DRAFT FOR DISCUSSION
OF URBAN FOREST PLAN AND DRAFT TREE REGULATIONS
Concepts and observations
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Introduction: The following are some observations, concepts, and synthesis of thought and research related to the update of the Urban Forest Management Plan and Draft Tree Regulations. These are based on review of existing drafts, public comment, research on trees, urban and rural forestry practices, programs in other cities, discussions with other municipalities on what has worked and what has not worked, conversations with professionals in forestry, ecology, whole systems design, land use, and some Seattle residents.

Purpose: The purpose of sharing these observations and concepts are to stimulate some additional thoughts and approaches to the update of the Urban Forest Management Plan and tree regulations particularly with City staff, the Urban Forest Commission, and the Urban Forest Interdepartmental Team. At this time it is intended to enhance our discussions. Specific ideas or proposals are only theoretical and exploratory and are not intended to be formal recommendations yet.

Key Overall Question: What is the paradigm or framework that defines our efforts related to trees?

Observation: Attitude of ownership or stewardship? Are trees units or part of a natural ecology? The general cultural orientation that seems to frame attitudes of many residents and City policy direction is one of "ownership". City policy direction tends toward a management orientation that focuses on behavior change through regulations and rules, but has limited resources for enforcement. Our key goal is to increase canopy cover and meet a certain percentage of canopy cover which tends to lend itself to an accounting orientation (tree counting) and sees trees more as units than part of a greater ecology. This orientation also tends towards short –term monitoring and reporting percentage increases over time regardless of the health of the urban forest and whether the highest priority trees are protected/renewed. There is discussion of the value and environmental services of trees, but the policies tend to be mostly structured to the ownership paradigm and trees as units.

Proposal: Shift toward a "stewardship" model- Start with an ecological framework that sees trees as part of the commons, the natural urban ecology, and provide important environmental and cultural services for the resident, City (and region). The framework would be grounded in what contributes to regeneration of the urban forest and would develop strategies that replace, where needed, existing and essential environmental services, not just trees as units. For example, planting a small Japanese maple does not

regenerate the environmental services that a mature Douglas fir provides. I would consider changing the name of the plan to Urban Forestry Stewardship Plan.

Ownership/trees as unit framework:	Stewardship framework:
• My trees, Park's trees, Street trees • Trees as units: cut one, plant two • Trees are bounded by property lines • Trees are individual entities and not related to or impacted by or impacting other trees or natural entities • Cultural message oriented toward you are a bad person if you cut a tree • Management requires significant control/regulations that to be effective require significant enforcement • Tree replacement is not specific to types of trees, best locations for trees, or replacing their ecological services • Monitoring and progress tends to be focused on numbers of trees replaced and short –term gains • Management units defined by types of land use	• Principles that guide policymaking are based on natural living systems • Focuses government policies and programs on creating long-term change • Emphasizes long-term regeneration of urban forest ecology • Orients towards regenerating, replacing and enhancing ecosystem services not just tree units • Shifts focus on policies and programs to emphasize opportunities for creating community stewardship, outreach, information, and skills that promote long-term sustainability of effort/outcomes • Identifies where greatest threats are and focuses enforcement/regulatory efforts to most threatened/significant situations • Based on ecology of place and ability to connect best ecological practices to appropriate locations

Observation: technical problem or adaptive challenge? What is our theory of change? We need to be more explicit about why trees are important and how we define the "problems" that we are trying to solve so that our initiatives are effectively matched to our problem statements. I also think we need more clarity on what our underlying theory of change is since our efforts are striving towards certain behaviors or rules. Is tree protection a technical problem to solve or an adaptive challenge or both? A technical problem lends itself to technical solutions like creation of rules, regulations, adding trees, etc. An adaptive challenge lends itself to the need for changing behavior, attitudes, building cooperation, and resolving conflicts.

I would suggest that in order to meet our long-term goals we cannot buy or regulate our way to a healthy urban forest. I believe it depends more fully on our ability to shift people's views and city actions to see the value of trees and see them as part of the ecological commons. I believe we need more mutual understanding of the benefits of trees, as well as what conditions support healthy urban trees/forests including location,

soil, maintenance…This lends itself to strategies that emphasize outreach, skill-building, opportunities for place-based stewardship.

Observation: underlying strategies are not fully grounded in a set of ecological principles. For example, why would planting 2 trees or 4 trees for every 1 tree be beneficial? I would suggest basing our strategies and policies on ecological principles. I would articulate the underlying ecological principles that our actions, policies, and programs are based on. Examples of these could include:

- To align as much as possible with ecological conditions that sustain trees
- Humans are stewards of the urban ecology
- Regeneration of the urban forest and urban trees has an ecologically based time horizon (renewing/replacing environmental services does not happen quickly-different than we had 10 trees and now we have 20 trees)
- Trees are part of living systems and so our actions will reflect a systems orientation

We would want to clearly identify the system conditions that support healthy trees and have our policies reflect these systems. For example, diversity of species, proper maintenance, planting in appropriate places, types of soils, reduction of invasive species. In reviewing many of the public comments to date, if one looks at the pattern of the comments and not just the specifics, many are striving towards an approach that is ecologically based.

