Council Meeting Date: August 21, 2000 **Agenda Item: 6(a)**

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Presentation of the Proposed Neighborhood Traffic Safety Program
DEPARTMENT:	Public Works
PRESENTED BY:	William L. Conner, Public Works Director

EXECUTIVE / COUNCIL SUMMARY

On November 9, 1998, your Council adopted the City's first Capital Improvement Program (CIP). This CIP included a Roads Capital Fund project to develop a City Neighborhood Traffic Safety Program (NTSP) for non-arterial streets. The NTSP provides a program and City process for neighborhood traffic safety requests. Citizen requests for service are candidates for the NTSP if the street is a non-arterial, the situation is not an emergency situation that can be solved through the City's Traffic Advisory Committee (new stop signs, other signage), and the situation cannot be solved through normal City maintenance including brush trimming and sign maintenance or replacement.

As part of program development in 1999-2000, staff researched the traffic safety programs of other agencies and executed an extensive public participation process to ensure that citizen issues are understood and that the developed program will meet the needs of the community.

The public participation process as presented to your Council on August 16, 1999 and executed by staff included:

- Creation of a Citizen Advisory Committee (CAC) of five citizens
- Establishment of a Technical Advisory Committee (TAC): Representatives from the Shoreline Police and Fire Departments, School District, King County METRO, and City staff
- Two public open houses involving the TAC and the CAC plus over 50 members of the public at large.

Our research shows that other agencies with neighborhood traffic programs utilize three program elements for maximum results and cost effectiveness: education, enforcement and engineering (the Three E's). Neighborhood traffic safety programs are effective only when changing the behavior of drivers, making education an essential program component. Education includes enabling citizens to use radar guns and readerboards to monitor speeds in their neighborhood, media campaigns to raise awareness about safety issues, and neighborhood campaigns to gain the commitment from neighbors to

obey the traffic laws in neighborhoods. Enforcement is comprised of working with police and other City staff to monitor and enforce traffic laws. The engineering component investigates the use of physical devices such as speed bumps, humps, and traffic circles to assist with traffic calming. Successful programs use a phased approach.

Phase 1 utilizes the elements of education and enforcement, along with data collection before and after the elements are utilized, to improve safety of the neighborhood (Attachment A). Phase 2 consists of engineering solutions to improve traffic safety. Once Phase 1 has been completed by the neighborhood (typically 6-12 months), then the "Selection and Prioritization Criteria for Phase 2 Program" (Attachment B) sheet is utilized to determine if Phase 1 was effective. If neighborhoods rank a score of 11 or above on the Phase 2 ranking sheet, then the neighborhood's traffic safety issue is a Phase 2 candidate (Attachment C).

Schedule

If your Council concurs with the developed NTSP, staff will implement the program. Implementation includes creation of brochures and documentation, creation of classes that introduce citizens to NTSP concepts and procedures, purchase of necessary safety equipment and program equipment (reader boards, radar guns, etc), and creation of appropriate contracts for data collection (speeds, volume, cut-through traffic). The NTSP would be ready for public entry in the spring of 2001.

Resources

The City's 2000-2005 Capital Improvement Program (CIP) has allocated $210,000 per year in capital street funds over the next five years for the implementation of the Neighborhood Traffic Safety Program. Typical police overtime for enforcement costs $304 per day, traffic circles cost between $10,000-$30,000 each depending on the existence of curb and gutter, and speed bumps cost up to $5,000 each. It is estimated that annual staff resource costs to manage the program is $75,000 and annual consultant costs to provide technical assistance and physical device design are estimated at $30,000. Once the program is underway, we will be able to gauge the adequacy of this CIP program budget.

RECOMMENDATION

No Council action is required at this time. Staff is seeking consensus with the Neighborhood Traffic Safety Program as presented and approval to move forward with implementation of the Neighborhood Traffic Safety Program. Staffing options will be addressed in the budget process.

Approved By: City Manager LB City Attorney N/A

BACKGROUND

At the 1998 Capital Improvement Program (CIP) development open houses, and through the CIP survey mailed to Shoreline households, citizens identified traffic neighborhood issues as a top priority for City attention. Based on this citizen feedback, the CIP adopted by Council on November 9, 1998 included the development of a Neighborhood Traffic Safety Program (NTSP) in 1999.

The two steps used to develop this program included:

- Public involvement to identify the needs of the community and to educate citizens about the pros and cons of typical program elements: education, enforcement, and engineering.
- Research of existing programs in other agencies to identify successful program elements (i.e. education, enforcement, physical devices)

Ultimately, the program that was developed provides a systematic approach to the issues of neighborhood traffic safety:

- Traffic volumes and cut-through traffic
- Vehicle speeding
- Accident rates
- Pedestrian safety concerns

The NTSP will include identification of the problem and potential solutions, gaining support and commitment from the immediate neighborhood, and implementation of measures to address the problem.

Citizen Involvement

The development of the Neighborhood Traffic Safety Program (NTSP) included a high level of citizen involvement.

- Citizen Advisory Committee meetings
- Technical Advisory Committee meetings
- 2 Public Open House meetings

The Citizen Advisory Committee and Technical Advisory Committee acted as one advisory committee of approximately fifteen participants.

Citizen Advisory Committee: Per our public involvement process that was approved by Council on August 16, 1999, two representatives from the Council of Neighborhoods were chosen to work on the NTSP Citizen Advisory Committee (CAC). Three additional CAC members were chosen through an application process solicitation of three more from the City at large.

The role of the CAC was to relay citizen neighborhood traffic issues to City staff and the Technical Advisory Committee. Through meeting with the Technical Advisory

Committee members, CAC members gained an understanding of how education and technical solutions will address traffic issues in relation to cost and consistency for all Shoreline citizens. The CAC played a strong roll in creating and editing the Neighborhood Traffic Safety Program as presented to your Council. As mentioned, the CAC met six times instead of the estimated three meetings. The first meeting was on November 10, 1999 and the final meeting was on June 5, 2000.

Technical Advisory Committee: This advisory committee was made up of representatives from the Shoreline School District, Shoreline Police Department, Shoreline Fire Department, and King County Metro. City staff on the TAC included representatives from the Office of Neighborhoods, Planning & Development Services, and Public Works.

As mentioned, the Technical Advisory Committee met jointly with the Citizen Advisory Committee. The Technical Advisory Committee provided a reality check on what is feasible and cost effective as solutions to neighborhood traffic issues. The Shoreline Police and Fire Department representatives educated other committee members and citizens as to the emergency response ramifications to the installation of physical devices (speed bumps and traffic circles) in our neighborhoods.

Public Open House Meetings: Two public meetings were held during the development of the Neighborhood Traffic Safety Program. Both public meetings were advertised in the Shoreline Enterprise, on community fliers, in neighborhood newsletters, and all traffic complaint/request customers in the CRT database received notification postcards.

The first open house held on January 19 educated the public about the City's process to develop the NTSP and provided the opportunity for TAC and CAC members to meet with citizens to hear their issues. The first open house also provided the opportunity to educate citizens about common program elements that we could incorporate into the NTSP (education, enforcement, and engineering) and to brainstorm the pros and cons of these potential program elements.

Eighty-five citizens attended the first open house, and CAC and TAC received many comments from the public. The comments on the Three E's included:

- Does education really work to change driving behavior?
- Will education work on cut-through traffic?
- Some neighborhoods don't want to bother with education and enforcement, traffic engineering only (traffic circles and speed humps).
- The City does not spend enough time and money on police traffic enforcement.
- Why can't this program solve problems on arterial streets?

Responses to these comments can be found later in this report.

The CAC and TAC took the feedback from this open house and continued to formulate the draft NTSP to be presented at the second open house held on May 19, 2000. Staff also met with the Council of Neighborhoods and several neighborhood associations to discuss the NTSP program and Three E's.

