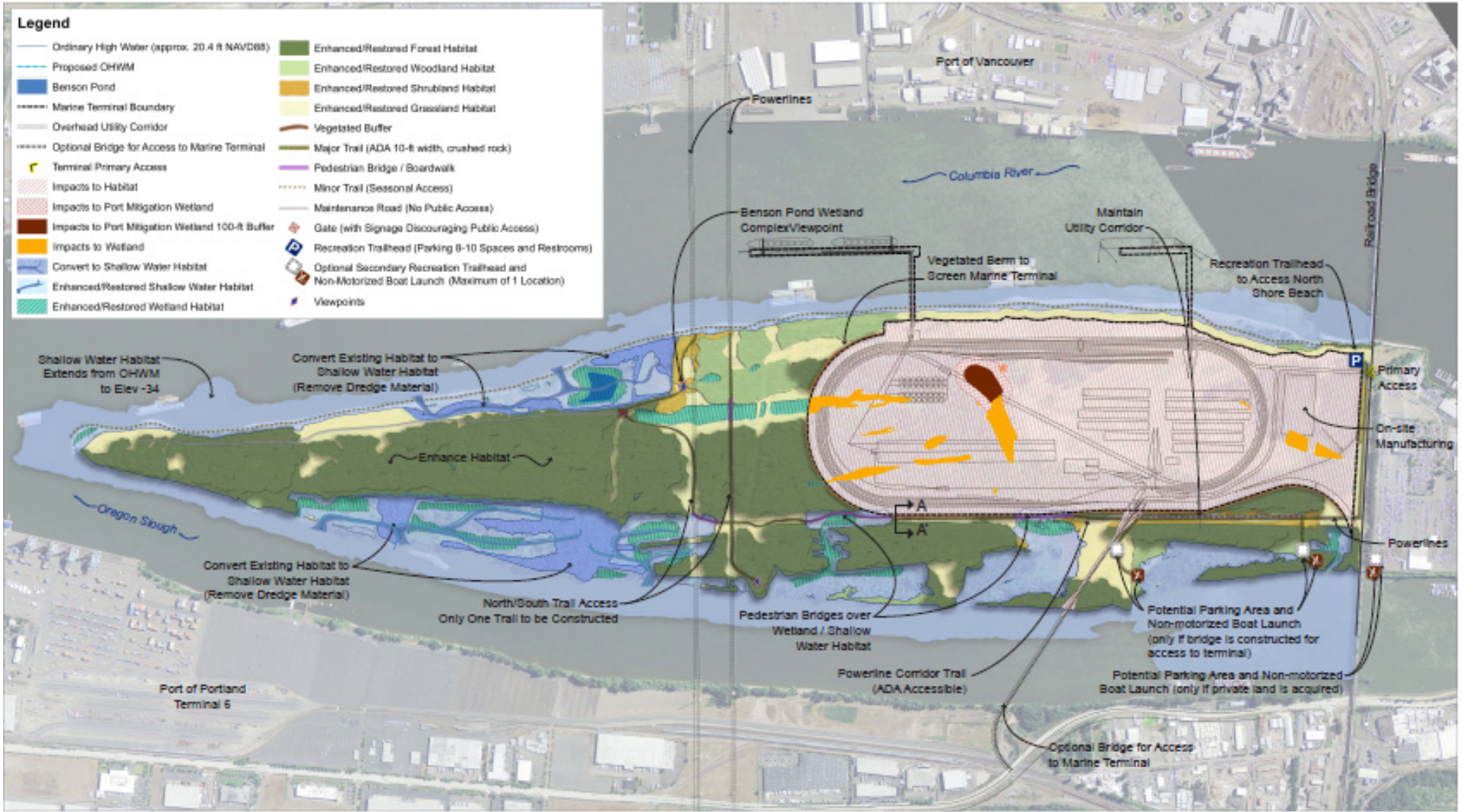
Factors Responsible for Population Health



