

Pressure Reduction Conceptual Model Summary – Land Development

June 6, 2011

This document summarizes work-to-date on a conceptual model representing the current context of land development pressures to ecosystems, species, ecological processes and people in the Puget Sound Basin. The direct pressure addressed in this model is **Residential and Commercial Development**, also referred to as the **Land Development** Pressure.

Figure 1 is an overview model showing all topic areas addressed by the interdisciplinary land development team, including. Figures 2-4 are detailed conceptual models showing further development of conceptual models related to Working Resource Lands (Figure 2), Development in Ecologically Important Areas (Figure 3), and Urban Growth Areas and Compact Development (Figure 4).

Pressures from the built environment, primarily stormwater, are being addressed by a separate group as well as floodplain development and protection.

Summary of Conceptual Model Development and Next Steps

Model Overview

The primary pressures from land development in the Puget Sound region can be classified in three dimensions: (1) Conversion of working natural resource lands (2) Growth and development in areas and lands that are important for maintaining important ecosystem functions, (3) and issues associated with the effectiveness and boundaries of urban growth areas for concentrating growth and increasing density.

While these pressures are related and have overlapping factors, the strategies and actions to be developed for addressing them are likely to be different enough that they are being presented and analyzed individually.

Outstanding Concerns

Land development and growth management is a politically and socially complex and contentious issue to discuss and solve. The policies and strategies designed to address these issues will touch many constituencies. Many of the team members have wrestled with these issues in legal, policy and scientific arenas and there will continue to be challenges along these fronts to devise, agree on and execute effective strategies and actions to protect Puget Sound ecosystems from land development pressures while accommodating population growth and maintaining a vibrant economy.

Objectives and targets for the land development pressures have not yet been identified.

Next Steps

The interdisciplinary team has been tasked with starting to consider and draft strategies to bring to the next meetings. The next meetings are likely to be three small group meetings to further and

develop strategies for each one of the three dimensions followed by two full group meetings to review and further develop strategies and actions for all of the dimensions.

Model Development- Process and Interdisciplinary Team

The interdisciplinary land development met in early 2011 to draft a conceptual model addressing land development pressures. The models presented here are similar but are more refined and expanded, including adding the issues of converting working natural resource lands. The initial team included only state natural resource agencies and the PSRC; the team was expanded by inviting the environmental, business and tribal caucus to designate a representative.

Table 1. Land Development Interdisciplinary Team Members

PSP staff	Interdisciplinary Team Members	
<p>PSP Staff Lead: Judith Leckrone Lee</p> <p>Technical Support: Kari Stiles, consultant</p>	<p><u>Primary</u></p> <p>Jaclyn Ford, WA Dept of Ag Sandy Mackie, Assoc of WA Business Daryl Williams, Tulalip Tribes Katie Knight, WA DFW Tim Trohimovich, Future Wise Kim Harper, Ecology Neil Aaland, AWC, WSAC Doug Peters, Dept of Commerce Naki Stevens, WA DNR Chris Townsend, PSP Norman Abbott, Puget Sound Regional Council</p>	<p><u>Alternate</u></p> <p>Kelly McLain Jeanette McKague Abby Hook Leonard Bauer</p>

Details and Comments on Strategies and Contributing Factors

This section summarizes additional information associated with draft strategies and contributing factors included in the detailed draft land development conceptual models (Figure 2-4). For an overview of the relationship between these submodels, please see Figure 1. The details included here will inform upcoming development of strategies and near-term actions targeted at reducing pressures associated with land development.

Note: Contributing factors represent the major forces contributing to land development as a direct pressure to Puget Sound ecosystems and people. Contributing Factors can include indirect pressures (or threats), enabling conditions, or opportunities.

* factors common to more than one model

Table 2. Strategies and Contributing Factors

	Strategy or Contributing Factor	Details and Comments
Working Resource Lands		
 DRAFT Strategy		
 DRAFT Strategy		
	*1. Lack of nested Basin-wide framework for coordinated planning and decision making	<ul style="list-style-type: none"> - lack of regionally (Puget Sound Basin) coordinated land development and protection strategies and priorities - decision-making is not happening at the watershed level or at the regional level - permitting happens at the local/ site level - planning happens at the local jurisdictional level - currently the only forum for this discussion is the county level - needs to include public programs addressing protection on private lands - need to address appropriate scale for planning (e.g. Action Areas vs. Integrating Units vs. counties) - lack of authority for Basin-wide planning efforts that do exist
	*2. Lack of info or analysis about which lands and processes are most ecologically important	<ul style="list-style-type: none"> - lack of watershed-based understanding of key processes and areas/features supporting processes - lack of understanding about relationship between land use practices and ecological processes and environmental response - lack of info about ecosystem services
	*3. Ecosystem services not valued and incorporated into planning and decision-making	<ul style="list-style-type: none"> - primarily a problem in new development - primarily a planning issue - this is an emerging concept/approach that could benefit ecosystems and human dimensions - value of ecosystem services is sometimes a tradeoff with other economic benefits
	4. Market for ecosystem services does not exist	
	5. Zoning allows non-resourced-based development in working resource lands in some counties	<ul style="list-style-type: none"> - counties allow development in working forest lands - pre-existing development and lots are grandfathered in by existing plans

