MUKILTEO CITY COUNCIL AGENDA BILL 2013-13

SUBJECT TITLE: Smuggler’s Gulch LID Public Hearing
FOR AGENDA OF: June 3, 2013

Contact Staff:
Patricia Love, Assist Dir. Of Com. Dev.
Jim Niggemyer, Assist City Engineer

EXHIBITS:
1. Agenda Report
2. Smuggler’s Gulch LID Project Budget

Department Approval:
Larry Waters, PE, Public Works Director.

City Administrator Approval:
Joe Hannan, City Administrator

Account Name(s):
Capital- Smuggler’s Gulch LID Retrofit Test Case

Account Number:
440.90.594.305.6203
Smuggler.4406203

Amount Budgeted:

Appropriation Required:

DOE Grant Award:

Total Project Costs

RECOMMENDATION: City Council MOTION to proceed with the Smuggler’s Gulch LID and Retrofit grant project and:
1. Maintain the Smuggler’s Gulch Citizen Advisory Committee and have staff continue to engage with the Committee through grant project(s) implementation of the fundable priority projects.
2. Direct staff to prepare a Smuggler’s Gulch Sub-Basin Plan using the Smuggler’s Gulch Committee as an advisory Committee.
3. Direct staff to prepare and return to Council with an implementation plan, schedule, and cost estimates to implement the remaining Committee recommendations as listed in the attached agenda report.

SUMMARY OF REQUEST:
City staff and consultant Tetra Tech have been working with the Smuggler’s Gulch Citizens Advisory Committee for the past three months to identify a list of potential LID projects that can be implemented with the funds available through the Smuggler’s Gulch LID and Retrofit Project grant. The attached agenda report summaries this process and Committee recommendation.

The top five project locations (each receiving 6 votes) selected for further evaluation by the Committee include rain gardens / unlined bio-retention facilities along:
- 44th Avenue West, just north and south of 88th Street SW
- 45th Place West
- North side of 88th Street SW between 53rd Avenue W and SR 525
- 49th Avenue West, north of 90th Place SW
- 56th Avenue, just south of 92nd Street

This recommendation includes delaying the 44th Avenue Bio-Retention project unless it can be reconfigured to function as a rain garden or constructed wetland if geotechnical site conditions allow; staff supports this recommendation. As is noted in the agenda report, the depth of the Committee’s issues exceeds the original scope of the LID projects. To successfully move forward with the projects, staff recommends that the LID project be separated from the larger basin wide concerns as noted in the recommendation above.

ALTERNATIVES: Return the grant funds to the Department of Ecology and stop the project.
SMUGGLER’S GULCH LOW IMPACT DEVELOPMENT & RETROFIT PROJECT
CITY COUNCIL AGENDA REPORT

BACKGROUND:
In late 2010 the Department of Ecology issued a notice of funding availability under their Statewide Stormwater Grant Program. These dollars were available via a competitive grant application process to local governments covered by a National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit to fund stormwater infrastructure projects.

The City of Mukilteo applied for a $1,000,000 grant under this program for the Smuggler’s Gulch Low Impact Development and Retrofit projects. As a requirement of the grant, a pre-design report was prepared describing the basin conditions and a list of potential projects that could be implemented with the funding. Because the predesign report was “preliminary” additional work to determine which projects could be built was included in the grant proposal. In November 2011, Ecology received 111 applications totaling more than $83M in eligible project costs. Ecology’s stormwater experts reviewed, rated, and ranked the applications and developed a priority list of the stormwater improvement projects. Mukilteo’s project was not included in the ranked project list sent to the Legislature.

In order to continue to take steps in managing stormwater runoff with in the Smuggler’s Gulch Drainage Basin, staff proposed a capital project to the City Council during the 2012 budget process to initiate a Low Impact Development (LID) demonstration project in the Smuggler’s Gulch Drainage Basin.

