



Bureau of Planning and Sustainability

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DATE: May 30, 2012

TO: Planning and Sustainability Commission

FROM: Tom Armstrong, Supervising Planner

CC: Susan Anderson, Director
Joe Zehnder, Chief Planner
Eric Engstrom, Principal Planner

SUBJECT: Buildable Land Inventory (Proposed Draft, Revised March 2012)
Economic Opportunities Analysis (Proposed Draft, Revised March 2012)
(Factual Basis - Portland Plan Background Report Update)

Overview

As part of Periodic Review, the City of Portland is required to complete a Buildable Land Inventory (BLI) and an Economic Opportunities Analysis (EOA). The BLI assesses the City's development capacity to accommodate projected housing and employment growth. The EOA evaluates the types and amounts of employment land needed to accommodate expected growth to 2035.

Changes to the Reports

Changes to BLI

1. New Brownfield database from DEQ/Metro
BPS has received an updated DEQ brownfield database (April 2012) that we have incorporated in the BLI. The new database increases in the amount of brownfields by 120 acres (12%).
2. Adjust Greenway constraint layer
The key element of the Greenway overlay constraint is the perceived burden of going through a Greenway review and the potential added costs of that review. A review of the Greenway constraint layer showed that some upland parcels in the River Industrial subarea (that would not be subject to Greenway reviews) were included in the constraint analysis. These parcels have been removed from the Greenway constraint, but other constraints still apply to these parcels. Also, we have expanded the coverage area of the constraint layer by increasing the buffer distance from Ordinary High Water (OHW) from 75-feet to 125-feet. We are now using 50 feet from OHW as a proxy for top of bank. In the River Industrial subarea, development that occurs within 75 feet of the top of bank triggers a greenway review. Therefore, parcels with more than 10 percent of the site



area within 125 feet of the Ordinary High Water (OHW) line are included in this constraint.

3. Add redevelopment of EX and EG sites into industrial geographies
The three industrial geographies (Columbia Harbor, Columbia East, and Dispersed) include a mix of comprehensive plan designations with about 80 percent of the capacity in the Columbia Harbor and Columbia East geographies in the Industrial Sanctuary (IS) designation. Likewise, there is a sizeable portion (25-36 percent) of the employment forecast that is non-industrial building types in these geographies. Therefore, we propose to include redevelopment of non-vacant, underutilized sites in the EX and ME designations. This change adds about 152 acres to the BLI.

The net result of these changes to the BLI is an increase of 105 acres for a total land supply of 3,198 acres (see table below).

4. Add new table with detailed housing type capacity
DLCD requested that we provide additional detail on the residential supply beyond the single-family and multi-family split. For the growth scenarios we have created a range of 11 housing types. Based on past development trends we are able to allocate residential capacity by comprehensive plan designation by housing type to generate the table that will be included in the BLI report.

Changes to EOA Employment Forecast

1. 2010 employment distribution correction
We discovered that the 2010 employment in Goose Hollow was assigned to the Residential geography instead of the Central City Commercial geography. This correction does not change the employment forecast or demand for land.
2. Shift some non-conforming uses from Residential to Neighborhood Commercial
The employment forecast shifted 270 jobs from the Residential geography to the Neighborhood Commercial category to account for some sites that are non-conforming commercial uses along commercial corridors that are better fit in that geography. It increases the land demand by 10 acres - no real impact on the overall development capacity picture.

Response to Selected Comments

1. Constraint Sensitivity Analysis
A couple comments suggested that our analysis was too optimistic when we addressed constrained lands in the BLI. We ran a sensitivity test that shows about one-third of the development capacity is associated with some kind of constraint. On the high end of the range, 56 percent of the Central City Incubator capacity and 44 percent of the Columbia Harbor capacity has some kind of constraint. This test indicates that for these geographies we need to focus our policies, programs, and projects on addressing these constraints and monitoring the development performance over time.