	Strategy or Contributing Factor	Details and Comments
	6. NGOs do not have authority to generate revenue to acquire working forest lands	
	7. Lack of funding and resources	
	8. Fewer or no incentives for small land owners to preserve land	<ul style="list-style-type: none"> - tax incentives are available for larger land owners, and different types of working lands, but not small land owners (economy of scale -large parcels qualify for state incentives) - public funds are being used to acquire lands that are not ecologically important - need to reach out to conservation district, state conservation commission, farmland trust -tax programs are often not properly targeted at ecological habitat and process protection -TDR challenges to effective implementation
	9. More profitable for rural landowners to develop property than protect it or sell to public	See above
	10. Ag land preservation programs are underfunded, underused or not properly structured	<p>ag lands are often converted due to disincentives to preserve and protect:</p> <ul style="list-style-type: none"> - state farmland preservation programs are underfunded - federal farmland preservation programs are underused and underfunded (CREP- conservation reserve and enhancement program) - some ag lands do not meet economic threshold for ag open space tax program -ag open space program is not as effective as it could be
	11. Fiscal and federal policies do not support small local forest land owner	<ul style="list-style-type: none"> - tax structure is disincentive to maintain working forest lands (rather than develop) - WA has highest combined tax burden in country (low property tax but high severance tax) - market for ecosystem services does not exist; we do not connect services forests provide to economic value; there are barriers to getting a market established - federal practices and land policy do not support local small forest land owner (e.g lack of fed harvest leads to loss of working mills) - complex relationship between forest lands and local milling capacity - research suggests that we need to maintain existing forest lands to preserve

	Strategy or Contributing Factor	Details and Comments
		<p>local forest economy</p> <ul style="list-style-type: none"> - current incentives are for clearcutting (leads to loss of ecologically functional forests) - NGOs do not have authority to generate revenue to acquire working forest lands
	12. Market and supply infrastructure not as supportive of small forest, ag and dairy land owners	- consider role of downstream effects (FSC)
	13. Conversion of working/natural resource lands	- includes forests, agricultural and mineral lands
Urban Growth & Development Patterns		
 DRAFT Strategy		
 DRAFT Strategy		
 DRAFT Strategy		
 DRAFT Strategy		
	1. Lack of info or coordinated and spatially specific analysis of land use and development trends and patterns	<ul style="list-style-type: none"> - population growth information - climate change information - spatially specific analysis of pressures associated with different land development patterns and trends
	2. Lack of regional agreement on vision and goals	
	*3. Lack of nested Basin-wide framework for coordinated planning and decision making (see also #10 in Avoiding Development in Ecologically Important Places)	<ul style="list-style-type: none"> - lack of regionally (Puget Sound Basin) coordinated land development and protection strategies and priorities - decision-making is not happening at the watershed level or at the regional level - permitting happens at the local/ site level - planning happens at the local jurisdictional level - currently the only forum for this discussion is the county level - needs to include public programs addressing protection on private lands - need to address appropriate scale for planning (e.g. Action Areas vs.

	Strategy or Contributing Factor	Details and Comments
		Integrating Units vs. counties) - lack of authority for Basin-wide planning efforts that do exist
■	4. Local plans, regulations and policies are not adequately protective of ecologically important and working resource lands	
■	5. UGAs are established without consideration for protecting ecosystem processes	
■	*6. Lack of incentives and resources in rural and urban areas to direct development to appropriate places (see also #6 in Avoiding Development in Ecologically Important Places)	<ul style="list-style-type: none"> - need to clearly identify best and worst places to develop; what is most appropriate/best use of particular lands (e.g. watershed characterization includes a "Development" category capturing most impaired/least important areas) - lack of incentive programs directing growth and associated infrastructure to ecologically appropriate places - rural and urban areas have some different and some similar issues; need to be addressed with separate strategies and actions where appropriate - growth in rural areas is being forced onto 5, 10, 20 acre parcels - LAMIRD- need better direction/incentives/planning for best location and type of development in these areas - challenges balancing urban/rural development - parcel by parcel planning is not the right scale - related to ecosystem services valuation
■	*7. GMA, SMA and SEPA Limitations and Loopholes (see also #13 in Avoiding Development in Ecologically Important Places)	<ul style="list-style-type: none"> - do not address Puget Sound scale effectively (directly) - need to address loopholes leading to reduced effectiveness at Puget Sound scale - lack of coordination among three; developed at different times, not intended to be integrated GMA: <ul style="list-style-type: none"> - urban v. rural counties: lack of certainty re. allowed urban and rural densities (and need to identify why these densities are allowed) - lack of deadline for ability to appeal a failure to implement a GMA decision creates disincentive for voluntary updates to plan; there is no incentive to act - lack of required review for GMA plans SEPA: inability for local govts to recover costs is disincentive to complete