At the second open house held on May 19, 2000 staff presented the draft NTSP. Approximately 50 citizens attended this meeting. This draft NTSP incorporated appropriate comments received from the public at Open House 1, additional research of other agency neighborhood traffic programs, and the direction of the TAC/CAC advisory committees.

The draft NTSP presented to the public on May 19, 2000 is substantially the same as that presented to Council for approval. The NTSP is designed to have two phases where Phase 1 elements include education and enforcement (with baseline data collection pre and post Phase 1 implementation), and Phase 2 is comprised of engineering solutions to be used only if Phase 1 is deemed ineffective through collection of post Phase 1 data.

Comments heard at the Open House 2 include:

- Citizens are willing to assist the City and volunteer to collect baseline data and implement the program.
- Citizens are willing to volunteer and help other neighborhoods navigate the NTSP.
- Citizens should be allowed to skip Phase 1 if their neighborhood has already collected some speeding/traffic data.
- What happens if my neighbors don't want to volunteer within the program?
- Most of the traffic violators are my neighbors.
- It is critical to keep by-pass traffic on arterials.
- Make sure Phase 2 devices don't block emergency vehicles and school buses.

Responses to these comments can be found later in this report.

Based on this feedback and final CAC/TAC recommendations, the Neighborhood Traffic Safety Program presented to Council is outlined below.

Program Elements: Three E's

Research of neighborhood traffic safety programs in other cities/counties has found that all programs include the following elements or Three E's: education, enforcement, and engineering. These three program components work together to provide driver education and physical traffic calming which result in safer neighborhoods.

Education: Education is the critical neighborhood traffic safety program element. This element is cost effective and includes neighborhood speed watch programs; traffic safety campaigns; street signing, striping, and brush trimming; and neighborhood pacts/contracts to obey traffic laws in the neighborhood.

Enforcement: Enforcement includes the utilization of radar reader boards and guns that can be checked out by neighborhoods to monitor vehicle speeds in their area. This element also includes police enforcement in targeted areas and includes media

coverage of police activity. These items go hand-in-hand with education of drivers and citizens.

Engineering: The third element of neighborhood traffic programs is engineering which includes the technical study of traffic volumes and speeds (traffic counts) and the installation of physical devices including speed bumps/humps, traffic circles, and chicanes. Engineering is the most expensive element as design and construction could cost as much as $30,000 per traffic circle. Many other programs use temporary physical devices to make certain the neighborhood is happy with the physical device before installing the permanent one.

As mentioned, the three E's are program elements that were discussed with the public to create the City's Neighborhood Traffic Safety Program.

Neighborhood Traffic Safety Program

Neighborhood streets are candidates for the Neighborhood Traffic Safety Program (NTSP) if the street is a non-arterial, upon initial review the problem is not an emergency, and if the problem cannot be solved through routine maintenance such as brush trimming and sign maintenance. The goals of the program are to establish procedures and techniques that:

- Improve safety on neighborhood streets
- Are easy for citizens and staff to understand and navigate
- Wisely utilizes the City's financial and staff resources
- Ensures that neighborhoods are treated consistently
- Relies on neighborhood cooperation and coordination
- Does not push on neighborhood's problems into another
- Respects the importance of emergency response time

The recommended program has two phases that utilize the three outlined components: education, enforcement, and engineering (Three E's). Phase 1 consists of education and enforcement while Phase 2 focuses on physical engineering of traffic solutions. Throughout the program, City staff works with residents within neighborhoods to identify the types and severity of traffic problems. Residents help to develop and evaluate the requirements, benefits, and trade-offs of NTSP projects within their own neighborhoods and are actively involved in the decision-making process. Volunteers from the neighborhoods will be required to execute many of the Phase 1 elements and they will be trained by the City to maximize safety and efficiency of the volunteers.

The benefits of a phased approach include:

- Allows change in driver behavior through education.
- Builds communities in neighborhoods when residents work together.
- Typically, the problem includes residents in the neighborhood. Neighborhood monitoring and education is effective in these situations.
- Uses City resources effectively.

- Eliminates the need for physical devices everywhere, for they have their own set of problems (emergency response time reductions, inconvenience, and potential to increase noise and air pollution).

The two phases of the NTSP are outlined below and describe the intent of the phases as well as key elements of citizen navigation.

Phase I

Phase 1 is outlined in Attachment A (also found following page 8 in NTSP User's Manual).

Customer Response Team: One of the keys to the navigation of the NTSP and Phase 1 is to understand that citizens enter the NTSP through the City's Customer Response Team (CRT). Citizens notify CRT of a neighborhood traffic issue (vehicle speeding, excessive vehicle volume, cut-through traffic, high accident rate) the same way they have since incorporation. As they do now, CRT will investigate and log the complaint.

Upon investigation, CRT will solve the issue if they are able through maintenance practices. If the situation is deemed an emergency by City staff, the issue may be referred to the City's existing Traffic Advisory Committee for appropriate action. This Traffic Advisory Committee is the traditional way the City handles traffic requests that can't be solved through CRT. If the request 1) cannot be solved through normal maintenance, 2) is not an emergency, and 3) is not an on an arterial street, it is a candidate for the neighborhood traffic safety program.

Traffic requests on arterial streets will continue to be handled as they have in the past through CRT investigation and Traffic Advisory Committee review where appropriate. Arterial streets differ from neighborhood streets as they experience mostly cut-through traffic and are not likely to respond as favorably to education and enforcement as neighborhood streets. The ability to put physical devices on arterial streets is also restricted as arterial streets are designed to move traffic and are main emergency response routes. If the NTSP is a success, arterial streets will experience more traffic.

Phase I kickoff: Once a neighborhood traffic issue is deemed appropriate for the NTSP through CRT investigation and consultation with the NTSP manager, CRT will send a package of information to the neighborhood "contact". This packet which has yet to be created will include program brochures and neighborhood requirements. Staff will also create a mandatory class (to be offered on a monthly basis) where neighborhood "contacts" are briefed on the NTSP process, taught how to use radar guns, and educated on street safety.

City staff will then review the candidate street and determine the boundary of affected residents (which residents are likely to use this street as part of their normal travel). Staff will also arrange for baseline data to be collected on the street. Baseline data collection will also be taken once the Phase 1 program of education and enforcement is complete in order to gauge its effectiveness.

Baseline Data Collection: Baseline data collection includes the following information: vehicle speeds, volumes, level of cut-through traffic, accident history, signage and pavement marking inventory, and photography of site. The City will collect as much data as possible through traffic count technology, but citizen volunteers will be required to determine cut-through levels. Citizens can log vehicle license plate numbers and the Shoreline Police Department can run these plates and indicate the general location of where the homeowner lives. This information will allow staff to determine the level of cut-through traffic.

Phase I Program Implementation: Once the "contact" has attended the required monthly program meeting, the City has determined the project boundary, and baseline data has been collected, the actual education and enforcement elements of Phase 1 are administered. Each Phase 1 program is tailored to meet the needs of the specific neighborhood and includes a high level of input from the neighborhood citizens. It is expected that Phase 1 will take between six months to one year to complete. Phase 1 actions could include:

- Education fliers and meetings
- Pavement markings
- Targeted police enforcement
- Portable radar trailer
- Radar reader board
- Rumble strips
- Signing
- Speed watch programs

Once Phase 1 is completed, baseline data is recollected by the City. A meeting is held by the City with affected residents and emergency response agencies in attendance. Phase 1 results are studied, the results of the "Selection and Prioritization Criteria for Phase 2" is discussed, and the City recommends next steps.

As learned from other agencies with NTSP programs, most neighborhood issues are solved through Phase 1. Phase 1 tends to be less effective when cut-through traffic is a significant problem. It is difficult to educate cut-through traffic drivers as they aren't reached by neighborhood meetings and information passed out locally. Cut-through traffic is mostly controlled through use of physical devices.