2. Brownfield Constraint Sensitivity Analysis

There was particular concern about our treatment of brownfields and the amount of remediation or redevelopment that we assume will occur. In general, capacity attributable to brownfields remediation only makes up about ten percent of the development capacity (300 acres of assumed brownfield remediation of out 3,200 acres of total capacity). About half of the brownfield capacity is in the Columbia Harbor geography. This factor is relatively low because of the overlapping nature of the constraints - if you remediate the brownfield contamination, the site still may have infrastructure or floodplain issues.

3. Risk Assessment: Higher Industrial Growth Scenario

There was testimony that the EOA is too “pessimistic” in terms of forecasting industrial land demand. First, we note that the industrial employment forecast has been increasing over the various drafts. The Columbia Harbor forecast has gone from 16,400 jobs in the 2009 draft, to 17,300 jobs in the 2011 draft, to 18,900 jobs in the current draft.

In addition, we have conducted a sensitivity test to look at a higher rate of industrial growth. The employment forecast assumes a higher short-term industrial/manufacturing job growth in the Columbia Harbor that shifts to warehouse and distribution employment by 2035. Modeling this higher level of industrial employment over the long term results in 53 acres of additional land demand. Second, the marine cargo forecast has used the mid-point as the “most likely” scenario. Utilizing the high growth scenario from the EcoNorthwest study, the demand for marine terminals could be more than double the “most likely” scenario, or an additional 380 acres of marine terminals. Therefore, a high growth industrial/traded sector scenario could increase the demand for industrial land by 430 acres.

4. Redevelopment of Industrial Land

We analyzed redevelopment (refill) rates on industrial land in EOA Section 1 Figure 32 (page 82). From 1999-2011 about 36% of industrial development in the Columbia Harbor occurred on land that was not vacant - this rate is consistent with Metro’s 2009 Urban Growth Report refill rate assumptions. This is development activity and not necessarily tied to employment growth. As such, we have not included redevelopment of underutilized industrial parcels in the BLI in order to be conservative (pessimistic) in our assumptions on development capacity. A refill factor could be part of closing the shortfall gap, but we recommend exploring other options first (i.e. brownfield remediation, freight infrastructure investment) through the comp plan process.

Utilizing a 36% redevelopment assumption would reduce the land demand in the Columbia Harbor by 245 acres.

The sensitivity test result is the Columbia Harbor shortfall could be somewhere in range of 364 acres (refill) to 1,039 acres (high growth/no refill). Note: An aggressive redevelopment assumption is compatible with a high growth scenario - more pressure to use land efficiently, greater market demand for redevelopment sites. The combination of the two factors results in an added demand for 185 acres, or a total shortfall of 794 acres



5. Relationship Between Job Sector Growth and Wages

There was a discussion about the relationship between manufacturing/traded-sector job growth, the multiplier effect in creating service sector jobs, and wage levels. The premise was that without family-wage jobs in the manufacturing sector, there would be nothing to support the service sector job growth and/or the service sector jobs tend to have lower wages, which will be a drag on household prosperity.

Research into income data and historic trends yields some insights. Higher job-growth rates in office and institutional services will not necessarily translate to wage sluggishness. On the contrary, the office and institutional sectors tend to require higher educational levels and pay higher wages. In 2011 in Multnomah County, average wages in professional and business services were 129% of the average wage; 133% in financial services; 94% in education and health care. However, traded sector growth (and retention) and overall job growth may have a bigger impact in wage trends. In the 1970s and 1990s, the Portland region had significantly higher rates of job growth than the nation, partly linked to high-tech industry growth, and average regional wages rose faster than the nation. In the 1980s and 2000s, average job growth rates in the region matched the nation, and regional wage levels declined relative to the nation. Theoretically, increasing productivity in a region's traded sector firms provides an income source for rising wages, while the income growth potential of other sectors is limited to the buying power of the regional population.