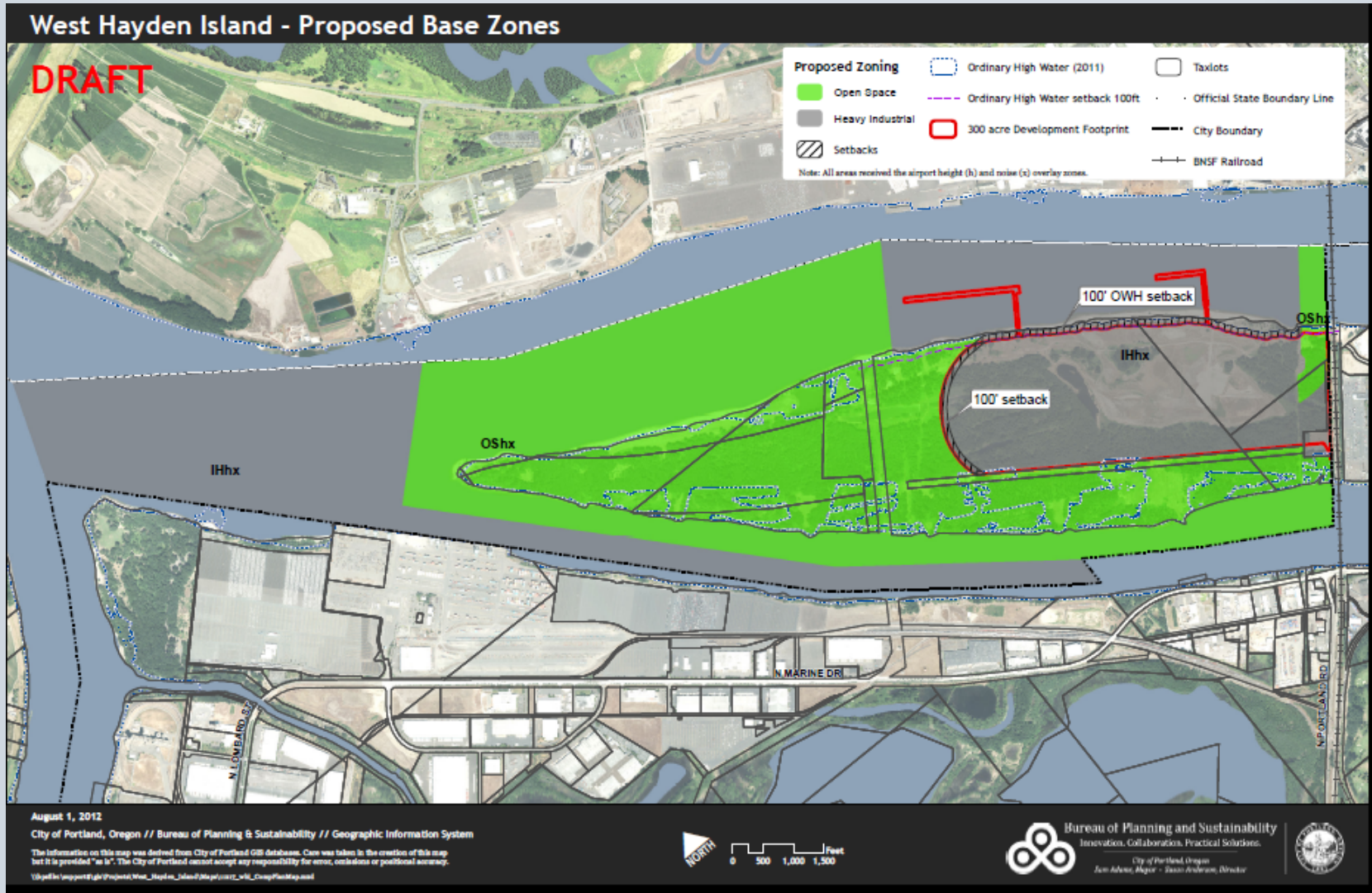
Health status is determined by: genetics 20 – 30%; health care 10%;
 social, environmental conditions, and behavior 60 – 70% J
Health Affairs, 2002 - Slide courtesy Human Impact Partners



WHI Concept Plan



Zoning Map



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“Development Scenario”