	Strategy or Contributing Factor	Details and Comments
		advance SEPA
	8. Personal preferences or economic decision about where to live/work	
	9. exempt wells	- drives development in inappropriate places
	10. Not enough growth going into UGAs	- proportion of growth going into UGAs is not optimal - UGA rules are not effective across highly variable counties (urban v. rural) - leads to lack of protection of consolidated resource lands
	11. Public resistance to increased density	
	12. lack of tools and info for ecologically friendly redevelopment in urban areas	- possible related strategy: SMPs are currently providing more incentives for green development (e.g. if you take out your bulkhead we will reduce our buffer requirement)
	13. Regulatory (code) barriers to density in cities	- height limits - minimum street widths ROW improvements - relying on conditional uses v permitted uses - limits on ADU in some areas - lack of carefully planned upzoning, a problem in some cities (KP) - setbacks - zoning - out of date development regulations; local govts need to redo dev regs every 10-15 years
	14. Cost of stormwater retrofitting and infrastructure improvements	- barrier to individual developer - incentive if local gov't does it but there are funding barriers to local govts completing retrofits
	15. Many economic, fiscal, institutional disincentives or barriers to infill & increased density	- poor quality capital facility planning (lack of understanding of costs of developing/reinvesting in infrastructure) - infill development is place with least space and most challenges to upgrade infrastructure = institutional barriers to good development in infill areas - sequencing challenges- infrastructure req. to meet additional capacity - disincentives for new developers to pursue infill development (saddled with costs of improving infrastructure/retrofitting); develop elsewhere instead - disincentives: lack of willingness and tools to have mixed density (social preference, zoning and regs), institutional barrier to mixed/high density due to current proportion of single family dev. - economic disincentives: in some cases, as # of units increases the cost per

	Strategy or Contributing Factor	Details and Comments
		unit increases (associated offsite costs - traffic, open space, etc); functions as barrier to infilling particularly in rural and suburban areas; environmental regs and review (in some jurisdictions) <ul style="list-style-type: none"> - lack of jurisdictional incentives to use higher end of allowable density - lack of guidance in GMA for urban areas; need state policy guidance for urban areas - difficult for some communities to provide full suite of amenities/ infrastructure that are expected in an urban area (e.g. Mill Creek downtown) - strategies: analysis of local opportunities and disincentives; support solving of older problems so new development can come in - address how development relates to WWTP improvements - address trade-off: industry is being pushed out of traditional industrial areas
■	16. Not enough compact development	
■	17. Jurisdictions not enforcing regulations	<ul style="list-style-type: none"> - lack funding - other reasons for lack of enforcement?
	18. Political will/pressures	- e.g. pressure from developers
	*19. No authority to recover full costs of implementing env reg programs at state fed local levels (see other #19)	<ul style="list-style-type: none"> - across many programs - leads to partial funding of programs - funding is easily cut
	20. Lack of funding and resources	
	21. Local financing structure drives need for new development	<ul style="list-style-type: none"> - drives UGA expansions (e.g. need to develop freeway interchange to get to development) - drives rural development - tax structure currently drives new development rather than infill; property tax system is capped so demand is focused on retail sales tax
	22. Expansion of UGAs	
	23. need for housing and services to support increasing population	- projected 2 million increase by 2050
Avoiding Development in Ecologically Important Lands		
■	*1. Lack of info or analysis about which lands and processes are most ecologically important	<ul style="list-style-type: none"> - lack of watershed-based understanding of key processes and areas/features supporting processes - lack of understanding about relationship between land use practices and ecological processes and environmental response