Income distribution and relative cost-of-living are also significant factors that affect real average incomes for much of the community, regardless of average wages. For example, national trends have shown a slightly eroding share of "middle-skill jobs" requiring more than a high school degree and less than a 4-year college degree, declining from 54% of all jobs in 1986 to 48% in 2006. Another factor is the relatively high housing costs of West Coast cities relative to the nation. In the 1970s and 1990s, rising wage levels in the region outpaced the cost of living, but inflation-adjusted wages declined in much of the 1980s and 2000s.

The manufacturing and warehouse/distribution jobs represent a big chunk of family wage jobs. If we loose (or fail to retain) jobs in these sectors, then the average wages will fall even further.

Proposed PSC Action

We are asking the Planning and Sustainability Commission to recommend that the City Council adopt the revised Buildable Land Inventory and Economic Opportunity Analysis with the revisions described above (updated data tables per changes to BLI and employment forecast).

With that recommendation, BPS will forward this material along with the other background reports to City Council. The City Council will be asked to adopt these reports by ordinance. They will then be delivered to DLCDD for acknowledgement, to satisfy a portion of Task 2 of Periodic Review.



Employment Land Need Reconciliation (revised 5-30-12)

Employment Geography	Added Jobs	Land Demand	Land Supply	Surplus/Deficit	Capacity
Central City Commercial	35,500	60	149	89	248%
Central City Incubator	10,950	100	40	(60)	40%
Columbia Harbor	18,900	1,490	855	(635)	57%
<i>Harbor Access Lands</i>	2,000	450	94	(356)	21%
Columbia East of 82nd	9,600	360	394	34	109%
Dispersed Industrial	4,400	140	112	(28)	80%
Gateway Regional Center	4,100	50	135	85	270%
Town Centers	6,350	140	90	(50)	64%
Neighborhood Commercial	26,100	530	1,118	588	211%
Institutions	23,350	380	306	(74)	81%
Residential	7,800	-	-	-	-
Total	147,000	3,250	3,198		

Aggregate Geography

Central City	46,480	160	189	29	118%
Industrial	32,910	1,990	1,361	(629)	68%
Commercial	36,210	720	1,342	622	186%
Institutions	23,360	380	306	(74)	81%
Residential	8,040	-	-	-	-
Total	147,000	3,250	3,198		



Organization	Comment	BPS Response																					
<p>1. DLCD 4/17/2012</p>	<p>Clarify how the EOA distinguishes vacant land from the state definition of vacant land (OAR 660-009-0005). This definition has some specific size (0.5 acres) and development limitations for considering whether a lot is vacant.</p>	<p>The BLI uses the 0.5 acre minimum parcel size threshold for vacant industrial land, but includes commercial land down to 1,500sf parcels. In general, Portland's land development pattern has smaller parcel sizes. We analyzed the share of smaller parcels (less than 0.5 acres) in the BLI compared to past development trends. They are comparable with the BLI running at a higher rate, which suggest that we might want to explore parcel assembly programs and incentives. The small parcels are a particular issue in the Central City Incubator geography. We have the latitude to include the smaller parcel size based on development trends and the nature of our existing parcelization.</p> <table border="1" data-bbox="695 394 1149 982"> <thead> <tr> <th colspan="3">Parcel Size <0.5 acres</th> </tr> <tr> <th>EOA Geographies</th> <th>New Development (1999-2011)</th> <th>BLI Supply</th> </tr> </thead> <tbody> <tr> <td>Central City Commercial</td> <td>31%</td> <td>43%</td> </tr> <tr> <td>Central City Incubator</td> <td>39%</td> <td>70%</td> </tr> <tr> <td>Neighborhood Commercial</td> <td>41%</td> <td>53%</td> </tr> <tr> <td>Town Centers</td> <td>39%</td> <td>47%</td> </tr> <tr> <td>Regional Center</td> <td>22%</td> <td>28%</td> </tr> </tbody> </table>	Parcel Size <0.5 acres			EOA Geographies	New Development (1999-2011)	BLI Supply	Central City Commercial	31%	43%	Central City Incubator	39%	70%	Neighborhood Commercial	41%	53%	Town Centers	39%	47%	Regional Center	22%	28%
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<p>2. DLCD 4/17/2012</p>	<p>Explain the coordination with other public agencies (Port of Portland, Business Oregon) in regards to the determination for the traded sector land needs such as marine terminals.</p>	<p>Port of Portland has been an integral partner on the EOA project, especially with respect to determining the need for traded-sector transportation facilities (see Port of Portland testimony letter). We also coordinated with Port of Portland staff for consistency on BLI mapping of sites in Port ownership.</p>																					

