

**City of Bellingham Habitat Master Plan  
Technical Advisory Group (TAG) Meeting #4  
December 5, 2012  
1:00-4:00 pm  
Mayor's Board Room; Bellingham City Hall**

**TAG Members present:**

Julie Guy, Parks and Recreation Advisory Board; Jim Helfield, WWU; Wendy Steffensen, RE Sources; Kim Weil, City of Bellingham Planning Department; Kurt Baumgarten, Ecology; Barry Wenger, citizen

**TAG members absent:**

James Luce, City of Bellingham Parks Department; Joe Meche, North Cascades Audubon; Leslie Bryson, City of Bellingham Parks Department; Sue Madsen, Skagit Fisheries Enhancement Group

**Others present:**

Project Manager: Renee LaCroix, City of Bellingham Public Works  
Consultant team: Margaret Clancy and Pete Lawson, ESA; Vikki Jackson and Michelle Bedtke, Northwest Ecological Services (NES); Hilary Wilkinson and Colleen Thumlert, Veda Environmental

Additional attendees: Ann Stark, City of Bellingham; Wendy Harris, citizen; Geoff Middaugh, citizen

**Handouts:**

1. Agenda
2. Conceptual Framework and Approach
3. Mock-up of an Action Sheet

**Meeting Objectives**

- Introduce new project team
- Share changes in project direction and framework; address issues and concerns
- Get TAG input on/support for new conceptual framework and approach
- Develop next steps (TAG meetings; expected input opportunities etc.)

**A. Meeting purpose, goals, objectives & Introductions**

Hilary thanked TAG members for attending with only two week's notice and noted the importance of having ongoing support from the TAG as the project continues.

Hilary introduced herself and Colleen Thumlert, a new project support staff person for Veda Environmental who will be helping with this project. She provided a brief overview of what the TAG is and why it was formed. It is primarily a technical group that will help ensure that the project is based on sound science. Hilary also provided an overview of the meeting agenda and objectives.

Renee thanked the TAG for continuing to support the project. She explained the reasons for the shift in project direction, namely the selection of a new consultant (ESA) to lead the project. The decision to bring a new consultant on board was difficult but necessary, and was primarily due to project deliverables not meeting the City's needs. She noted that ESA was the second place firm on the list of original submittals. Veda Environmental and Northwest Ecological Services will continue working on the project and will be subs to ESA.

The new consultant Project Manager and Project Support staff from ESA were introduced, and provided brief biographical background information.

Margaret Clancy will serve as the consultant's Project Manager and has been doing consulting for more than 25 years. She is excited about the opportunity to step in to this project and has done a lot of restoration work both locally and regionally. This includes Shoreline Master Plan updates for both the City of Bellingham and Whatcom County, and the Puget Sound Nearshore Ecosystem Restoration Project (PSNERP), where she developed management measures for protecting the nearshore. The resulting product for PSNERP will be helpful for this project and is available at:

[http://www.pugetsoundnearshore.org/technical\\_papers/psnerp\\_strategies\\_maps.pdf](http://www.pugetsoundnearshore.org/technical_papers/psnerp_strategies_maps.pdf) (**Note:** Link also sent via email)

Pete Lawson will be working with Margaret at ESA. He is a fisheries biologist and aquatic ecologist with 12 years of professional experience in the NW, and graduate of Huxley at WWU. He shared that this project combines two of his strongest interests: Bellingham and ecosystem/ landscape characterization. He has experience in the classification of aquatic ecosystems at various scales, and he recently worked with EPA/DSL in Oregon to develop an aquatic habitat rapid assessment method, which will ultimately be used to calculate credits/debits for project impacts and mitigation.

TAG Members introduced themselves; copies of agenda were distributed.