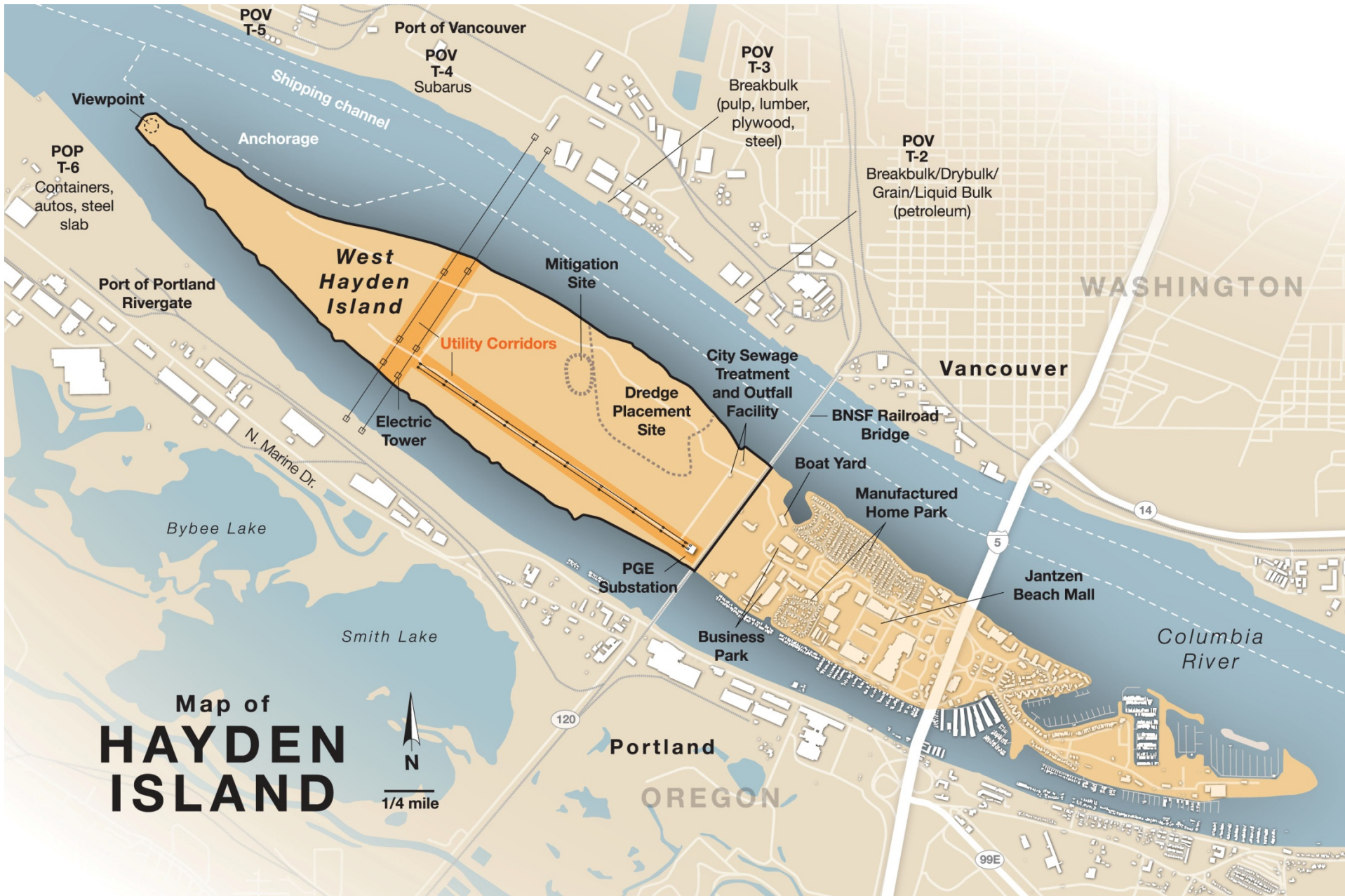
- 500 acres of open space
- 2.3 miles of trails, with beach access and non-motorized boat launch
- 300 acres of marine terminal with rail loop
- Two bulk export facilities, one auto import/export facility
- North Hayden Island Drive reconstruction, including improved pedestrian and bike facilities



Context

- Columbia River Crossing Bridge, with light rails service
- Additional residential development per Hayden island Neighborhood Plan
- Initial redevelopment of Jantzen Beach Supercenter