Observation: overall goals, objectives, and indicators are dispersed throughout the plan and could be consolidated and certain goals seem implicit, but not fully stated. I would suggest that under a stewardship model these goals could be articulated as goals of the Urban Forest Plan:

- Positively contribute and support the conditions for long-term health of the urban forest
- Develop a framework and strategies that regenerate a healthy forest and trees over time
- Increase capacity (attitudes and practical capacity) for stewardship for trees among residents, developers, businesspeople, city staff, and departments
- Develop programs, regulations, incentives, outreach & engagement, and opportunities that enhance and deepen stewardship, promote preservation, and align with the overall ecological framework (for example, instead of requiring certified arborists for pruning street trees, maybe develop a short pruning certification program that any landscaper or resident can take to learn pruning techniques. This expands the knowledge to more people. Require this certification before pruning street trees and utilize certified arborists for very specific situations-large trees or exceptional tree…)
- Build community and place based identity through sharing stewardship for trees
- Increase awareness of trees as part of the commons and articulate the environmental and cultural services that they provide
- Utilize the role of government to effectively assist in meeting the above goals through identifying appropriate responsibilities and coordination of efforts

Observation: more clearly articulating priorities would assist us in directing our resources, regulations, and programs. If key reasons we are stewarding trees are for climate impacts and drainage impacts then science and research has articulated some clear priorities for tree "management". These priorities could be more fully articulated in the plan and our regulations and programs should assist in meeting these priorities. They include:

- Maintain and preserve mid-sized and large trees especially evergreens and groves
- Tend to/maximize the health of existing trees which includes removal of invasive species and proper and timely pruning
- Promote regeneration and expansion of urban trees by focusing on planting new trees and replacing trees that provide the greatest benefit of environmental services and cultural and food services. For example, if a large conifer is removed, then replace it with a similar type of tree.
- Improve health of future urban forest/trees by planting appropriate trees in appropriate places (regeneration)
- Protect essential wildlife services of urban trees, especially where it is difficult to replace these services. For example, heron and eagle nests.

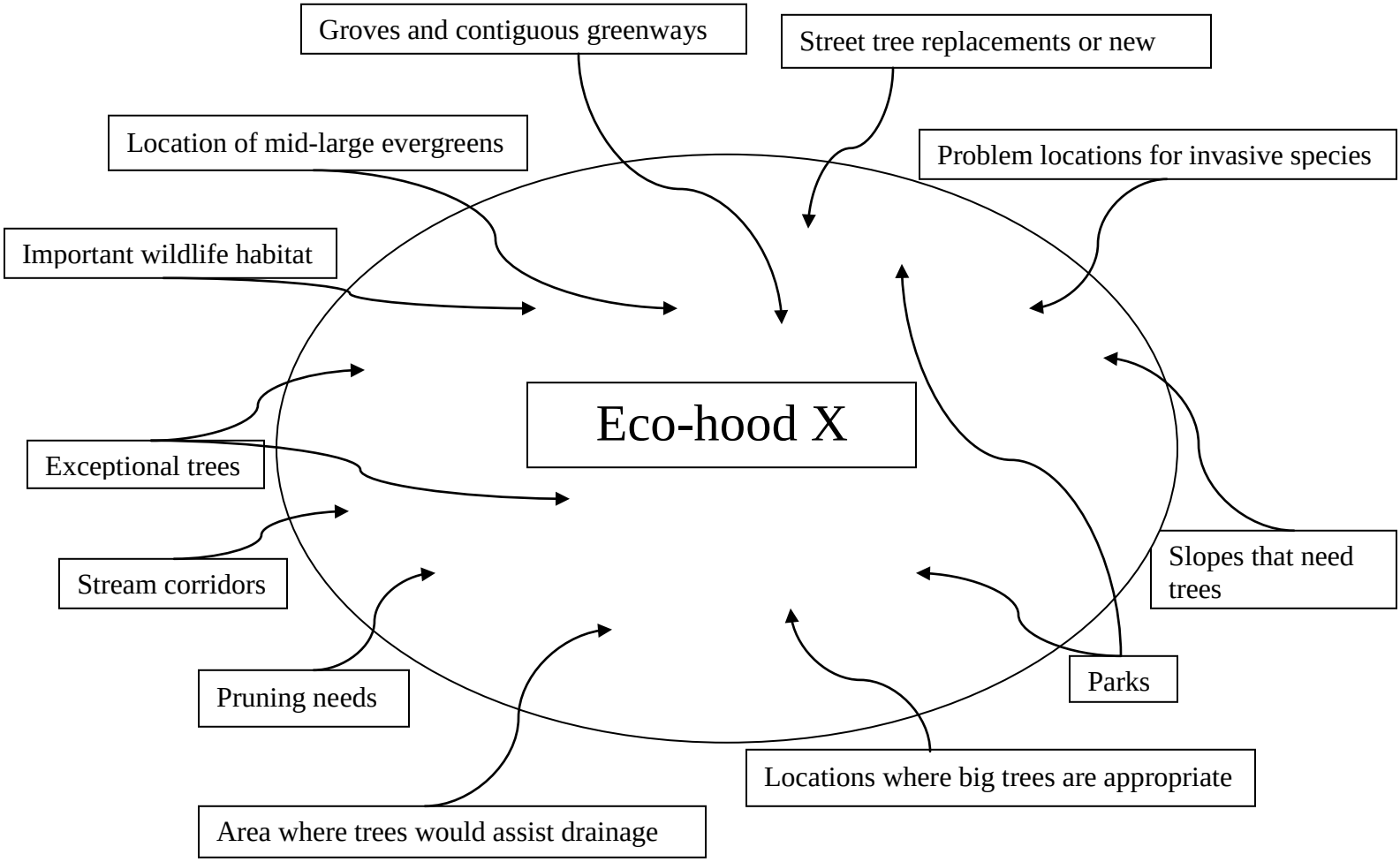
In addition, focus regulations where impacts are significant, for example, where new development happens and land is being clearly or heavily impacted.