Selection and Prioritization Criteria for Phase 2 Program (Attachment B): Once baseline data has been recollected for Phase 1, the necessity to enter Phase 2 program is determined by using the score calculated by using the Selection and Prioritization Criteria for Phase 2 Program (Criteria). The higher the number, the more severe the problem. A minimum score of 11 (of a possible 24) is required to begin the Phase 2 process. The Criteria gauge traffic speed information, volumes, cut-through traffic, accident history, street condition, and proximity to schools and parks to determine whether Phase 2 is appropriate.

These Criteria were created and approved by the Citizen and Technical Advisory Committees who felt it was necessary to gauge problem severity and provide for a minimum level of need before physical devices are allowed.

To test the Criteria, staff chose two streets with previous traffic complaints that CRT felt had traffic issues: 167th Street between Aurora and Meridian Avenue NE and 12th Avenue NE between 145h and 165th Streets. As staff felt these streets have traffic problems, staff wanted to ensure streets would result in a minimum of 11 points when the Criteria were used. Once baseline data was collected and reviewed with the Criteria, it was found that these streets would easily fall with the Phase 2 criteria.

Phase 2

Funding must be determined prior to implementing Phase 2 for a particular request. If there is more than one request that meets or exceeds the required 11 points from the Criteria, the neighborhood with the highest number shall have priority. If there are two or more neighborhoods tied with the highest score, the neighborhood that has been in the program the longest shall have priority.

See Attachment C for a flow chart of Phase 2. Once priority and funding requirements are determined, the boundary of affected residents is re-evaluated. It is possible that more residents will be affected through installation of a physical device. Once the boundary is evaluated, a public meeting will be held to again review effectiveness of Phase 1, discuss physical devices that are available, discuss process for Phase 2, and establish workgroups or neighborhood discussions, and determine a preferred alternative.

Preferred Physical Device: City engineering staff will then determine if the preferred physical device is appropriate and feasible. Once the device is chosen, the affected residents boundary will again be reviewed based on the physical device selected. If a temporary physical device is feasible, the City will then petition all affected residents for 70% approval of the temporary physical device. If 70% approval is not garnered, the temporary physical device will not be installed, nor will a permanent device. If 70% approval (of those responding to the petition) is achieved, the City will collect baseline data for the new boundary of affected residents.

Temporary Physical Device: The City will install temporary physical devices where feasible once 70% approval for the physical device is reached. Baseline data will be collected after the temporary device has been in place for 90 days to ensure that it is working. Where no temporary physical device is feasible, the City will directly petition for installation of a permanent physical device.

Permanent Physical Device: Once 70% majority approve of permanent physical device, temporary physical device will be removed and replaced with permanent device. If determined necessary by the City, City staff will re-measure baseline data on surrounding streets to ensure the issue did not shift to another neighborhood. This data could be re-entered into the Prioritization Criteria (Attachment B) to see if the new rating is below 11 which would indicate a successful program.

Device removal: Physical devices that become a safety issue will be removed by the City at the City's expense. If residents desire removal of the device for non-safety reasons, the City will petition affected residents for removal (70% approval required) and the neighborhood will pay for the removal. Other agencies with this removal policy tell us that no non-safety removal of physical devices has occurred. We do not expect removal of devices in Shoreline based on neighborhood request. However, should a neighborhood request device removal for non-safety reasons, administrative procedures and payment process for removal would be created at that time.

Citizen Concerns

City staff has made copies of the NTSP available to all citizens interested in the program. Copies of the program draft were mailed before Open House 2 to citizens who requested it. Copies were also handed out at Open House 2. Several citizen concerns and questions are critical and now that the NTSP has been summarized, these questions deserve attention. Below are comments made by citizens at Open Houses 1 and 2 and the staff response.

1) What happens if my neighbors don't want to volunteer within the program?

The Citizen and Technical Advisory Committees strongly believed that the NTSP is a program that requires neighborhood communication and participation to be effective. Therefore, Phase I requires a committed nieghborhood "contact" and a baseline level of neighborhood communication and concurrence on the traffic issues the neighborhood faces. If the "contact" person is not able to garner support within the neighborhood that a traffic issue exists, the neighborhood will not be allowed to proceed through the NTSP.

The committees understand that it may be difficult to find volunteers at all phases of the program to perform the education components and data collection. The Advisory Committees recommend creation of a City-wide volunteer group that would be available to help neighborhoods collect data and administer pieces of the NTSP. However, this group of volunteers is not to take the place of neighborhood activity and communication.

2) Education and enforcement don't work, skip to physical devices.

Our research of other agency programs shows that education and enforcement do work. Bellevue tells us less than 90% of their traffic problems are solved (or significantly reduced) in Phase 1, and Phase 2 is not necessary. We have been told by other agencies that the enemy is "us", not typically cut-through speeders. Our police department staff tell us that they have just as many "soccer mom" speeders in neighborhoods as high school kids after school. Education and enforcement will have the biggest impact on traffic violators when they live in the targeted neighborhood. Phase 1 is necessary to determine where folks on the street are coming from (baseline cut-through traffic determination).

Changing driver behavior with these program components also has a positive impact when drivers travel to other parts of the City. Physical devices are street specific and no lessons are learned that translate to safety elsewhere.

Many components of Phase 1 must be completed before Phase 2 could occur. These steps include agreement among neighbors of the traffic issue, neighborhood petitions, baseline data collection, coordination with emergency response agencies, and community education of traffic issues.

Finally, this program will help to target our limited police department resources to where they will have the most impact. The NTSP will direct enforcement resources to neighborhoods that are working comprehensively towards traffic solutions.

3) Why can't this program be utilized on arterial streets?

Traffic on arterial streets has different characteristics than neighborhood traffic. By design, arterials are meant to pass traffic quickly to state highways and the interstate. Traffic on arterials is predominantly cut-through traffic which will not be as responsive to education. Citizens living on arterials streets will continue to utilize the City's Customer Response Team (CRT) to request review of arterial street traffic issues. Arterial streets will continue to be reviewed by the City's Traffic Advisory Committee. Improvements to arterials, beyond basic operational maintenance, are typically included in the City's Capital Improvement Program.

4) Can Phase 1 be bypassed if neighborhoods have already organized and are collecting speed data on their street?

Staff has received this question on several occasions. Many neighborhoods have spent a significant amount of time talking to their neighbors about traffic issues their neighborhood faces. Some neighborhoods have also taken the initiative to borrow radar guns from the police storefronts to collect vehicle speed data. The police department has an informal program where license plates of speeders may be collected by citizens and the police department will send a letter to the vehicle owner asking them to slow down and be cognizant of neighborhood safety. The police department also uses this citizen information to perform enforcement as their resources allow. No cut-through traffic data has been collected by neighborhoods.

Staff believe it is critical for all neighborhoods to navigate Phase 1 of the NTSP as previously outlined, regardless of previous data that may have been collected by a neighborhood. The key to Phase 1 is that speed, volume, accident, and cut-through traffic baseline data is collected before and after any neighborhood traffic watch, education, and enforcement programs attempt to change driving behavior in that neighborhood. Without this data, all but cut-through traffic is determined by professional traffic counts, success of Phase 1 cannot be determined. Engineering staff will review any data collected by neighborhoods prior to the NTSP creation to determine whether any of the information is scientifically useful.

5) Phase 1 takes too long, we're ready for physical devices now!

As mentioned, agencies that we researched (Bellevue, King County, and Seattle, Washington; San Buenoventura, California; Portland, Oregon; and Phoenix, Arizona) are satisfied with the results of their education and enforcement programs. These program elements cost significantly less than physical devices and are proven effective. Phase 1 provides for a high level of citizen involvement and volunteerism which promotes building of communities and is cost effective. Phase 2, engineering and installation of physical devices, is costly. Traffic circles can cost anywhere from $10,000-$30,000 are effective only when curb and gutter exist in the identified intersection. It is rare to install only one traffic circle, they are typically installed at each end of a street segment. Other measures might also be necessary to mitigate adjacent streets for traffic that may be "pushed" from the target street. Traffic circles also require on-going maintenance.