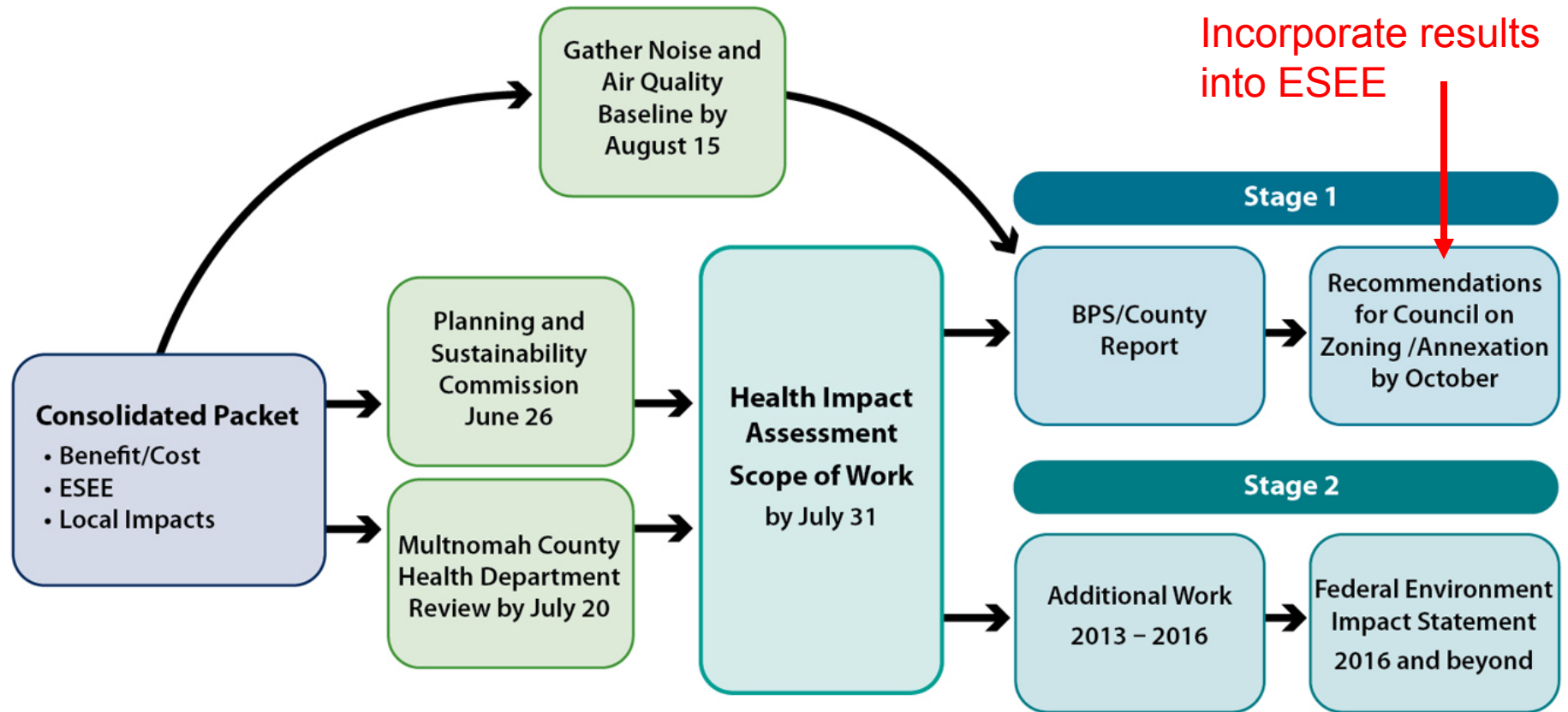


Health Analysis Update

- Two stage analysis
- First stage informs annexation and ESEE
- Second stage informs EIS
- Partners: Multnomah County Health, Oregon Public Health Institute, Upstream Public Health