<p>3. DLCD 5/7/2012</p>	<p>BLI does not sufficiently break down the housing supply by housing type (mix and density) per the “needed housing” definition.</p>	<p>We will add a table that distributes the housing capacity into expected dwelling unit types based on past development trends.</p>
<p>4. DLCD 5/7/2012</p>	<p>The BLI should calculate the housing units per acre to make it clear that the 10 units per acre standard in the Metropolitan Housing Rule (OAR 660-07) has been met.</p>	<p>We have calculated the residential capacity is approximately 130 units per acre – based on 83% of the residential capacity is multi-family housing types. We will include these findings in the BLI report.</p>
<p>5. Gunderson/Peter Finley Fry 5/8/2012</p>	<p>Employment as a surrogate for economic expansion is not always appropriate. The use of output is a far more appropriate measure of land intensification.</p>	<p>We agree that is why we used the cargo forecast to establish the future need for marine terminals. Employment is also used as a general demand indicator for various reasons, including consistency with regional forecasts, estimation of varying growth rates between sectors and small geographies, and accounting for the policy value of job growth for community prosperity.</p>
<p>6. Gunderson/Peter Finley Fry 5/8/2012</p>	<p>Floor-to-area ratio (FAR) is not appropriate in an industrial harbor context as so much activity occurs outside the buildings. A low FAR is not a measurement of underutilized land for industrial uses.</p>	<p>The Harbor Lands Inventory also studied trends on land efficiency, in terms of cargo volumes per acre, dollar value outputs per acre, and employment per acre. While direct on-site employment per acre has dropped, total output has gone up, as measured in terms of value and tonnage. The efficiency increase is 1-4% annually. This difference is why we included the need for traded-sector transportation facilities as a separate line item. Since cargo terminals come in fixed sizes, it might not have any significant impact on the land need (we still may need the same number of new terminals, with the same acres consumed).</p>
<p>7. Gunderson/Peter Finley Fry 5/8/2012</p>	<p>The employment growth (demand) assumptions are pessimistic and the land supply assumptions are optimistic. The result will be a far greater undersupply of industrial harbor land.</p>	<p>We disagree. The employment forecast can be characterized as optimistic based on recent job growth trends. In the 2000-08 business cycle, Portland only captured 5 percent of the regional job growth, whereas Metro’s long term forecast has Portland with a 27 percent capture rate. We think the BLI is generally conservative in its approach, especially if you consider that we have not included any development capacity from higher value/higher FAR lands even though past trends shows that a significant amount of development occurs on these parcels.</p>