The City's available resources do not allow for physical devices in all locations where traffic issues exist. It is irresponsible to put physical devices in locations without meeting certain criteria (Attachment B, Selection and Prioritization Criteria For Phase 2 Program). Our Citizen Advisory Committee (CAC) of five citizens concurred that they do not want Shoreline scattered with physical devices that may not be necessary.

NTSP Program Resources:

The City's Capital Improvement Program (CIP) has allocated $210,000 per year (2001-2005) in capital street funds for the implementation of the Neighborhood Traffic Safety Program. Once the program is underway, we will be able to gauge the adequacy of this budget.

The following table displays the estimated cost of program elements.

Eight hours police enforcement (overtime)	$38.00/hr x 8 = $304.00
Traffic Circle	$10,000 -$30,000 each
Speed bump	$3,000-5,000 each
Collection of baseline data	$1,000 each occasion
Education programs	Citizen volunteers
Cut-through data collection	Citizen volunteers
Physical device maintenance	$300/year each
Staff administration costs	$75,000/year
Consultant costs	$30,000/year

This table shows the relative cost of education and enforcement compared to engineering. The CIP budget per year of $210,000 does not allow for more than a few annual physical device installations.

NTSP Implementation Schedule and Resources

Once your Council concurs with the program, staff will begin implementation of the program. This will include creation of necessary brochures, documentation and forms; creation of the citizen introductory class to the NTSP; purchase of equipment and supplies including radar reader boards, radar guns, and safety equipment; and creation of contracts for traffic data collection. It is anticipated that the program will be ready for public entry in spring of 2001.

Final Comments

The NTSP is a new program for Shoreline and was created through the research of other agencies, a high level of public involvement, and input from Shoreline emergency response and Shoreline School District Staff. This program is meant to be a dynamic program where updates and changes to methodology occur regularly to ensure the program meets the needs of Shoreline citizens. The City Engineer will have the final authority to solve issues that may arise in the NTSP process.

As mentioned, we expect Phase 1 to address the majority of neighborhood traffic issues. Should multiple neighborhoods enter Phase 2 on an annual basis, the City will establish administrative procedures to facilitate higher risk locations.

The Citizen and Technical Advisory Committees support the NTSP. Several Citizen Advisory Committee members have requested continued involvement in program implementation. Staff recommends that the Citizen Advisory Committee (CAC) be reconvened on a quarterly basis (at minimum) to discuss necessary changes to the NTSP. This will allow for consistent review of issues that arise and allow for continued involvement of the public in NTSP direction. Staff recommends that CAC members be the original five until at least one neighborhood has navigated the NTSP. At that time, a citizen that has been through the NTSP process will be solicited to join the CAC. Original CAC members will be replaced within three years of program implementation.

Staff will return to your Council after one year of public implementation of the NTSP with an update of program progression.

RECOMMENDATION

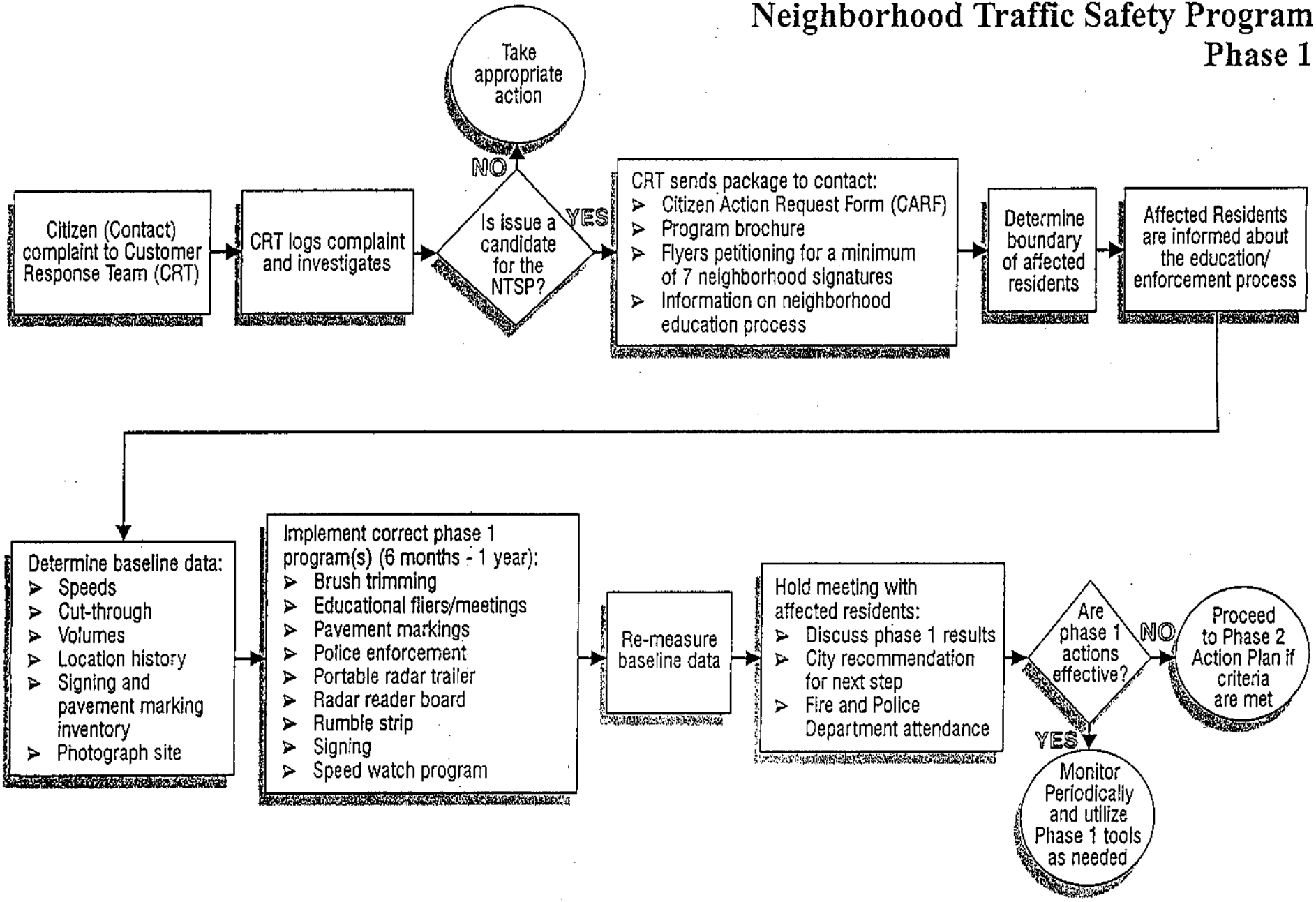
No Council action is required at this time. Staff is seeking consensus with the Neighborhood Traffic Safety Program as presented and approval to move forward with implementation of the Neighborhood Traffic Safety Program. Staffing options will be addressed in the budget process.