Preliminary HIA Approach

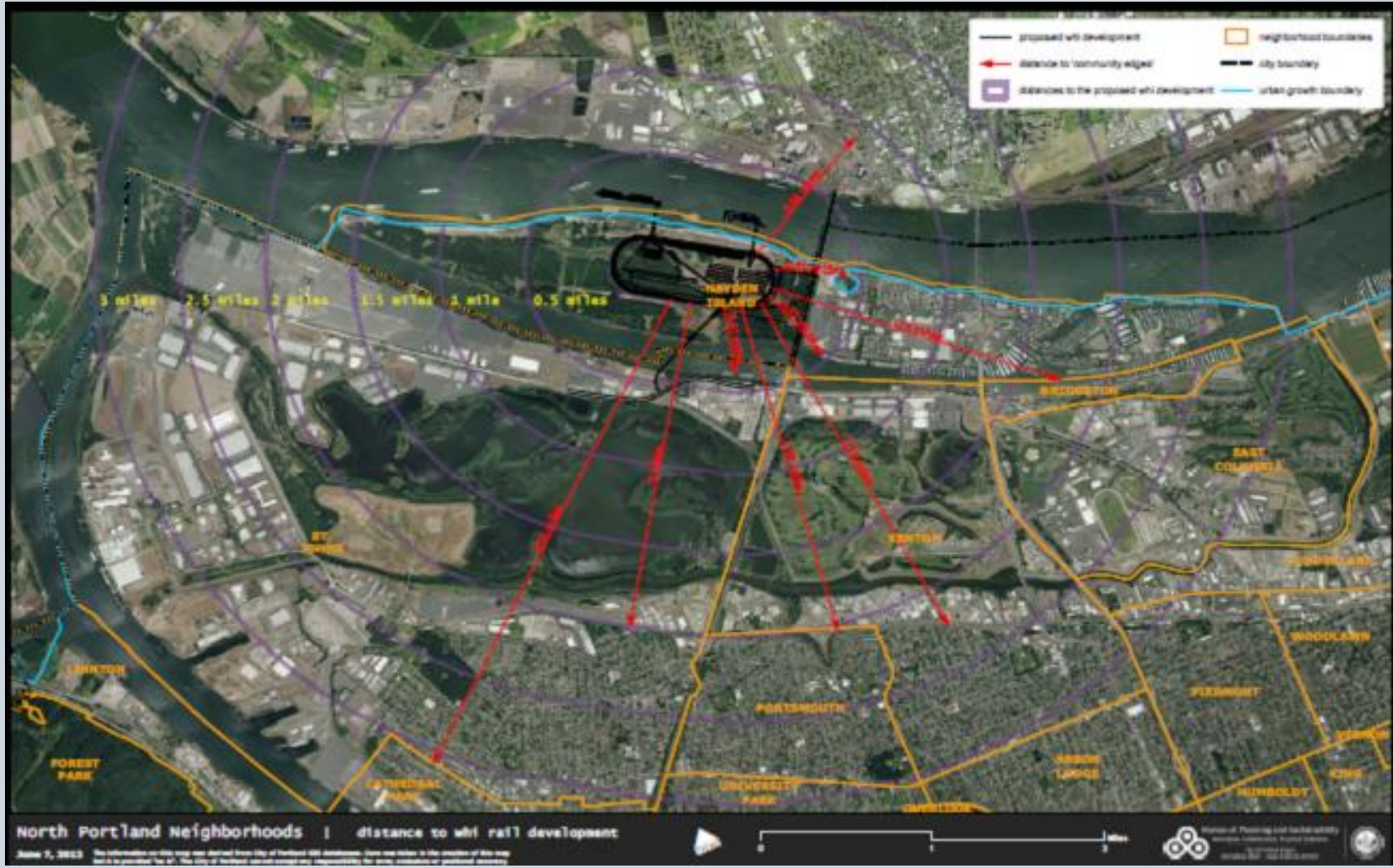


Health Analysis Update

- Draft report released October 8
- AC + Expert Worksession on Oct 22
- Report contained data from:
 - Extensive Health literature review
 - Noise baseline report
 - Port emissions data
 - DEQ PATs Model data
 - PBOT traffic study, greenhouse gas and traffic safety
- Areas of study: air quality, noise/vibration, light, housing, physical activity, traffic safety, employment
- Menu of possible mitigation strategies



Community Impacts



Impacted Populations

- Hayden Island population of 2,270 (2010 census)
- 4,022 people on Hayden Island by 2035
- Median age is 54.3, 17 years older than regional
- Median family income is \$46,143, well below \$56,275 for the Portland area



Impacted Populations

- 440 household manufactured home community
- From 2008 CASA survey:
 - ~65% on fixed income
 - Household incomes ~\$31,200
 - Average home value is ~\$13,900



Next Steps: Review of Mitigation Strategies

- Advisory Committee discussing menu of mitigation strategies
- BPS/AC reviewing Mayor's Proposal in relation to the mitigation strategies
- Determine changes to IGA/Code



Summary of Mitigation Strategies

- 20: in proposed IGA or Code
- 15: in existing City Code/Policy or Law
- 9: have Additional agreement from Port
- 9: with small changes to language Port OK
- 25: Port is either not in agreement or pervue of a different bureau/agency
- 9: recreational and housing related strategies (could be covered in part under Mayor's Proposal)



Health Impact Pathways

Development Scenario

500 acres of open space with approximately 2.3 miles of trails

300 acres of deep water marine terminal inside a rail loop. Includes two bulk and one auto facility with some associated manufacturing

Columbia River Crossing completed

Initial re-development of Jantzen Beach Mall

Increased residential density on East Hayden Island

Increased:

Freight traffic	Port activity
Rail traffic	Trails
Marine vessel traffic	Sidewalks
Vehicle traffic	Bikelanes
Industrial activity	Traffic controls