## **B. New Conceptual Framework & Approach**

Margaret and Pete provided a presentation outlining the new conceptual framework and project approach. A PDF version of the presentation will be sent to members via email. (**Note:** presentation was sent on 12-7-12)

## Handout: Project Definitions and Conceptual Model and Project Approach

### Presentation Overview and Highlights

#### Project Goals:

- Develop a scientifically defensible plan that prioritizes a wide range of restoration actions.
- Create a useful tool for a variety of applications, including development review/permitting; capital improvement plans; comprehensive planning; mitigation programs; grant applications; and more.
- Take advantage of TAG input to date – using what people have offered so far.

#### Project Approach

- Framework is science-based but also considers feasibility
- Process based vs. species based – target restoration on the processes underlying the ecosystem
- Functions grouped by habitat groups
- Restoration actions prioritized by sub basin and by type of action
- Utilize existing data and TAG input
- Restoration actions include capital projects, protection, education/outreach, changes in land use, and more
- Success of Plan can be measured (adaptive management)
- Plan is accessible and understandable by public like City IQ website and Action Sheets (quick glance at a given restoration project, where it is appropriate to be implemented – all the info you need to know about a restoration project, neatly assembled)

A comparison of the original project approach and new project approach was provided. The information can be summarized in the following table (see Slide #6).

<b>Original Approach</b>	<b>New Approach</b>
<b>Step 1:</b> Identify Limiting Factors	Create science-based analysis of ecological functions. Develop model parameters
<b>Step 2:</b> Determine stressors	Group functions by habitat type; Utilize existing data and TAG input; Characterize existing ecosystem conditions
<b>Step 3:</b> Identify restoration and regulatory constraints and opportunities	Develop/analyze project actions
<b>Step 4:</b> Habitat restoration potential and feasibility	Prioritize restoration actions by ecological uplift
<b>Step 5:</b> Prioritized actions	Feasibility assessment

An overview of key differences between the two approaches was also provided. These include:

- Function based and transparent

- Not explicitly species focused (although species will be incorporated into the analysis through a biodiversity function, or similar approach)
- Incorporates anthropogenic constraints at the end
- Focused on project actions – where we get the most benefit as opposed to pitting one neighborhood against each other
- Does not rank all actions against each other

### Key issues and questions raised by TAG regarding new project approach

**Note:** Responses (except where noted) are from the consultant team Project Manager (ESA)

1. **Keep species in mind.** Process-based approach is good; but it is also important also to keep species in mind as the plan moves forward, particularly keystone/critical species. The terms “process” and “function” won’t translate for education and outreach purposes. Will have to incorporate species and other words while educating public about this.  
Response:
  - ESA wants to link processes to habitat types. There will likely be a biodiversity function for each habitat group in which key species can be identified.
  - Veda Environmental will help with the public outreach aspects of this plan and will definitely use language that is more compelling and makes sense to a broader audience. (Veda)
2. **The final plan should address restoration *and* protection.** Response:
  - The term restoration is used in the broadest sense: it encompasses protection/preservation actions.
3. **Are we looking back retroactively to past projects – how would they work given this new approach?** Discussion/Response Summary:
  - Past restoration actions will be looked at when the conditions assessment is conducted. (ESA)
  - We need to be careful about this because these projects were done very differently and not in the same framework as this plan is being developed. Past projects were not necessarily looked at on a larger scale. Because of that, it’s unclear how useful it would be to look at them and fit them into our approach. Many projects were opportunistic or a response. (NWES)
  - There might be ways to link up past projects with new projects – connectivity and geographically. (ESA)
  - Great discussion and great point; lots to learn from past actions; assessing them fully for this project is outside the scope. (ESA/Veda)
4. **Feasibility is an important component. How will it be addressed?**  
Response summary:

- It will be incorporated. First step is to ensure sound scientific/technical foundation for the plan. Second step is to bring in feasibility elements such as land ownership etc.
5. **Will the plan include/address citizen monitoring efforts** (example: birds/cavity nesters)? The plan will have general adaptive monitoring guidance that could be adapted for various monitoring efforts (ESA).
  6. **Connectivity is an important concept**, particularly in regards to connected streams/habitats between Bellingham and Whatcom County. Will this be addressed? Response:
    - Yes – there needs to be a link and a lot of coordination in the results of this plan.
    - Renee will be meeting with staff from County. The County is a key stakeholder. (City)
    - The analysis will extend beyond the City of Bellingham to encompass parts of Whatcom County. This is a process-based plan, and many processes within the county affect habitat within the city.
  7. It will be important to **connect the nearshore prioritization effort** and this effort. Response:
    - This element will not be forgotten. The report will be available on the city’s website shortly; several people on this project were also involved in the nearshore prioritization project so that element will not be lost.

