



**Marquam Nature Preserve
Soft Surface Hiking Trails 2012**

OPEN HOUSE

Wednesday, May 25, 2011

Trail Options Comments

Introductions and Meeting Goals:

- This process begins with eight Trail Alignments proposed in 2007 public process.
- The Project Team has done some preliminary design to allow us to develop cost estimates, which exceed our budget.
- The Nature Preserve is an environmentally sensitive watershed with spectacular scenery.
- PP&R needs your feedback on which trails will best support the community's needs while addressing the design objectives.
- PP&R values the work of and its relationship with the Friends and other volunteer groups who help us take care of our assets.
- PP&R must make sure that the trails are engineered and constructed in such a way as to minimize ongoing maintenance. These trails will function well with appropriate drainage and will be sustainable with a natural soil surface.

PP&R's Trails Strategy:

- The site is sensitive, so the proposed Trails will be designed to the Type A, High Challenge Hiking Trail guideline in PP&R's 2009 Trails Design Guidelines
- Surfaces will be **soil**.
- Width will be between **18" and 30"**.
- **Longitudinal slope will generally be between 0% and 15%**, only exceeding 15% in short segments within which a lower grade would require invasive grading.
- **Cross slope will be between 2% and 4%**.
- A "sustainable trail" is one that is carefully engineered for its site and constructed such that it does not need more than a couple of visits per year to maintain.

Project Context:

- The planning foundation includes the Marquam Hill Plan and its pedestrian connections and supporting the 40-Mile Loop and the Terwilliger Parkway.
- This proposed trail network started with the conceptual alignments worked out between City Nature and the community in 2007, with refinements based on field visits this winter and the technical assessment from PP&R's design consultants, Vigil-Agrimis.

Environmental Considerations:

- The Nature Park contains sensitive headwaters and habitat, and is protected by environmental zoning overlays ("P" for protection or "C" for conservation).
- The Bureau of Environmental Services also protects all of the drainageways that are not already protected by the P-overlay.

- This means that where a trail crosses a stream it must stay clear of the Top of Bank of that stream. This causes more bridges and boardwalks to be necessary and adds significantly to the design and permitting costs.
- Where a trail crosses a drainageway that is not a stream, other kinds of engineered crossings will be necessary, such as boardwalks or causeways.
- The one segment along Terwilliger Parkway, Trail 6, will need to adhere to the Design Overlay for the Parkway.

Project Funding:

- Funding of \$740,000 has been received from a Local Share of Metro's 2006 Natural Areas Bond Measure.
- The funding criteria are that the project result in a built asset, and that the asset enhance habitat while still allowing public access.

Design Objectives are a framework to allow us to accomplish a trail network that meets all of these criteria:

- Respect the Functional Values: hydrology, habitat, safety and maintainability;
- Have minimal impact on the scenery of the Nature Preserve;
- Make key pedestrian connections; and
- Increase access to nature and recreational opportunities.

Trail Options Map:

- The 2007 process proposed a Trail 2 that ran from the Log Landing to Trail 5a, but this proposal involves cutting a trail into hillsides with many seeps, springs and drainages, which would cause continual drainage and erosion problems. This is also sometimes an indicator of unstable soil. In addition, the trail would bisect good quality habitat. For these reasons, Trail 2 has been removed from consideration.
- The other 2007 alignments were walked and assessed and adjusted using the Design Objectives. The February 2011 memo from Vigil-Agrimis summarizes those findings.
- The result is the Trail Options Map, including:
 - over 10,000 lineal feet (LF) of soft-surface trail;
 - o an estimated 90 crossings (including 5 high bridges with guardrails + 4 low bridges);
 - simple trail outlets with no right-of-way alterations budgeted;
 - minimal wayfinding signage; and
 - one bench.

Cost Estimates:

- The Predesign Total Project Cost Estimate for all of the trails is \$971,500.
- A *total project cost* estimate differs from the construction estimates found in the Vigil-Agrimis memo in that it includes the contractor's profit and insurance plus the City's soft costs to make the project happen: survey and design fees; permitting; and other miscellaneous costs; and staff time.
- Soft costs are about 40% of the Total.
- It is important to remember that there has not been any design yet, so the estimates will change.

Trail 1:

- Connects Marquam Hill Road and the Upper Marquam Hill Trail to Trails 3 and 4 at the Log Landing.

- Mostly gentle grade on an existing informal trail.
- Minimal impact, several crossings, high canopy overhead.
- Estimated Total Project Cost \$165,000.

Trail 3:

- Connects SW Fairmount to Trails 1 and 4 at the Log Landing. Requires steps at the Fairmount end.
- Low hydrologic and habitat impact with high connectivity.
- Passes through well-developed native forest.
- Estimated Total Project Cost \$34,200.

Trail 4:

- Connects Trail 5 to the Log Landing, which links SW Fairmount to the Marquam Trail via Trail 3.
- Low hydrologic and habitat impacts with high connectivity.
- Passes through well-developed native forest.
- Estimated Total Project Cost \$63,100.

Trail 5:

- Splits off the Marquam Trail in the north near SW 13th Ave, connects with Trails 4 and 5a, and rejoins the Marquam Trail in the south near the old Norris House.
- Moderate impact with 4 major crossings. Central segment bisects a large trail-less area of park.
- High connectivity and recreational value, enabling two east/west routes through the Nature Park an internal recreational loop.
- Estimated Total Project Cost \$375,400.

Trail 5a:

- Connects SW Fairmount with Trail 5.
- Low hydrologic and habitat impact but high connectivity.
- Passes through well-developed native forest.
- Estimated Total Project cost \$85,400.

Trail 6:

- A curb-tight section of sidewalk that moves the crossing of the Terwilliger Parkway by the Marquam Trail further south to a safer location.
- PP&R will recommend to PBOT that a crosswalk be placed across Terwilliger in the new location.
- Low hydrologic and habitat impact, but improved safety on the Marquam Trail.
- Estimated Total Project Cost \$53,100.

Trail 8:

- A re-route of a portion of the Marquam Trail farther south, away from residences along SW Gaines Street.
- Low hydrologic and habitat impact.
- Requires decommissioning of a segment of the existing Marquam Trail that seems to be functioning and well-tended.
- Estimated Total Project Cost \$48,600.

Trail 9:

- Connects the Marquam Trail with SW 6th Avenue and OHSU parking areas.
- Traverses a series of steep, wet ravines requiring 4 bridges through habitat heavily infested with blackberry.
- A key pedestrian connection per the 2003 Marquam Hill Plan and a gateway into the Nature Park for the eastern portion of the Hill.
- Estimated Total Project Cost \$146,700.

Priority Question:

- There is a gap of approximately \$230,000 between the available funding and the estimated Total Project Cost for all of these trails.
- Which trails best support the community's needs that also have low environmental impact, are low maintenance and sustainable, and make key pedestrian connections?