ATTACHMENTS

Attachment A: Neighborhood Traffic Safety Program Phase 1
Attachment B: Selection and Prioritization Criteria for Phase 2 Program
Attachment C: Neighborhood Traffic Safety Program Phase 2

Attachment A

Neighborhood Traffic Safety Program
Phase 1



Attachment B

Selection and Prioritization Criteria For Phase 2 Program

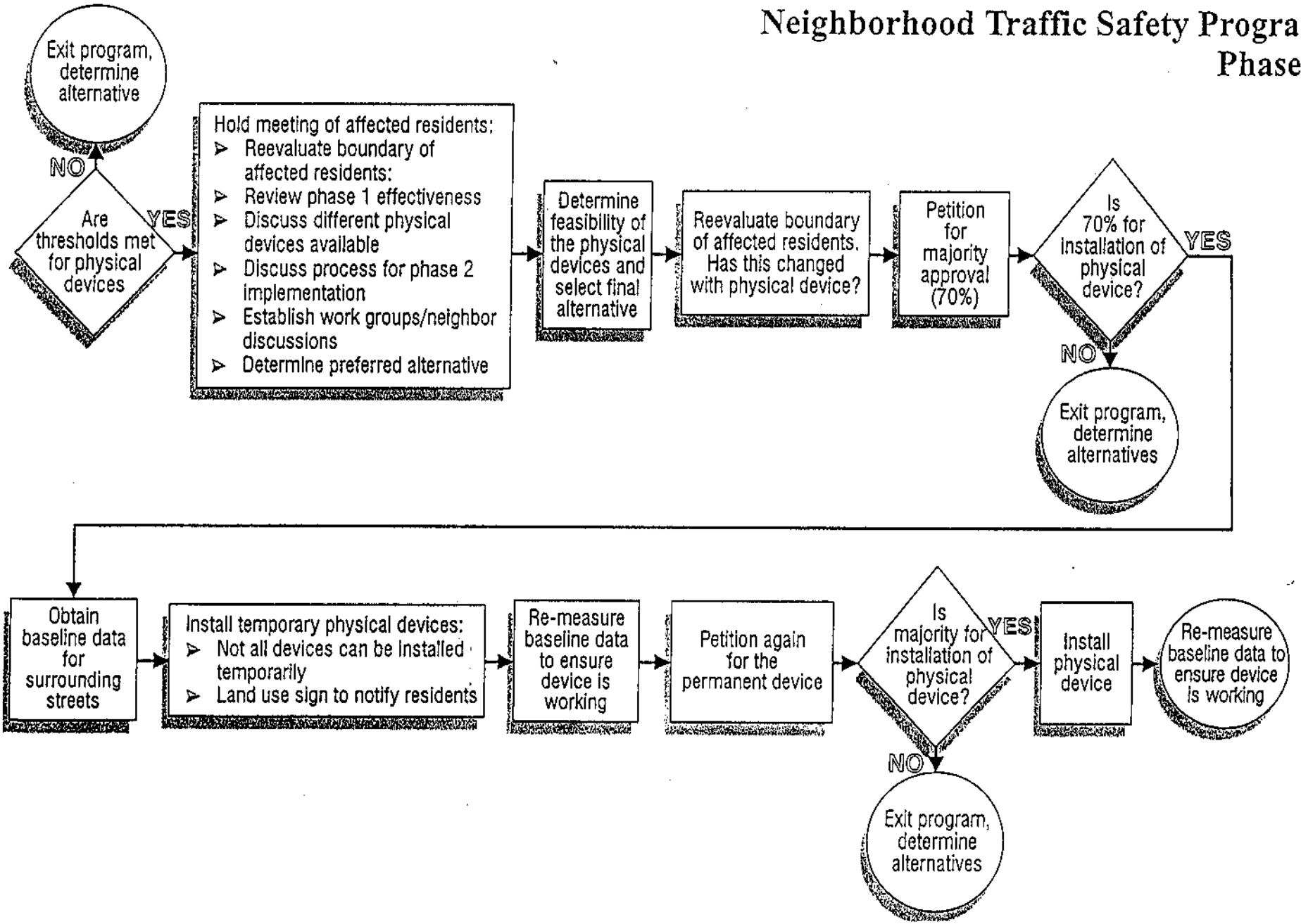
Criteria	Points
Average Weekday Daily Traffic Counts (AWDT)	
Up to 700 AWDT	Devices not permitted
2500 and over	Devices not permitted
Traffic Cut-Through Volume (1)	
25.00% - 49.99%	1
50.00% - 74.99%	2
75.00% +	4
Traffic Speeds (2)	
0-5.99 mph over posted limit	0
6.00-8.99	2
9.00-10.99	4
11.00 +	6
Sight Distance Hazards (3)	2
Accident History (4)	
0.5 –1.0 accidents/year	1
1.1 – 1.5	2
1.6 – 2.0	3
2.1 – 2.5	5
2.6 – 3.0	6
Over 3.0	7
Street Conditions	
No sidewalks	2
Sidewalks on one side of street only	1
Parks, Schools Public or Private, K-12	
Within ¼ mile	3
Between ¼ and ½ mile	2

1) As a % of the total AWDT on primary roadway between arterials.
2) 85th percentile of all vehicles, both directions, following use of *Phase 1.*
3) Limited vertical or horizontal sight distance, such as the inability to see over a hill or around a curve. Points will be given if stopping sight distance for crest and sag curves per WSDOT Design Manual are not met.
4) Reported collisions over past three years at intersections and mid-block for study area.

Note: The minimum number of points required for a neighborhood to qualify for consideration is 11. All physical devices shall be subject to technical feasibility as determined by the City Engineer for the situation.

Neighborhood Traffic Safety Program
City of Shoreline
July, 2000

Attachment C



Council Meeting Date: August 21, 2000 **Agenda Item: 6(b)**

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Discussion Regarding King County Wastewater Treatment Division's Draft Siting Criteria For Wastewater Facilities
DEPARTMENT:	City Manager's Office
PRESENTED BY:	Kristoff T. Bauer, Assistant to the City Manager

EXECUTIVE / COUNCIL SUMMARY

As your Council may recall, Mayor Jepsen is representing the City on the King County North Treatment Facilities Siting Advisory Committee (SAC). This Committee was formed by the King County Executive with the assistance of the Snohomish County Executive, and has been charged with the responsibility of providing a recommendation to the King County Council regarding the criteria that should be utilized to select the site for new facilities called for by the Regional Wastewater Services Plan ("RWSP") adopted earlier this year.

An initial draft set of criteria prepared by King County staff was provided to your Council on July 17th. The Committee discussed the initial draft criteria at two meetings in July. Revisions recommended by Committee members have been incorporated into a second draft of the propose siting criteria discussed at the Committee's August 10th meeting and provided to your Council as Attachment A to this report.

Michael Popiwny, King County Siting Manager, and Christie True will be available at the workshop to respond to questions.

Next Steps

The SAC is scheduled to meet two more times, September 6 & 14, 2000, to discuss the draft siting criteria. After the Sept. 14th meeting, the Executive will transmit a recommended set of criteria to the King County Council for adoption. The Regional Water Quality Committee is also expected to have a role in finalizing the criteria, but the timing of this review has yet to be established.

After the final criteria is adopted by the King County Council, they will be utilized by the Executive in weeding potential sites down to 10 or 15 candidates in early 2001. It is unclear whether the SAC will have a further role in the selection of 3 to 5 sites that will go through a formal environmental analysis beginning in 2001 and resulting in a preferred alternative selected by the Executive in 2002.

RECOMMENDATION

This item is for discussion purposes only. Mayor Jepsen would like to summarize Council comment regarding the draft criteria in a letter to the King County Council and Executive.