Observation: the current draft of the Urban Forest Plan and tree regulations could be strengthened by providing a more ecologically based framework that maximizes the environmental and social outcomes that we value and provides a framework that enhances opportunities for community stewardship and identity. What might an ecologically based framework look like? Answering this question might include analyzing/observing where we can best support the health of existing trees, especially mid- large trees, and other trees that are especially important. We could identify where there are areas in the City where we should minimize development, where there are areas where the City could benefit from additional specific types of trees, for drainage benefits, replacement of significant or unique trees in parks, where groves and greenways are located, where existing orchards can be maintained and expanded, where priority trees need maintenance, where slopes need to be stabilized, where streams and wetlands need trees, where invasive species are particularly problematic, where view corridors already exist, etc.

An example of a more ecologically based system might be to start with looking at the City's watersheds and then "dividing up" the City into "Eco-hoods". Each eco-hood would be based on the watersheds, geography, and other criteria. This would help to build community identity with the surrounding natural environment and people could begin to envision how their trees and plants are part of the larger whole. Then we could develop opportunities for stewardship and mitigation within each eco-hood and gear our regulatory approaches not only to private property, but the enhancement of the eco-hood. This approach could minimize some of the conflicts we already experience related to individual land use decisions like solar access, urban agriculture, industrial uses, development, etc. This could encourage neighborhood- based approaches and help

identify priority areas for protection and priority areas for enhancement. Also mitigation could be focused in eco-hoods instead of individual properties and could be better matched to replacing specific environmental services lost to tree cutting and planted in appropriate locations that minimize repeating mistakes from the past.

For example: within an eco-hood the City and community could identify:



Observation: identifying which entities can most effectively do certain roles can enhance stewardship. For example, the City can most effectively develop a framework plan, develop regulations and policies and carry out the specific work related to department missions as well as help coordinate work among departments. Neighborhood groups and community organizations can mobilize volunteers. A work program item can be to identify which of the stewardship actions fit best with which entities and enhance the capacity of those entities to carry out their efforts.

Observation: there are possibilities to creatively explore additional resources for implementation of tree policies and programs. Some totally brainstormed ideas could be:

- Add additional Americorp volunteers
- Develop a "buy a live Christmas Tree" program where the city sells live trees and then instead of sending trees to the compost now, have neighborhoods plant them in their "eco-hood" at identified locations
- 1% for trees

Next Steps:

If an ecological/stewardship framework were to be the orientation this would require tweaking the Urban Forest Plan as that is the appropriate place to describe this orientation and expand on the principles, goals, and priorities that align with it. Once that is accomplished some sections may need to be reoriented, but much of what is there would be part of the revised plan. New future work items may need to be added if the structural framework for how best to implement this orientation needs to be designed. I think this process could be accomplished within the first quarter of 2013 and the plan could be put forth for adoption in that timeframe. We could also then review our current public comments, draft legislation based on how it aligns with these principles and re-design some of the concepts. We would want to identify any additional analysis or indicators for monitoring that might be needed.