MITIGATIONS | E.G., USE OF CLEANER FUELS

Health Assessment Factors

Air Quality

Noise and Vibration

Light Exposure

Physical Activity

Traffic Safety

Community Design and Housing

Employment

MITIGATIONS | E.G., INSTALLATION OF AIRTIGHT WINDOWS

Health Outcomes

Life expectancy

Premature mortality

Chronic disease

Respiratory illness

Cardiovascular illness

Cancer

Temporary illness & injury

Mental health

Depression

Sleep disruption

Annoyance

Stress

Hearing loss

Injuries

Fatalities



Table 1: Summary of potential health impacts prior to mitigation

KEY: • low •• medium ••• high ? uncertain or unable to evaluate						
Health effects (Factor)	Geographic extent of the impact	Types of people most impacted	Number of people impacted	Evidence in the literature for a link between the change and health outcome	Likelihood that development scenario will contribute to the prevalence of the health outcome	Intensity of the health impact
POSITIVE IMPACT: Employment						
Increased life expectancy	region	Hires for family-wage port jobs (e.g., longshore workers)	2,300-3,700 people in the region	•••	•	•
Improved mental health				•••	••	•
Decreased chronic disease				•••	••	•
Decreased temporary injury & illness				•••	••	•
POSITIVE IMPACT: Physical Activity						
Increased life expectancy	local/region	People in the region who utilize the open space/trail, improved bicycle and pedestrian facilities. Local residents will have improved access to goods and services on the island.	?	•••	•	•
Improved mental health				•••	••	•
Decreased chronic disease				•••	••	•
Decreased temporary injury & illness				•••	••	•



KEY: • low •• medium ••• high ? uncertain or unable to evaluate

Health effects (Factor)	Geographic extent of the impact	Types of people most impacted	Number of people impacted	Evidence in the literature for a link between the change and health outcome	Likelihood that development scenario will contribute to the prevalence of the health outcome	Intensity of the health impact
POSITIVE IMPACT: Traffic Safety (Motor Vehicles)						
Decreased injury	Local/region	Drivers and passengers	Number of people impacted unknown but approximately 11 fewer collisions annually	•••	•••	••
Decreased premature death				•••	••	•••
NEGATIVE IMPACT: Traffic Safety (Bicyclists and Pedestrians)						
Increased injury	Local/region	Bicyclists and pedestrians in close proximity to truck traffic on Hayden Island	?	•••	••	••
NEGATIVE IMPACT: Community Design						
Increased housing related health conditions	local	Manufactured home park residents, floating home residents	Up to 2,000 Hayden Island residents	•	•••	••
Decreased economic stability				•	•••	•••
Decreased social opportunities				•	••	?



KEY: • low •• medium ••• high ? uncertain or unable to evaluate

Health effects (Factor)	Geographic extent of the impact	Types of people most impacted	Number of people impacted	Evidence in the literature for a link between the change and health outcome	Likelihood that development scenario will contribute to the prevalence of the health outcome	Intensity of the health impact
NEGATIVE IMPACT: Air Quality						
Increased respiratory illness	local	Manufactured home park residents, floating home residents	People who live in the 440 manufactured homes and approximately 150 floating homes	•••	••	••
Increased cardiovascular illness				•••	••	••
Lung cancer				•••	•	•••
Decreased life expectancy				•••	?	•••
NEGATIVE IMPACT: Light Pollution						
Increased sleep disturbance	local	Manufactured home park residents, floating home residents	People who live in the 440 manufactured homes and approximately 150 floating homes	••	••	••
Increased cancer				•	•	•••
Increased obesity and diabetes				•	•	••
Increased depression				•	?	?
NEGATIVE IMPACT: Noise & Vibration						
Increased annoyance	local	Manufactured home park residents, floating home residents	People who live in the 440 manufactured homes and approximately 150 floating homes	••	•••	•
Increased stress				•	••	••
Increased sleep disturbance				•	••	••
Increased mental health problems				•	•	•
Increased hearing loss				•••	?	•••
Increased cardiovascular disease				••	•	?