Approved By: City Manager LB City Attorney N/A

ATTACHMENTS

Attachment A – Revised Draft Policy Siting Criteria

RESPONSE TO COMMENTS ON DRAFT NTF CRITERIA

SITING ADVISORY COMMITTEE

August 10, 2000

SAC NTF POLICY CRITERIA REVIEW
RESPONSE TO COMMENTS

CRITERIA #	ORIGINAL POLICY SITING CRITERIA	COMMENTS/SUGGESTIONS	RESPONSE / ACTION	REVISED POLICY CRITERIA
TECHNICAL				
1 – Size, Shape, and Topography	T-1A. King County shall seek north treatment plant sites that provide sufficient area to accommodate the proposed treatment facilities, an appropriate buffer, and future treatment process improvements.	1. Change to "shall select"; County should pick a site with adequate space – should be a minimum or mandatory requirement. 2. Revise so that criterion addresses all facilities, not just plant. 3. Does this criterion (and others) address all NTF facilities or just the treatment plant? Change it to address all facilities. 4. Size should allow for mixed use – no single facilities. 5. Comment on Criterion 1C re: site elevation relates to this point: should evaluate if site allows for future potential land use changes, stricter clean water requirements (treatment space), and water reuse (treatment space and location to users)	1. Originally, King County proposed two terms to describe policy criteria. The language "shall select" was used to indicate the objective to find a site that meets this criterion. "Shall seek" was used to indicate preferences and opportunities for tradeoffs in certain circumstances. The SAC spent some time discussing whether individual policy criteria used the appropriate terms. In most cases, opinions were divided with some members recommending "shall select" language and others suggesting that the same criterion should not be a major driver. One person suggested that the verbs be eliminated altogether. Staff considered the suggestions carefully and decided to use the term "shall seek" for every policy criterion. The chief reason for using shall seek is to ensure that a NTF site evaluation process allows thorough and thoughtful consideration of the trade-offs between sites. We cannot use language that predetermines where the facilities will go, by imposing criteria that are too restrictive or prescriptive. Constraints that absolutely must be met for a site to be viable have been identified as part of the Engineering and Environmental Constraints. 2. OK; see revision. This is most important and applicable to the treatment plant, although buffer is generally considered desirable for pump stations as well. Treatment plant capacity improvements will be phased, and the site must be able to accommodate expansion and upgrades. Pipelines, pump stations and the outfall will likely be sized for full future capacity and will be buried or enclosed – therefore requiring little to no room for expansion. 3. OK; see revision. Most criterion are intended to apply to all NTF facility sites (the plant, pipelines, pump stations, and outfall); however, some are more applicable or specific to one or more component. 4. Mixed use of NTF sites is a project goal. This particular criterion is intended to focus on the narrow "technical" issue of securing sites with adequate size for the proposed facilities. Other criteria address the opportunity to develop multiple uses at the site (see Community Amenity Criterion C-3B). 5. These considerations will be incorporated into the detailed questions asked to assess this criterion. These are exactly the types of considerations necessary to determine how well a site provides for the proposed facilities, adequate buffer for existing and future land uses near the site, and room for changes in treatment requirements to meet stricter regulations and/or reuse programs.	T-1 A. King County shall ~~seek north treatm plant~~ NTF sites that provide sufficient area accommodate the proposed ~~treatment~~ facilit an appropriate buffer, and at the treatment plant, future treatment process ~~improvements~~upgrades.
	T-1B. King County shall seek north treatment plant sites that minimize the need for extensive alteration due to steep slopes and/or hazard mitigation.	1. Criterion should apply to all facility sites, not just the treatment plant. 2. Change wording to seek sites that "require minimal site alteration" rather than "minimize extensive alteration." 3. Clarify and be more specific about the degree of slope and/or hazard that is acceptable. 4. Comment: concern about the cost of dealing with steep slopes.	1. OK; see revision. 2. OK; see revision. 3. The specifics about slopes and geo-hazards are addressed in the detailed evaluation questions that will be asked to determine a site's consistency with this criterion. Several factors must be considered and it would be difficult to reflect all the details of each factor in this criterion statement. 4. Criterion is intended to screen sites to avoid or minimize steep slopes. Engineering Constraint factor regarding steep slopes screens out sites with slopes of 30% or greater affecting a majority of the site.	T-1B. King County shall seek ~~north treatment plant~~NTF sites that ~~minimiz need for~~do not require extensive altera due to steep slopes and/or hazard mitigation.

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	T-1C. King County shall seek a north treatment plant site that is located at an elevation that allows efficient use of energy for conveyance of sewage to the plant and conveyance of treated effluent to Puget Sound.	1. Change "allows" or "shall seek" to "consider." 2. There was discussion about the importance of this criteria, since the study area has such varied and varying topography. Some SAC members felt this was a low priority or low value criterion. 3. Should address support for water reuse (which may support different plant elevation choices).	1. The County will use "shall seek" for all criteria. See response under Technical 1A. 2. The County believes that this criterion is important for purposes of assessing long-term energy usage, system complexity and operations and maintenance costs. Very high or very low elevation sites could result in larger (or more) pump stations, a less effective use of energy, higher maintenance requirements, and a more complex emergency flow management system. Although the impact of these elements may not seem critical in any single year, the cumulative impacts over the life of the facilities can be substantial. 3. Technical Criterion 6A – Sustainability addresses a site's level of support for water reuse opportunities. Note: This criterion is specific to the treatment plant, and not to all NTF facilities.	T-1C. No Change
2 – Geology, Soils, and Groundwater	T-2A. King County shall seek NTF sites that minimize exposure to geologic hazards, poor soil conditions, and unsuitable subsurface geology.	1. This criterion should be stated as "shall select," reflecting a key or priority site attribute. 2. Is threshold of 0.5 kilometer setback from know active fault adequate? Can we measure the known location of faults adequately enough to establish this as a safe set-back distance? Half a kilometer may not be adequate.	1. The County will use "shall seek" for all criteria. See response under Technical 1A. 2. The setback distance (0.5 kilometers) is intended to limit the potential for surface rupture on the plant site. It is not intended to protect the site from strong groundshaking, which any site in the study area would be susceptible to because of the presence of faults. The County will ask geotechnical staff to provide further substantiation for this evaluation threshold used as an engineering constraint factor.	T-2A. No Change
	T-2B. King County shall seek NTF sites that minimize impacts to construction and operation from shallow groundwater.	1. State the issue more directly – minimize need for dewatering or avoid sites having shallow groundwater. 2. Should be "shall select." 3. Change "minimize" to "avoid, minimize or mitigate." Mitigation may be appropriate solution; perhaps don't need to avoid or minimize. 4. Is this possible to avoid given presence of shallow groundwater in Snoho Co? This issue is not a primary driver – it doesn't seem to be a critical evaluation factor. 5. Relationship to Environmental Criterion 2A – re: municipal groundwater water supply.	1. OK; see revision. 2. The County will use "shall seek" for all criteria. See response under Technical 1A. 3. See revision. 4. Because of long-term impacts it will be useful to compare the candidate sites with respect to the need for dewatering and minimize this need through site selection if possible. 5. Environmental Criterion 2A deals with protecting areas of potable municipal groundwater use, which is distinct from shallow groundwater that may affect project construction or operation.	T-2B. King County shall seek NTF sites that avoid, minimize or allow mitigation for dewatering during facilities construction or operation ~~impacts to construction and operation from shallow groundwater~~
3 – Site Access and Utilities	T-3A. King County shall seek NTF sites with adequate access to and from major roadways.	1. This criterion should be stated as "shall select"; this is a priority for the plant site. 2. Need to add that if a site doesn't already have existing or planned access that will be adequate, then County will develop adequate access within reasonable costs. 3. Broaden this criterion to address other modes of	1. The County will use "shall seek" for all criteria. See response under Technical 1A. 2. OK; see revision. Cost consideration is addressed by Financial Criterion 1. 3. The County believes that it is necessary to have a criterion that specifically addresses roadway access for vehicles. Convenient and safe access via roadways is necessary during construction as well as for operational traffic such as equipment deliveries, maintenance and repair vehicles, biosolids vehicles, emergency services vehicles, delivery of supplies and school and tour buses. The County will also determine whether a site provides alternate transportation	T-3A. King County shall seek NTF sites with adequate access to and from major roadways or for which the County can develop adequate access.