### Overview of Conceptual Model

Pete provided an overview of how the conceptual model would work for an example objective: reduce streambank erosion. (Slide #11). He also provided an overview of the terminology used for the conceptual model so that everyone understands the working definitions.

The example (reduce streambank erosion) helps show how objectives, functions and attribute measures are linked. Functions include things such as surface water storage and flow variation; attribute measures include things like percent impervious area of contributing watershed. Because not all attribute measures can be effectively measured, criteria will be used to determine their suitability. These criteria include:

1. Relationship to function
2. Quantifiable and repeatable
3. Sensitivity to change
4. Data availability

An example of the end product was provided for Squalicum Creek and its subbasins (Slide # 16) to show how the conceptual model would result in a list of prioritized actions, both by sub-basin and by type of action. The list of actions developed will be based on the functions and habitats we are trying to restore or protect. It will be a “portfolio” of actions, some of which will have a long-lasting effect, and others that will affect structure and mimic natural processes but require more human

interaction (see PSNERP Management Measures report for examples). Still other types of actions include preventing and removing physical disturbances, and influencing human behavior through outreach and education. In the end, a mix of action types will be included in the portfolio.

Margaret provided an overview of next steps in the process. These include:

1. Determine number and type of habitat groups
2. Prepare draft list of functions for each habitat group
3. Prepare draft list of attribute measures for each function
4. Prepare draft list of restoration actions

She noted that, assuming buy-in from TAG regarding the approach and conceptual framework, ESA will think about attributes and start to populate the conceptual model. Then they will develop raw material and get input from the TAG. A mock-up of a template of what the paper version of a project action sheet may look like was distributed. This is NOT for circulation – for internal purposes only.

#### Key issues and questions raised by TAG regarding conceptual model:

**Note:** Responses (except where noted) are from the consultant team Project Manager (ESA).

1. Will there be any kind of **weighting system of the functions**– or will be looking at them all equally? Response:
  - Likely yes, both attribute measures and functions may require weighting. **Note:** A TAG member noted that data is not always available so this can be challenging.
2. **Will restoration of functions be part of the plan?** (e.g. beach nourishment)
  - Yes – this is the goal of the plan. For example beach nourishment is feasible but removing Squaticum harbor is not feasible– can't get rid of the harbor to replenish beach nutrients.
3. **What is the end-game?** Response:
  - The document will contain the list of actions and the priority for which they should occur by sub-basin.
4. Will the plan be flexible enough that **new actions can be added over time?**
  - This is a tool that will be easily used over and over. One of the challenges is that part of what drives the priorities may change and will need to be recalibrated.
  - Don't think of the plan as "Remove fill from wetland, take out culvert, etc." This will be both programmatic ideas **and** specific actions – a combination of the two. This will give it a longer life span.
5. What **scale of restoration actions** will the plan target? Response:
  - Some actions will be on parcel scale (e.g., fix known area of bank stability) and others might be on the sub-basin scale (riparian vegetation or revegetation). And others might be programmatic, targeting a subset of sub-basins.

6. Please **provide a map** that shows the physical area the plan will address, as well as sub-basins. Response:
  - The City has a map on its website and will provide a link. Hard copies will also be distributed if preferred.

Three key questions were posed to the TAG regarding the new conceptual framework and approach.

**Question 1: Is function-based model proposed appropriate and the one that will address goals?**

Hilary asked each TAG member to share his or her thoughts regarding the new approach, and each TAG member responded with strong support for it. Specific comments included:

- It makes sense and is understandable, more so than the previous approach.
  - It is a good approach as long as it provides what the City needs
- Question 2:  
Do you have suggestions for number or type of habitat types?