Table 7: Summary of health outcomes affected by the West Hayden Island development scenario

	Air Quality	Noise/Vibration	Light Exposure	Physical Activity	Traffic Safety	Community Design/Housing	Employment
Population most impacted	local	local	local	local/region	local/region	local	region
Life expectancy				+		X	+
Premature mortality	X				X		
Chronic disease			X	+		X	+
Respiratory illness	X					X	
Cardiovascular illness	X	X					
Cancer	X		X				
Temporary illness/injury				+			+
Mental health		X		+	X	X	+
Depression			X			X	
Sleep disruption		X	X				
Annoyance		X					
Stress		X				X	
Injuries/fatalities (bike and pedestrian)					X		
Injuries/fatalities (motor vehicles)					+		

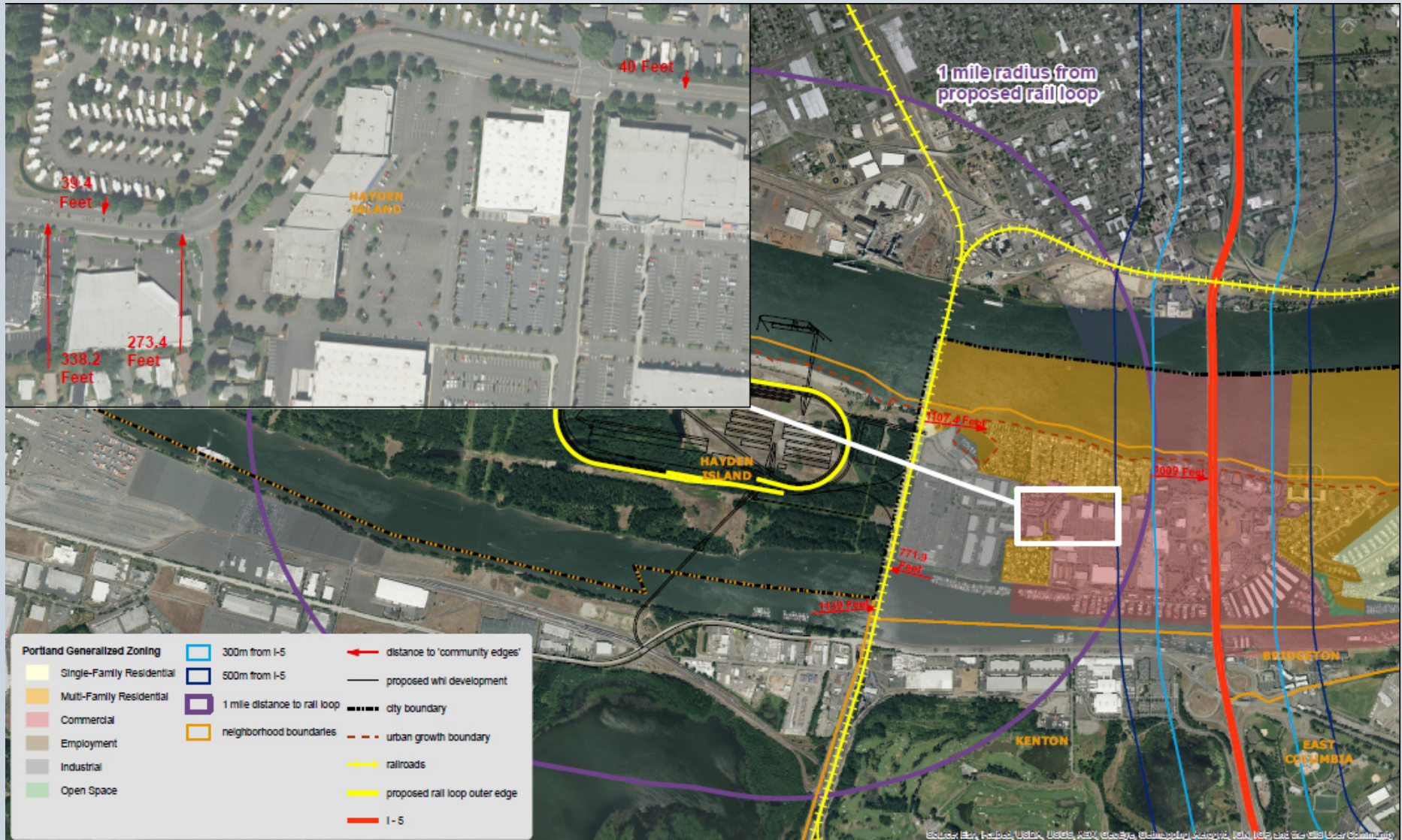
X signifies negative health impacts,
 + signifies positive health impacts





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West Hayden Island | distance to whi rail development

September 26, 2012 The information on this map was derived from City of Portland GIS databases. Care was taken in the creation of this map but it is provided "as is". The City of Portland cannot accept any responsibility for errors, omissions or positional accuracy.