<p>8. Gunderson/Peter Finley Fry 5/8/2012</p>	<p>The brownfield constraint analysis is problematic. A 100% discount rate is more likely due to the threat of litigation and high risk of environmental cleanup.</p>	<p>We disagree, primarily because this is a long-term analysis. We agree that in the short-term that discount factor may be higher, especially due to the uncertainty surrounding the Portland Harbor Superfund liability. We have included that higher discount rate in our short-term analysis. However, over the long-term we think the Portland Harbor Superfund liability issues will be resolved and market pressures for Portland's location as a freight hub with harbor access will drive the market for redevelopment of 40% of the industrial brownfields.</p> <p>A sensitivity analysis of the brownfield constraints shows that there are about 960 gross acres of brownfields in the BLI. However, when you factor in the overlapping constraints, there is only 300 acres of development capacity attributable to brownfields.</p>
<p>9. Gunderson/Peter Finley Fry 5/8/2012</p>	<p>The 50% discount for environmental lands is too low. Recent litigation may make undeveloped floodplains 100% constrained. The city is currently advocating for Hayden Island to be constrained at 37.5% of the land area.</p>	<p>We disagree. Our zoning code allows for development within environmental conservation zones (c-zones) and floodplains, so it is reasonable to assume that some development will occur on these sites. Over time, it is nearly impossible to replicate Portland's freight hub with access to the harbor, rail, airport, and freeway system, which will result in market pressure to develop more difficult sites with brownfield contamination or natural resource constraints.</p> <p>It is difficult to apply a site-specific analysis like the West Hayden Island plan as a generalization to be applied citywide. The constraint discount factors represent a citywide average with variation (high or low) expected for any specific site.</p>
<p>10. Working Waterfront Coalition 5/8/2012</p>	<p>Concerned about the accuracy of the BLI because the supply numbers are considerably different than previous drafts.</p>	<p>The difference is largely due to changes in methodology because we felt the previous versions did not accurately reflect the conditions. The base inventories are largely the same, the differences are largely due to adjustments to the discount factors for constraints, mixed use development, and market caps.</p>
<p>11. Working Waterfront Coalition 5/8/2012</p>	<p>Floor-to-area ratio (FAR) is not appropriate in an industrial harbor context as so much activity occurs outside the buildings. A low FAR is not a measurement of underutilized land for industrial uses.</p>	<p>We agree concerning industrial zones. But we recommend adding redevelopment capacity to the BLI in EG/EX zones of industrial geographies to account for the comparable share of commercial demand in industrial geographies and past redevelopment trends.</p>

<p>12. Working Waterfront Coalition 5/8/2012</p>	<p>The employment growth (demand) assumptions are pessimistic and the land supply assumptions are optimistic. The result will be a far greater undersupply of industrial harbor land.</p>	<p>We disagree. The employment forecast can be characterized as optimistic based on recent job growth trends. In the 2000-08 business cycle, Portland only captured 5 percent of the regional job growth, whereas Metro's long term forecast has Portland with a 27 percent capture rate.</p> <p>We think the BLI is generally conservative in its approach, especially if you consider that we have not included any development capacity from higher value/higher FAR lands even though past trends shows that a significant amount of development occurs on these parcels.</p>
<p>13. Port of Portland 5/8/2012</p>	<p>Need qualitative analysis of constraints to address what is actually on the ground. These impacts need to be assessed at a parcel-level to truly understand the impact of the constraint.</p>	<p>We disagree. Qualitative analysis is important for specific site development, but less so for average development impacts in aggregate geographies. Goal 9 does not require an analysis of individual parcels. The constraint discount factors represent citywide averages – some sites will be more constrained, some sites will be less constrained.</p>
<p>14. Port of Portland 5/8/2012</p>	<p>Remove references to land capacity at the Port of Vancouver.</p>	<p>The reference to land capacity at the Port of Vancouver does not impact the BLI or the EOA analyses. No Vancouver capacity is included in the EOA or BLI shortfall calculations. The passing reference is an acknowledgement that some people see Vancouver as a relief valve for our marine industrial capacity shortfall. We have included the reference to note that there is cost to that job shift in terms of lost opportunity, wages, and tax revenue.</p>
<p>15. Port of Portland 5/8/2012</p>	<p>Detail vs. Precision: detailed data can imply a level of precision that may not exist. Need to consider appropriate context.</p>	<p>We agree, which is why we think we need a set of indicators to track our performance and to update the EOA on a regular basis tied to Metro's 5-year schedule of regional population and employment forecasts.</p>
<p>16. Port of Portland 5/8/2012</p>	<p>Jobs is not the only factor, need to consider wage levels, aspirations, and the City's role in the region.</p>	<p>We agree. The consideration of wage levels and multiplier effect of traded sector jobs is the main reason we have included the additional land need for freight facilities.</p>