	Strategy or Contributing Factor	Details and Comments
		- lack of info about ecosystem services
	*2. Local govts cannot analyze and consider economic value of ecosystem services (see also #3 under Working Resource Lands)	- primarily a problem in new development - primarily a planning issue - this is an emerging concept/approach that could benefit ecosystems and human dimensions - value of ecosystem services is sometimes a tradeoff with other economic benefits
	3. Areas most suitable for protection, restoration or development are not identified	- or inverse, preferred areas for development are not identified - growth still allowed in floodplains for cities with jurisdictional boundaries in floodplains
	4. Local plans, regulations and policies are not adequately protective of ecologically important and working resource lands	
	*6. Lack of incentives and resources in rural and urban areas to direct development to appropriate places (see also #6 in Urban Growth & Development Patterns)	- need to clearly identify best and worst places to develop; what is most appropriate/best use of particular lands (e.g. watershed characterization includes a "Development" category capturing most impaired/least important areas) - lack of incentive programs directing growth and associated infrastructure to ecologically appropriate places - rural and urban areas have some different and some similar issues; need to be addressed with separate strategies and actions where appropriate - growth in rural areas is being forced onto 5, 10, 20 acre parcels - LAMIRD- need better direction/incentives/planning for best location and type of development in these areas - challenges balancing urban/rural development - parcel by parcel planning is not the right scale - related to ecosystem services valuation
	7. Vested Rights Doctrine	
	8. When info is available, local governments lack technical capacity to use and/or access/interpret info	- information is not clearly synthesized or easily accessible to local governments; difficult to interpret; difficult to make effective use of information - difficult to integrate information with other planning efforts at multiple scales - information is not available on useful timeframe

	Strategy or Contributing Factor	Details and Comments
		- information not standardized across data provision efforts
	9. Various and uncoordinated fed, state and local permitting requirements and processes	<ul style="list-style-type: none"> - multiple permits often required - lack of authority to streamline/consolidate/coordinate permitting process and appeals across multiple levels - not always targeted at improving environmental outcomes - need legislative authority
	*10. Lack of nested Basin-wide framework for coordinated planning and decision making (see also #3 in Urban Growth & Development Patterns)	<ul style="list-style-type: none"> - lack of regionally (Puget Sound Basin) coordinated land development and protection strategies and priorities - decision-making is not happening at the watershed level or at the regional level - permitting happens at the local/ site level - planning happens at the local jurisdictional level - currently the only forum for this discussion is the county level - needs to include public programs addressing protection on private lands - need to address appropriate scale for planning (e.g. Action Areas vs. Integrating Units vs. counties) - lack of authority for Basin-wide planning efforts that do exist
	11. Laws and regulations are designed to to fix specific problems rather than ecosystem processes	
	12. Site scale permitting, protection and restoration instead of protection of ecosystem/watershed processes	<ul style="list-style-type: none"> - this is an issue of how to grow in addition to where to grow - lack of focus on protection (focus is on restoration); protection and restoration are addressed separately rather than together - site-scale focus rather than watershed or process focus - focus is on wrong aspects of protection/restoration - lack of sufficient tools to maximize ecological health of development and those that we do have are not being effectively implemented - lack of guidelines and strategies focused on compact development that will enhance ability to protect environment - includes resource lands with place-based ecological benefit (e.g. floodplains and ag) - need to consider differences in impacts of new development and redevelopment

	Strategy or Contributing Factor	Details and Comments
	*13. GMA, SMA and SEPA Limitations and Loopholes (see also #7 in Urban Growth & Development Patterns)	<ul style="list-style-type: none"> - do not address Puget Sound scale effectively (directly) - need to address loopholes leading to reduced effectiveness at Puget Sound scale - lack of coordination among three; developed at different times, not intended to be integrated GMA: <ul style="list-style-type: none"> - urban v. rural counties: lack of certainty re. allowed urban and rural densities (and need to identify why these densities are allowed) - lack of deadline for ability to appeal a failure to implement a GMA decision creates disincentive for voluntary updates to plan; there is no incentive to act - lack of required review for GMA plans SEPA: inability for local govts to recover costs is disincentive to complete advance SEPA
	14. New development occurs in ecologically sensitive areas	<ul style="list-style-type: none"> - includes ecologically-sensitive areas - includes flood hazard areas - includes areas difficult to reach with infrastructure - includes ecologically desirable areas within urban growth areas - includes resource lands (agriculture and working forests, mineral resource lands) - includes lands critical to supporting watershed processes
	15. Existing development is in inappropriate places and has negative impact on ecosystem	
	16. Regs create nonconforming structures and uses and lock in development patterns	- Allowing non-conforming structures is a disincentive for commercial/industrial redevelopment and leads to locking in previous undesirable development patterns
	17. Jurisdictions not enforcing regulations	<ul style="list-style-type: none"> - lack funding - other reasons for lack of enforcement?
	18. Delay in regulatory response to mandates	<ul style="list-style-type: none"> - see local planning boxes - creates problems for implementation/sequencing
	*19. No authority to recover full costs of implementing env reg programs at state fed local levels (see other #19)	<ul style="list-style-type: none"> - across many programs - leads to just partial funding of programs - funding is easily cut

	Strategy or Contributing Factor	Details and Comments
	20. Lack of funding and resources	
	23. Need for housing and services to support increasing population	- projected 2 million increase by 2050