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City of Portland
Dan Adams, Director

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West Hayden Island Noise Study
 Long Term Noise Monitoring Locations



Scale: 0 100 200

Project Engineer:

MLR

DATE:

8/14/12

PROJECT NO.:

129121

FIGURE #2



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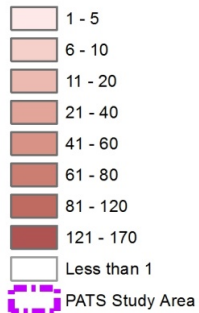
Portland Air Toxics Solutions

All Sources

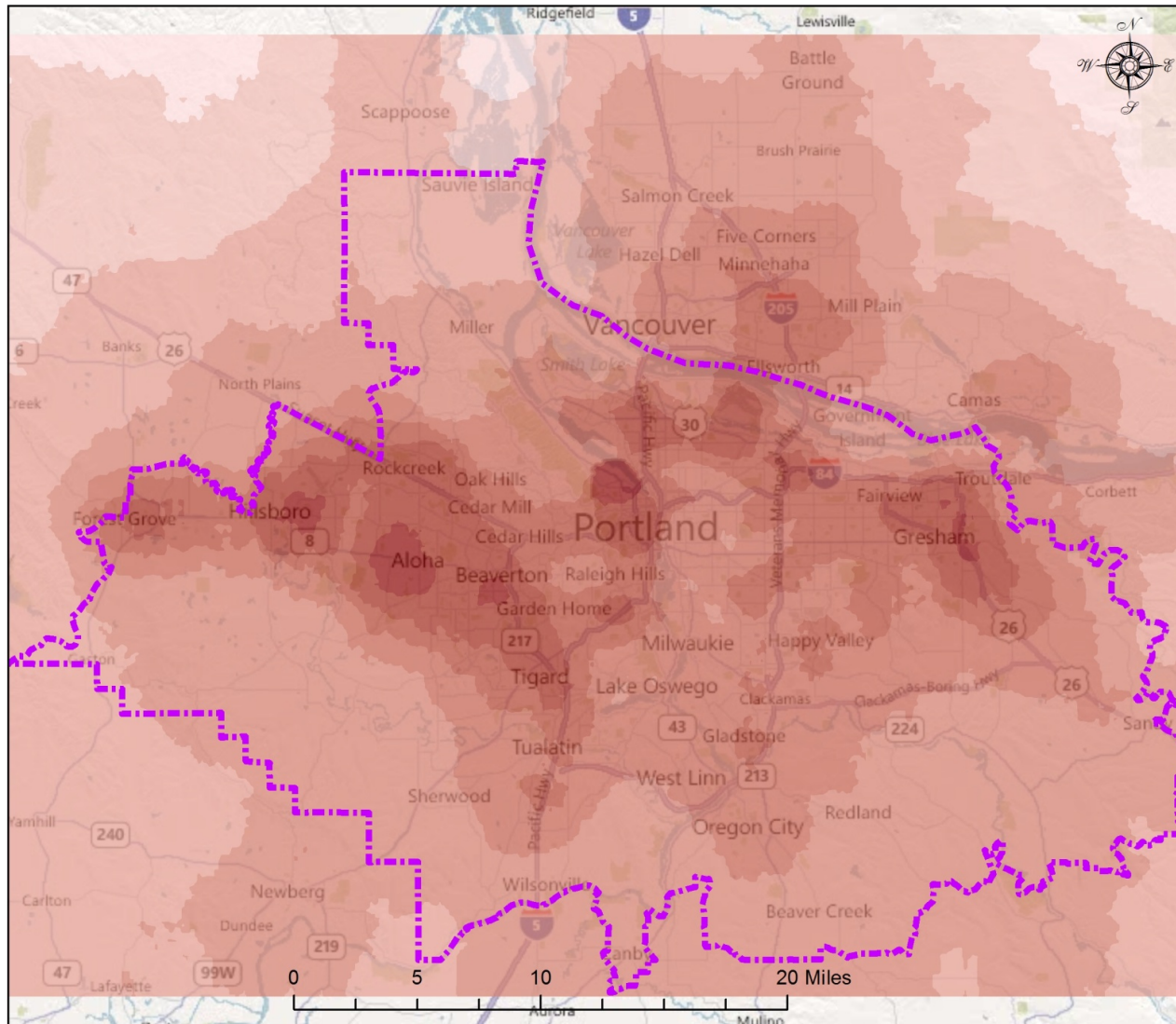


State of Oregon
Department of
Environmental
Quality

Times Above Benchmark



Reference:
PATS modeling results
ESRI base data



Path: G:\PortlandAirToxicsSolutions\EJ\EJ_Revised\GIS\EJ_Risk.mxd

Date: 7/14/2011



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