CRITERIA #	ORIGINAL POLICY SITING CRITERIA	COMMENTS/SUGGESTIONS	RESPONSE / ACTION	REVISED POLICY CRITERIA
		transportation access, including rail and barge. 4. Not a primary driver. 5. Does not need to be a major highway.	access modes and evaluate the usefulness of alternative modes. (see Detailed Evaluation Question for Technical Policy Criterion 3B). 4. Adequate access to the site and to a major regional roadway/freeway system for truck transport is an important consideration. 5. Major roadway access directly to the site may not be necessary, however major roadway access does need to be within a reasonable proximity to the site for plant construction and long-term operation.	
	T-3B. King County shall seek NTF sites with adequate, reliable, and cost competitive power supply.	1. This criterion should be stated as "shall select"; this is an important and basic need for the plant site. 2. Need to add that if a site does not already have existing or planned power supply that will be adequate, then County will develop adequate supply within reasonable costs. 3. Seek opportunities for co-generation after plant has been built.	1. The County will use "shall seek" for all criteria. See response under Technical 1A. 2. OK; see revision. Cost consideration is addressed by Financial Criterion 1A. 3. See Technical Policy Criterion 6 – Sustainability, which addresses the potential for reuse of any by-products of the NTF process, including co-generation.	T-3B. King County shall seek NTF sites with adequate, reliable, and cost competitive power supply or for which the County can obtain adequate supply.
	T-3C. King County shall seek NTF sites with adequate emergency response services (fire and medical).	1. This criterion should be stated as "shall select"; this is a basic need for the plant site. 2. Need to add that if a site doesn't already have existing or planned emergency services that will be adequate, then County will develop such services within reasonable costs. 3. Criteria about desire for existing services could lead to selection of a site in an already developed area which may have other issues/problems – need to consider plans or future potential for adequate services to be developed along with other pending development.	1. The County will use "shall seek" for all criteria. See response under Technical 1A. 2. OK; see revision. Cost consideration is addressed by Financial Criterion 1. 3. Comment noted. King County will consider future utility plans in siting, design and construction phases of the project.	T-3C. King County shall seek NTF sites with adequate emergency response services (fire and medical) or for which the County can develop or obtain adequate services.
4 – Conveyance Routes	T-4A. King County shall seek conveyance routes that minimize the complexity and cost of conveying flows to and from the north treatment plant site.	1. What is the relative cost of conveyance facilities vs. cost of plant? 2. Is this criterion in conflict with desire to support water reuse opportunities? 3. Don't let system complexity and cost overshadow opportunities – need to balance costs, complexity with benefits to the community.	1. Although cost will vary significantly depending on the location of the NTF site, it is estimated that the total cost of the NTF system will be relatively equally split between costs of the treatment plant and costs of the associated conveyance facilities. 2. This criterion assesses the relative conveyance system requirements for each candidate site. There is a separate criterion that assesses support of water reuse. Assessment of both criteria will allow the County to consider and balance any possible trade-offs in terms of system cost, complexity and benefit to the community and/or water reuse. 3. See item 2 above. King County agrees that there is a need to evaluate the complexity of a system in the context of the benefits and opportunities that the system provides. The intent of the this criterion is to value the inherent reliability advantage that simple systems often have	T-4A. King County shall seek conveyance routes that minimize the complexity ~~and cost~~ of conveying flows to and from the north treatment plant site.

CRITERIA #	ORIGINAL POLICY SITING CRITERIA	COMMENTS/SUGGESTIONS	RESPONSE / ACTION	REVISED POLICY CRITERIA
			over more complex systems. Complex systems, such as ones with many pump stations, can be designed and constructed such that they are fully reliable but are often more difficult to operate and maintain and more difficult to manage during emergency situations. The NTF conveyance facilities will be operated and maintained for 30 to 100 years or more. For long-term operation and reliability, the County believes we should seek less complex conveyance routes where they exist. Note: Cost consideration is addressed by Financial Criterion 1.	
	T-4B. King County shall seek to avoid routing conveyance facilities in congested utility corridors where construction could adversely affect existing utilities.	1. This should not be a priority criterion. It is not likely possible to avoid affecting other utilities? As long as disruption to existing utilities is short-term and can be mitigated – then corridor / sites should remain under consideration as suitable. Don't avoid sites just because of existing utilities; may be opportunity to avoid only the specific trouble spots, combine utilities or provide needed repairs.	1. Comment noted, criterion deleted.	Criteria Deleted (T-4B)
5 – System Reliability	T-5A. King County shall select NTF sites that have adequate options for an emergency bypass from the north treatment plant in the event of system service disruption.	1. No bypass allowed per DOE regulation. Change text to address emergency flow management. 2. Change "adequate" to "effective." 3. Don't plan emergency discharge to freshwater (stream, lakes, rivers). 4. First choice is to contain/store flows in the system in an emergency or reroute to other facility. Build redundancy to avoid bypasses. Don't design for an emergency; design to avoid an emergency. Second choice is discharge to Puget Sound. 5. Is this untreated or treated flow?	1. OK; see revision. 2. OK; see revision. 3.-5. King County will design its system to eliminate preventable emergency flow management situations to the maximum extent possible. The goal is not just to meet the minimum requirements of regulatory agencies, but to explore and implement alternatives to reduce emergency flow management to the absolute minimum. However, emergency situations such as an earthquake do occur and it is prudent to plan for such events, particularly since emergencies often do disrupt the system's ability to deliver sewage to the treatment plant, adequately treat the sewage and/or transport the effluent to a Puget Sound outfall. Wastewater facilities are designed and constructed with redundant equipment, power supplies and, in come cases redundant structures. Standby electrical power is provided by emergency generators or two independent sources of power. Alarms, communications systems and operator training are provided to assure rapid and effective response to emergency conditions. King County will provide these features as a minimum, in design and operation of the NTF facilities. Specific options for managing flows under such an emergency would vary depending upon the ultimate location of NTF facilities, configuration of the conveyance system, extent and location of system damage and time of year. In general, King County would manage flow emergencies by: a. Storing flow within the conveyance system, b. Redirecting flows, to the extent possible, to the other two existing regional wastewater treatment facilities, c. Utilizing available offline storage to its fullest extent, and d. Discharging any flows that cannot be contained, diverted or stored by the above measure to Puget Sound either partially treated or untreated. Despite precautions included in treatment plant, pump station and collection system design, King County Wastewater facilities, as well as other facilities in the state and nation, have experienced failures which have resulted in discharge of untreated or partially treated sewage. The Washington State Department of Ecology manual, "Criteria for Sewage Works Design", December 1998, does not specifically address emergency bypass facilities for wastewater pump stations or treatment	T-5A. King County shall ~~select~~ seek NTF sites that provide for effective emergency flow management. ~~have adequate options for an emergency bypass from the north treatment plant in the event of system service disruption.~~

CRITERIA #	ORIGINAL POLICY SITING CRITERIA	COMMENTS/SUGGESTIONS	RESPONSE / ACTION	REVISED POLICY CRITERIA
			plants. The manual does provide requirements for reliability depending on the quality of the receiving waters but does not appear to include any written prohibition of facilities designed to discharge untreated sewage during emergency conditions. King County will evaluate opportunities to maximize system reliability and minimize emergency flow management, in association with new and existing facilities during development of the NTF system configuration.	
6 – Sustainability	T-6A. King county shall seek NTF sites that maximize the potential for recycling treated wastewater, biosolids, and/or gas.	1. Maximize? Is this a necessary qualifier? Do we need to maximize or just look for reuse opportunities? 2. Change "potential" to "capability" or "opportunities." 3. Don't identify specific byproducts (such as methane gas), instead evaluate potential to recycle any byproducts of the proposed treatment system. 4. "Shall select" instead of "shall seek." 5. More emphasis on this issue is due – will become more important in future; versus not a driver. 6. Consider additional criterion that addresses sustainable design principles and long-term operation. Is there a site that would allow for more efficient energy use, etc.? One example is an industrial use area, where reuse or plant byproducts could occur at adjacent facilities and where conflicts with adjacent uses would be minimized.	1. OK; see revision. 2. OK; see revision. 3. OK; see revision. 4. The County will use "shall seek" for all criteria. See response under Technical 1A. 5. Comment noted. 6. Many of the concepts of sustainable design are incorporated into other policy criteria and detailed questions in support of those criteria. For example, energy conservation is addressed in Technical Policy Criteria 1C, 4A and 6A; minimizing disruption to existing site conditions is addressed in Technical Policy Criterion 1B; minimizing transportation miles is considered in Technical Policy Criterion 3A and impacts of dewatering shallow groundwater are addressed in Technical Policy Criterion 2B.	T-6A. King county shall seek NTF sites that support opportunities for reuse of treatment process by-products~~maximize the potential for recycling treated wastewater, biosolids, and/or gas.~~.
7 - Marine Outfall	T-7A. King County shall seek outfall locations that minimize encroachment on other marine use areas.	1. Other marine uses should be addressed, such as public beaches or diving areas. 2. Use "shall select." 3. Distinguish use areas such as commercial use areas vs. biologically sensitive marine areas. 4. Is it necessary to build a marine outfall at all? Would it be possible to provide for tertiary treatment and achieve 100% reuse of treated effluent.	1. This criterion will be combined with Community Impacts 1A. As modified, it is more inclusive of other marine uses than the earlier version. 2. The County will use "shall seek" for all criteria. See response under Technical 1A. 3. See response to item 1 above. Biologically sensitive marine uses are also covered under Environmental Criterion 1B 4. A marine outfall will be required for this facility. Although King County will look for ways to maximize opportunities to reuse the treated effluent when the new plant is built and at our other treatment plants, there will not be sufficient customers to handle the flow. This is especially true in winter, when irrigation is not required and when wastewater flows are highest. Over time, more and more of the flow may be reused as new projects are developed, but even in the long term, we do not expect the demand for reclaimed water in the winter to approach the volumes of wastewater generated.	T-7A. This has been incorporated into Community Criterion 1A, which addresses siting NTF facilities on sites that are compatible with surrounding uses, including marine uses.