The following habitat types are examples of those that could be used for this project:

1. Uplands
2. Wetlands (freshwater)
3. Riverine
4. Riparian
5. Nearshore
6. Estuarine (including estuarine wetlands)

TAG members were asked to comment on these habitat types and make any suggestions for how they might be broken down further, and what might be included in each type. Pete noted that you have to be careful about how far you break categories down.

Summary of Discussion:

- Uplands could be broken down further. **Note:** Barry to follow up with a list of how to break down uplands into different habitat types.
- Geoff Middaugh has a habitat plan that Renee will send to ESA – it includes definitions of Uplands.
- Consider including a category for “Urban” this could possibly support some species such as bats and birds. Response:
  - Urban could be included in the Upland type.
- Consider “deep water” as a habitat type or figure out where it belongs.

**Question 3: Appropriateness of sub-basin scale for analysis?**

Summary of Discussion:

- Need to see more information first. Example - Baker Creek - too big of an area.
- Expand on wildlife corridors. Example: Great Blue Heron. Flight corridors and foraging sites are important to consider and important to see. Response:

- This can present challenges; where do you draw line? The consultant team will be looking at it uniformly across the City – could be by habitat patch unit maybe more of a geological landform.
- Make sure categorization is based on regulation. Start from regulation areas and then nuance it.

### C. Wrap Up and Next Steps

Hilary provided a brief summary of meeting highlights, and pointed to some key issues raised during the meeting. These include (but are not limited to):

1. Process-based approach – just don't lose species focus. Utilize Biodiversity Index that ESA mentioned.
2. Restoration in broadest sense (encompass protection).
3. Past projects – keep in mind.
4. Feasibility is an important element.
5. Ecological conditions – how to define.
6. Language regarding monitoring/baseline assessments.
7. Connectivity.

Renee noted that she would like to have this process wrapped up and taken to Council by May/June 2013. It will also need to go through “outer” ring and have robust public process before then. She also explained that there are timeline restrictions from the funding source - current funding ends at the end of this year. The new timeline has extended to May 2013 with a new funding source. TAG members were asked to extend their commitment to the project.

Hilary provided a brief overview of when the final two TAG meetings might occur, and what they will cover.

<b>Date</b>	<b>Topic</b>	<b>Actions</b>
<b>12-5-12</b>	Transition meeting; Project Goals/Objectives; New Project Approach/Framework	Email list of habitats/attribute measures for review and comment before next meeting
<b>Early Feb 2012</b>	Methods and Variables included in the science- based prioritization; Finalize model	TBD
<b>Mid- to Late March 2013</b>	Results of Prioritization	TBD

Renee thanked everyone for attending and Hilary adjourned the meeting.

## D. ACTIONS ITEMS

### Hilary

- Will forward Barry's list of upland habitat types to Margaret and Pete. **(DONE)**
- Will forward draft meeting notes to Margaret and Pete **(DONE)**
- Will work with ESA to develop a revised TAG work plan that provides additional details regarding two future meetings, as well as input needs from TAG between meetings. This will be distributed to the TAG in January.
- Will forward the following to TAG members:
  - Link to PSNERP website with Nearshore Ecosystem report **(DONE)**
  - Spreadsheet with TAG member names, affiliations and contact info **(DONE)**
  - Link to City's map and/or PDF version of the map **(DONE)**
  - PowerPoint presentation **(DONE)**

### Jim H

- Will send Renee Habitat Plan

### Barry

- Will send a list of upland habitat types and how they might be broken down to Hilary. **(DONE)**

### ESA:

- Will share timeline with the group that will identify when TAG members will be needed.
- Will edit draft meeting notes received from Hilary and forward to Colleen who will incorporate edits and send to Renee. **(DONE)**
- Will work with TAG via email to get additional input on habitat types.

### Renee

- Will send Habitat Plan (from Jim H) to ESA
- Will do final edits of draft meeting notes, finalize them, and forward directly to TAG.