The purpose of the project was to reduce flooding, manage erosion, and improve water quality. The upper regions of Smuggler’s Gulch basin, between 44th Avenue and SR 525, was selected for the project based on the aging drainage system (neighborhood was developed in the 1970’s - 1980’s) where stormwater facilities do not meet current capacity standards for water detention or water quality. It is also a fully developed neighborhood where retrofit projects could be used to help educate residents of their value and neighborhood context. With this in mind the City began working on two projects in early 2012: the 44th Avenue Rain Garden and the 88th Street Detention Pond Retrofits. These two projects were selected because they met at least one of the goals of LID and were also highly visible locations where public educational interpretive signs could be most effective.
Seeing the high demand for stormwater funding, the 2012 Legislature provided an additional $13.987 Million Dollars to fund an additional 21 unfunded projects under the “Stormwater Retrofit and Low Impact Development Supplemental Capital Budget Proviso”. These additional dollars could only be spent on retrofit and LID projects. Mukilteo received a $1 million dollar grant out of these funds because our grant application met the specific criteria outlined by the Budget Proviso. This grant opportunity allowed the City not only implement scope of the demonstration projects but also provided an opportunity to gain ground on addressing stormwater management needs within the larger basin.

As part of the outreach effort to implement the project, staff mailed three letters to the affected neighborhood and held two open houses. A website on the project was also created. The purpose of this outreach effort was to obtain public input on projects the residents would like to see in their neighborhoods. While the effort gained support of many of the residents it did not gain the support staff had hoped and on January 22, 2013 at the request of a group of citizens in the basin the Council requested that a Citizens Advisory Committee be developed to help establish a list of projects for the basin.

Specifically, the motion stated:

“To direct staff to continue with the project design and the public outreach process and in particular to be sure to outreach to homeowners throughout the basin and to proceed with design and construction of the 44th Avenue rain garden and the detention pond projects.” And

“To amend the motion to form a citizens committee from each of the upper, middle and lower areas of the gulch to meet with staff two to three times before coming back to Council.

CITIZEN ADVISORY COMMITTEE:

City staff and our consultant Tetra Tech have been working with the Smuggler’s Gulch Citizens Advisory Committee, which is made up of 9 community members representing each of the three Smuggler’s Gulch sub-basins in the City; a fourth sub-basin is located outside of the City on Paine Field. The purpose of the Committee was to develop a list of potential LID projects for the basin while still meeting the intent of the DOE Grant. We have met with the Committee three times and held one open house. What we have learned is that the Committee has significantly more issues within the basin that goes beyond the scope of the Low Impact Development project and there is no single solution to address each of the issues raised by the Committee. Below is a summary of the Committee’s work over the last few months:

**Committee Meeting #1 - Kick-off Meeting:** General education meeting about LID facilities and to learn about the basin issues affecting the community.

<table>
<thead>
<tr>
<th>Sub-Basin 1: Paine Field</th>
<th>Sub-Basin 2: Upper Region (44th Ave to SR 525)</th>
<th>Sub-Basin 3: Mid Region (SR 525 to 57th Ave)</th>
<th>Sub-Basin 4: Lower Region (57th Ave to Puget Sound)</th>
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<tbody>
<tr>
<td><strong>Issue:</strong> Belief that excess water is being released into Smuggler’s Gulch by the Airport</td>
<td><strong>Issue:</strong> Underground springs &amp; little detention; iron oxide seeps</td>
<td><strong>Issue:</strong> Health of wetland; infiltrate water as much as possible</td>
<td><strong>Issue:</strong> Excess flows and downstream erosion</td>
</tr>
<tr>
<td><strong>Request:</strong> Divert water to Big Gulch and/or at a minimum decrease flows into Smuggler’s Gulch</td>
<td><strong>Request:</strong> Reduce yard saturation and direct water to detention ponds / fix existing detention ponds</td>
<td><strong>Request:</strong> Evaluate wetland ecosystem and route stream into wetland; infiltration is important</td>
<td><strong>Request:</strong> Control flows and/or divert flows to Big Gulch; flow &amp; volume monitoring</td>
</tr>
</tbody>
</table>
Committee Meeting #2 – Design Charrette: The Committee identified a list of projects suggested by individual committee members; however there was no general consensus from the committee on the project list at this time. As part of the site selection exercise, a variety of LID design options were presented to the Committee for educational purposes; these expanded on the original three options of rain gardens, bioretention facilities, and gravel galleries to include tree canopy planting, porous concrete sidewalks, bioretention swales and cells, grass filter strips, media filter drains, sheet flow dispersion, continuous inflow biofiltration swales, constructed wetlands, and check dams. The following two maps show the potential project locations identified by the Committee members.
**Basin Wide Open House:** This list was then presented at an open house to the general public to obtain their feedback and to potentially add projects to the draft list. Twelve people attended the open house: 4 committee members, 4 people that staff has met with previously on the project, 2 Council members, and 2 new people to the project.

