

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Request the Council to Approve a Contract with RW Beck to Develop the Thornton Creek Basin Plan
DEPARTMENT:	Public Works
PRESENTED BY:	Mark Relph, Public Works Director Jesus Sanchez, Operations Manager

EXECUTIVE SUMMARY

The approach to solving the recurring flooding problems south of Ronald Bog and other areas within the Thornton Creek basin requires a watershed approach. Without a comprehensive basin-wide planning and implementation approach, the frequency of flooding for the remaining properties cannot be effectively reduced. In addition, a basin-wide approach will enable the City to identify water quality and habitat improvements that need to be implemented.

The approval of this contract will be coordinated with a separate contract with Northwest Hydraulic Consultants (NHC), who will be performing the modeling and mapping for both the City of Shoreline and the City of Seattle. NHC was not in a position to complete all of the modeling and mapping for both entities and the individual project alternatives analysis. Therefore, staff is proposing this separate contract with RW Beck to complete the necessary scope of work.

The basin plan will begin with using the modeling and mapping provided from NHC for problem identification. Next, a set of criteria will be developed to be used to design solutions. Once the design criteria for the basin planning work have been established, alternative solutions will be developed to solve the identified problems. These solutions for flooding will include one or more of the following approaches:

- Infiltration
- Detention
- Diversion
- Property acquisition or relocation
- Structure elevation.

The basin plan will include cost estimates of the selected projects. In addition, the plan will include options for funding the required projects. This information, especially flooding projects for the Ronald Bog basin, will be included in the 2010-2015 Capital Improvement Plan.

FINANCIAL IMPACT

The value of this contract is \$441,561. All expenses on his project though December 31, 2008 (estimated at \$300,939) will be funded by Public Works Trust Fund (PWTF) dollars (85%) and by City Surface Water Enterprise funds (15%). The remaining cost for this project (\$140,622) in 2009 will come from the Surface Water Enterprise fund.

STAFF RECOMMENDATION

Staff recommends Council authorize the City Manager to execute this professional services contract with RW Beck in the amount of \$441,561.

Approved By: City Manager  City Attorney ____

BACKGROUND

The December 2007 storm caused flooding of many homes located in the Thornton Creek basin, especially near Ronald Bog. It is clear that while we cannot guarantee flooding will never occur anywhere in the basin, we can provide a reasonable level of protection that seeks to mitigate property and/or personal damage to the extent possible.

Past projects in the basin have helped to alleviate flooding in many areas through a combination of vigilant maintenance practices, combined with local drainage improvements. Understanding the hydrologic character/behavior of the basin is the next critical step in the process of developing programs and capital projects aimed at alleviating flooding as a first priority.

The approach to solving the reoccurring flooding problems south of Ronald Bog and other areas within the Thornton Creek basin requires a watershed approach. Without a comprehensive basin-wide planning and implementation approach, the frequency of flooding for the remaining properties cannot be effectively reduced. In addition, a basin-wide approach will enable the City to identify water quality and habitat improvements that need to be implemented.

PROJECT APPROACH

The purpose of the basin plan is to perform a comprehensive examination of the City's surface water system, including Thornton Creek and major tributaries and storm drain trunk lines. This Plan will identify current and potential problems with respect to flooding, water quality, and stream habitat. Flood protection projects in the Ronald Bog sub-basin will get top priority in this plan. This approach will allow us to have proposed solutions by the first quarter of 2009 that can be included in the 2010-2015 Capital Improvement Plan.

The basin plan will begin with problem identification. Next, a set of criteria will be developed to be used to design solutions. For example, for each sub-basin, the level of flood protection or level of service will be defined (e.g. the design storm level such as 25-year, 50-year, or 100-year). These decisions will be made with input from several public forums.

Once the design criteria for the basin planning work have been established, alternative solutions will be developed to solve the identified problems. These solutions for flooding will include one or more of the following approaches:

- Infiltration
- Detention
- Diversion
- Property acquisition or relocation
- Structure elevation.

Additional approaches may be identified in the evaluation process. The updated model developed for flood plain mapping will be used to evaluate the feasibility of the solutions. A selected number of alternatives will then be brought back to the public, to provide designers and City staff with additional input.

The basin plan will include cost estimates of the selected projects. In addition, the plan will include options for funding the required projects. This information, especially flooding projects for the Ronald Bog basin, will be included in the 2010-2015 Capital Improvement Plan.

RW Beck, Inc. (Consultant) will assist the City of Shoreline in the preparation of the Thornton Creek Basin Plan. The limits of the study area will be the portion of the Thornton Creek basin lying within the City of Shoreline. The plan development will include data gathering, technical analysis and investigations, and a public/community involvement program. The public/community involvement program will be designed to solicit community and stakeholder feedback on plan development.

While the basin plan is being developed, a parallel effort in support of flood protection will be implemented: mapping of the floodplains for Thornton Creek Basin in 2008 by Northwest Hydraulic Consultants (NHC). The Federal Emergency Management Agency (FEMA) maps the flooded areas of major rivers, creeks and their tributaries. FEMA produced flood plain maps for Thornton Creek in the 1970s, but only for that portion within the City of Seattle. FEMA-style flood plain mapping offers several advantages: 1) Properties located in certain portions of the mapped flood area are eligible for the National Flood Insurance Program (NFIP). Different types of policies are available depending on a property's flood risk. These policies are sold and serviced by private insurers, and backed by the federal government. 2) Mapped FEMA flood areas are eligible for both pre-disaster and post-disaster mitigation funding.

The mapping of the Thornton Creek floodplain will be in conjunction with the City of Seattle. The FEMA flood areas for Thornton Creek from N 145th Street to Lake Washington are being updated for Seattle Public Utilities (SPU) by NHC. Staff is executing a separate contract with NHC (via the City Manager, since it is less than \$50,000) to develop a model and maps of the flooded areas to FEMA standards. By using the same consultant, this will provide Seattle a more detailed look of the flows north of 145th Street and additional options for flood reduction for both cities may result. The flood plain mapping project will generate an updated hydrologic and hydraulic model of the Thornton Creek basin.

There will be a citizen participation plan developed for this project; both in terms of the mapping and the development of the individual projects to reduce the potential of flooding. Staff is anticipating a wide area of affected properties and interests over issues of specific property impact, property valuation, the NFIP and insurance, project options and the time to complete the projects.

CONSULTANT SELECTION

RW Beck, Inc. was selected from two firms' qualifications based on their experience in the basin and on projects of similar scope and size. The RW Beck team includes a firm specialized in stream habitat, the Watershed Company and NHC, the firm performing the FEMA flood-plain mapping. Normally, to select a consultant for a full Request for Qualifications (RFQ) process is used. City code allows the City Manager to waive the formal RFQ process to expedite the acquisition of services. This waiver was recommended by the Public Works Director to the City Manager and approved since RW Beck is well qualified in this area and since the 2008 money must be spend by the end of this year.

FINANCIAL IMPACT

In 2001, the City obtained a loan from the Public Works Trust Fund (PWTF) for surface water projects in the Thornton Creek/Ronald Bog basin. For projects using the PWTF dollars, the city must match with a 15% share.

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RECOMMENDATION

Staff recommends Council authorize the City Manager to execute this professional services contract with RW Beck in the amount of \$441,561.

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