<p>17. Port of Portland 5/8/2012</p>	<p>Risk Assessment: what might cause this forecast to change – big gamer changers that might spur increased economic growth.</p>	<p>This type of assessment is highly speculative and not required by Goal 9. However, we think there are three major factors that could change the employment forecast:</p> <ol style="list-style-type: none"> 1. The pace of economic recovery. Metro's forecast assumes a fairly robust recovery with a leveling off of growth in the out years of the forecast. Continued sluggish recovery or a sudden increase in job growth will impact the long term forecast. 2. Fuel costs. Increasing fuel costs could further slow the economic recovery. It also could shift freight to more cost effective modes such as marine and rail. It also could increase Portland's competitive position in the region as people and businesses seek more centralized locations. 3. Climate change. Climate change and adaptation may result in increase migration to the Pacific Northwest which could drive service sector job growth. 4. Accelerated industrial growth. A high scenario demand forecast for marine terminal and general industrial development could add demand for an additional 430 acres, which could be fueled by robust West Coast port growth and shifting manufacturing trends. <p>The speculative nature of these scenarios is another reason to commit to updating the EOA on a regular basis tied to Metro's 5-year schedule of regional population and employment forecasts.</p>
<p>18. Audubon Society of Portland 5/8/2012</p>	<p>The primary challenge for industrial lands in Portland is a landlocked city with no potential to expand its boundaries. The Statewide Planning Goals do not give primacy to Goal 9. Need to balance demand for industrial lands with other equally important objectives.</p>	<p>We agree that the primary challenge is Portland's limited and constrained supply of development land for all types of uses. The statewide planning system does provide for balancing between conflicting policy goals. One of the legal issues in recent decisions such as the North Reach of the River Plan has been the lack of a factual basis to make a balancing decision. This EOA will provide the necessary basis to evaluate different policy choices.</p>

<p>19. Audubon Society of Portland 5/8/2012</p>	<p>Need to include underutilized industrial land (not just vacant land) to determine development capacity.</p>	<p>We analyzed redevelopment (refill) rates on industrial land in EOA Section 1 Figure 32 (page 82). From 1999-2011 about 36% of industrial development in the Columbia Harbor occurred on land that was not vacant – this rate is consistent with Metro’s 2009 Urban Growth Report refill rate assumptions. We have not included redevelopment of underutilized <i>industrial</i> parcels in the BLI in order to be conservative (pessimistic) in our assumptions on development capacity. A refill factor could be part of closing the shortfall gap, but we recommend exploring other options first through the comp plan process.</p>
<p>20. Audubon Society of Portland 5/8/2012</p>	<p>Need to assess industrial capacity on a regional basis with interstate (Lower Columbia) collaboration to explore efficiencies.</p>	<p>We agree that Portland should advocate for a more comprehensive Lower Columbia River planning effort to allow more integrated planning of marine terminals over the long term. However, for the purposes of the EOA we still need to work within the current state and regional regulatory framework.</p>
<p>21. Audubon Society of Portland 5/8/2012</p>	<p>The constraint analysis is too restrictive for environmental and greenway constraints. The zoning code allows for development in these areas as long as impacts are avoided, minimized, and mitigated.</p>	<p>We disagree. We think the constraint analysis strikes a balance between accounting for permissive development as allowed by code and the market response to those regulations in terms of avoidance and underdevelopment that is a drag on full utilization of the zoned capacity.</p>
<p>22. Audubon Society of Portland 5/8/2012</p>	<p>Remove references about the future development capacity of West Hayden Island.</p>	<p>The EOA and BLI do not assume any development capacity on West Hayden Island. The only reference to West Hayden Island is in Section 4, which presents next step policy options for the Comprehensive Plan.</p>
<p>23. Audubon Society of Portland 5/8/2012</p>	<p>The BLI and EOA need to be fact based not prescriptive or advocacy oriented. They should provide a factual basis for decision-making but not promote specific outcomes or solutions.</p>	<p>The EOA and BLI are fact-based. Section 4 of the EOA is a transition to the Comprehensive Plan policy discussion and presents a starting point for what we can do to fill our shortfalls in development capacity. It is not intended to limit the discussion or prohibit the consideration of other ideas.</p>