**Committee Meeting #3 – Refinement Meeting:** After reviewing the Committee and open house suggested project list staff met to evaluate the options. Staff also added a couple of project locations for final consideration by the Committee. The items marked with an asterisk are the staff suggested projects. Staff sorted the list into three categories: 1) viable projects – shown in blue, 2) good projects, but need more evaluation & time than the grant allows – shown in yellow and 3) deleted projects due to fatal flaw – shown in red. At this meeting, the Committee members took this map and using sticky voting dots, individually selected their priority project sites. From this dot exercise a list of the top priority project sites immerged and can be packaged to match available funding.

At the end of the meeting there was consensus to move forward with the LID project, the Committee agreed that they did not want to forfeit the grant and that we should begin to make progress towards managing stormwater in the basin.

The following maps show how the above listed site were sorted and then ranked by the Committee. The top 5 project (each receiving 6 votes) areas include rain gardens / unlined bio-retention facilities located along:
- 44th Avenue West, just north and south of 88th Street SW
- 45th Place West
- North side of 88th Street SW between 53rd Avenue W and SR 525
- 49th Avenue West, north of 90th Place SW
- 56th Avenue, just south of 92nd Street

Two future projects which were noted as good projects, but needed additional time to evaluate outside of the DOE grant timeline included restoration of the 92nd Street wetland on private property (11 votes) and expansion of the 92nd Street Park wetland site (3 votes). Each of these are good projects have the potential to help manage stormwater within the basin, but need cannot be completed with the DOE grant.
Note: For simplification purposes on this map, the term "Bioretention" means one of several options: bioretention swale, bioretention swale with check dams, and biofiltration swales. The type and size of the facility at each location will be dictated by the site constraints.
Note: For simplification purposes on this map, the term “Bioretention” means one of several options: bioretention swale, bioretention swale with check dams, and biofiltration swales. The type and size of the facility at each location will be dictated by the site constraints.
MOVING FORWARD:
While it was difficult to get consensus on the entire proposed list of projects due to the diverse range of basin issues and because there is no single solution to address the issues in the basin, the Committee agreed as a whole, that LID techniques / technologies can help with stormwater management in the basin. They also acknowledged that these LID projects cannot solve all of their concerns in the basin.

To successfully move forward, the larger basin issues need to be separated from the LID project by creating a Smuggler’s Gulch Sub-Basin Strategy Plan. This sub-basin plan will help prioritize drainage issues / projects in the basin, suggest LID techniques for property owners to implement based on their location, and establish a capital facilities project list for the basin which will be inserted into the upcoming stormwater comprehensive plan update.

Secondly, the Committee has ranked (through the voting dot exercise) their list of top priority project locations; we purposely did not identify the type of LID feature which could be built at each of the top priority sites as staff will now need to start project evaluation work to determine which of the sites are technically feasible to move forward towards full design and eventual construction. This process will include determining which of the LID techniques is best suited to each of the suggested project sites. The Committee would like to stay engaged in this process, and staff is supportive of this suggestion.

The dot ranking exercise however did include a recommendation by the Committee to remove the 44th Avenue Bio-Retention project from the list of priority project locations until further evaluation can be performed. The Committee is not supportive of piping the outflow to the existing stormwater system or that
it is the best location for a LID facility, thus might not be the best use of these limited funds for the demonstration projects. Staff is supportive of removing the 44th Avenue project from the LID project list at this time. It was selected not just because of its potential to help with water quality and storage capacity, but because it was located along a heavily used pedestrian path where public education and awareness about how low impact development can help manage stormwater and help the environment. The first goal of this project was to find sites that the community wanted in their neighborhood, and as such the education goal can be achieved at another site with Committee involvement. Staff will also be working with our consultants to determine if the 44th Avenue project could be redesigned as a “pure rain garden or wetland” type project to more fit with the Committee’s desires while not increasing the amount of water going into adjacent yards or crawl spaces.

Lastly, the Committee has suggested several good ideas that staff feels will benefit the basin and the community as a whole. These ideas include creating a local grant program for the community to implement their own LID projects on their property, reaching out to the community with more education opportunities, and doing some water quality sampling. However, there is one outstanding issue that has not been resolved: stormwater flow and volume monitoring. Our engineers are recommending against monitoring at this time due to limited benefits on return of investment. Their recommendation is to continue to use modeling programs that are considered acceptable state of practice for this type of area wide analysis. Additionally, the LID project cannot be used to pay for any monitoring activities; DOE wants their dollars and our matching dollars to go directly into construction projects.

In summary, below is the Committee’s recommendation which staff supports:

1. Maintain the Smuggler’s Gulch Citizens Advisory Committee with the purpose of working with staff on finalizing the remaining LID grant projects and preparing a Smuggler’s Gulch Sub-Basin Plan.

2. Remove the 44th Avenue Bio-Retention project from the LID project.

3. Use the Committee’s top listed project locations to evaluate which of the projects are most viable, fundable and constructible. From this evaluation process the projects will be moved forward into design and construction.

4. Create a Smuggler’s Gulch Sub-Basin Management Plan that will guide future projects and development in the basin. The plan will include goals, issues, existing conditions, subarea mapping, list of recommended capital facilities projects, basin strategies for the neighborhood, and possible funding sources.

5. Consult with a geotechnical engineer to evaluate, at the community level of the Smuggler’s Gulch basin, existing data and reports to help determine and implement future LID solutions in the basin.

6. Establish an ongoing local stormwater improvement grant incentive fund to support property owners and/or neighborhoods to make LID or flow control improvements on either public or private property which helps support the health of the basin. This would be a City wide program open to all citizens.

7. Conduct selected water quality sampling in targeted reaches of Smuggler’s Gulch Creek starting this summer.
8. Update the City’s Surface Water Comprehensive Plan and Capital Facilities Plan with the information learned through this process.

9. Hold a series of land use law and City government workshops to help educate the citizenry about how local, state, and federal laws control project design and approval processes.

10. Look for and apply for grants that could be used to enhance wetlands in the Smuggler’s Gulch basin and/or return fish to the basin.
**Project Budget**

Using the grant contract, consultant contract, and cost estimates of the approved projects, a preliminary budget has been prepared showing the distribution of funds.

<table>
<thead>
<tr>
<th>Original Grant Budget:</th>
<th>$1,333,333.00</th>
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<tbody>
<tr>
<td>Allocated as follows (See Grant Contract):</td>
<td></td>
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<tr>
<td>Project Administration (Staff Time):</td>
<td>$40,000</td>
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<tr>
<td>Design:</td>
<td>$295,000</td>
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<tr>
<td>Construction Management:</td>
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<tr>
<td>Construction:</td>
<td>$862,000</td>
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<tr>
<td>Public Meetings:</td>
<td>$3000</td>
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<tr>
<td><strong>Sub-Total:</strong></td>
<td>$1,333,333</td>
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<tr>
<td>Added Costs:</td>
<td></td>
</tr>
<tr>
<td>Citizen Advisory Committee Staffing &amp; Technical Support:</td>
<td>$57,222</td>
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<tr>
<td><strong>Total Budget:</strong></td>
<td>$1,390,555</td>
</tr>
</tbody>
</table>

**Predicted Expenditures:**

Original Budget: **Approved Projects Costs Estimates:**

| 44th Avenue "Bioretention Facility" | $170,000 |
| 88th Street Detention Facility | $130,000 |
| 50th Place Detention Facility | $150,000 |
| Whisper(ing)wood Detention Facility | $150,000 |
| **Subtotal:** | $430,000 |

Remaining Construction Budget for LID Options:

(862,000 – 430,000)

$432,000

**Alternative Option:**

Alternative Construction Budget for LID Options:

Add: staff reimbursement line item: $40,000
Add: reduce construction management estimate by half: $66,000

**New Remaining Construction Budget for LID Options:** $538,000