CRITERIA #	ORIGINAL POLICY SITING CRITERIA	COMMENTS/SUGGESTIONS	RESPONSE / ACTION	REVISED POLICY CRITERIA
			The potential customers of reused water are dispersed throughout the wastewater system, and King County is working on ways to increase water reuse throughout the region, not just at the North Treatment Plant. Other potential customers include industries in the lower Duwamish and the Ballard Locks. Identifying reclaimed water customers will take time and education. While some welcome reclaimed water, others will need more time and scientific study to develop confidence in the product's safety.	
8 – Land Acquisition, Easements, Right-of-Way, and Permitting	T-8A. King County shall seek to secure permits and to acquire land, easements and rights-of-way for the NTF in a manner that minimizes disruption to the community and avoids or minimizes risk of project delay and cost overruns.	1. Use shall select. 2. These are standard project management issues; shouldn't eliminate a site due to potential acquisition or permit issues alone. 3. Criterion is too broad. 4. How can the siting of a WWTP avoid or minimize community disruption – it will disrupt the local community. 5. Since permitting happens much later in the process, after SEPA, should it be addressed now? Criterion should address permit complexity as a siting issue rather how the County will secure permits, which comes much later.	1. The County will use "shall seek" for all criteria. See response under Technical 1A. 2. The County would like to consider the information about the relative permit and site acquisition complexity associated with each site. For some permits, complexity is related to environmental impacts that must be addressed and mitigated in order to receive the approval. The extensive amount of time it can take for multiple agencies to process and approve permits may jeopardize the 2010 completion date. Site acquisition complexity (multiple owner, potential relocation, contaminated property, etc.) can take extensive time to negotiate and reach a settlement agreement on, also possibly jeopardizing the 2010 date. 3. OK; see revisions. 4. OK; see revisions. 5. OK; see revisions. See response under item 2 above.	T-8A. King County shall seek NTF sites that minimize permit and acquisition complexity in order to ~~to secure permits and to acquire land, easements and rights-of-way for the NTF in a manner that minimizes disruption to the community and~~ avoids or minimizes risk of project delay and cost overruns.
9 – System Opportunities	T-9A. King County shall seek sites that maximize mutual benefit to the wastewater infrastructure of the County and any public partner wastewater agency.	1. Why limit potential partners to wastewater agencies? Consider partnerships with other utilities (e.g., transportation, underground utilities)? 2. Change maximize to consider or optimize.	1. This criterion will be combined with Community Criterion C-3A, to clarify the expanded types of joint-use and partnership opportunities the County is evaluating. 2. See revision.	T-9A. This criterion is deleted and instead, the assessment of opportunities to partner with and benefit other wastewater infrastructure projects (either the County's or another agency) through NTF siting will be addressed under Community Criterion 2A.
ENVIRON-MENTAL				
1 – Biological Resources Protection	E-1A. King County shall seek NTF sites that avoid or minimize adverse effects to listed federal endangered species and to officially designated state and local sensitive or protected natural resources.	1. Include threatened as well as endangered species. 2. Include species proposed for listing. 3. Use "Shall select." 4. Will need a buffer between plant and Endangered species habitat; can't necessarily use habitat area as plant buffer. 5. Why is this limited to endangered species, why not other biological resources too?	1. OK, see revision. 2. See revision; species proposed for listing will be considered. 3. County will use "shall seek" for all criteria. See response under Technical 1A. 4. Comment noted – the buffer requirements will be developed for each specific site and take into consideration both sensitive adjacent land use and habitat factors. 5. See revision; this criterion is intended to cover the spectrum of biological resources from "listed" and "designated" resources to wildlife and habitat resources in general.	E-1A. King County shall seek NTF sites that avoid ~~or~~ minimize, or mitigate adverse effects to biological resources including threatened, endangered and candidate species as listed under the federal ~~e~~Endangered ~~s~~Species Act; endangered, threatened, sensitve and candidate species listed under WDFW's Priority Habitats and Species, and Species of Concern; and/or ~~and to~~ officially designated ~~state and~~ local ~~sensitive or protected~~ natural resources.

SAC NTF POLICY CRITERIA REVIEW
RESPONSE TO COMMENTS

CRITERIA #	ORIGINAL POLICY SITING CRITERIA	COMMENTS/SUGGESTIONS	RESPONSE / ACTION	REVISED POLICY CRITERIA
	E-1B. King County shall seek outfall locations that avoid or minimize effects on sensitive near-shore and off-shore marine resources.	1. Shall select.	1. County will use "shall seek" for all criteria. See response under Technical 1A.	E-1B. No Change
2 – Water Resources Protection	E-2A. King County shall select NTF sites that minimize adverse effects to major municipal drinking water wells, potable aquifers, and/or potable groundwater resources.	1. Change "minimize" to "have no adverse effects to" or "do not adversely affect major municipal ..." 2. What does "major" or "major drinking well" mean?	1. "Minimize" refers to the intent to reduce adverse impacts to less than measurable levels or to the lowest degree feasible. It is possible to have a "minimal adverse effect" on the environmental that would result in inconsequential or negligible adverse impacts. Change this criterion to "have no adverse effects" may be overly restrictive in site screening if it precludes selecting an otherwise good candidate site when there would be no resulting adverse environmental impacts. 2. A "major drinking well" is defined as a "Group A Public Water System Wellhead Protection Area." The Washington State Department of Health uses this definition.	E-2A. King County shall ~~select~~ seek NTF sites that minimize adverse effects to major municipal drinking water wells, and potable aquifers, ~~and/or potable groundwater resources~~.
	E-2B. King County shall seek NTF sites that minimize adverse effects to local surface waters.	No comments.		E-2B. No change
	E-2C. King County shall not select NTF sites that have a significant flood hazard.	2. Delete "significant"; KC should avoid sites that have a flood hazard.	1. Some potential sites may be located in areas where localized flooding of varying degrees is known to occur but would not preclude the site from being developed. It is possible that mitigation associated with developing the site, such as incorporating regional detention facilities, could actually improve the flood hazard for both the site and surrounding areas. Avoiding sites that have any potential "flood hazard" may prove to be too restrictive a criterion and preclude site opportunities.	E-2C. No change.
3 – Human Health Protection	E-3A. King County shall seek outfall locations that avoid or minimize the potential adverse health effects on people using areas for public recreation, fishing, or shellfish harvesting for consumption or other human use activities.	1. Are commercial harvest activities and areas included in this? 2. Are tribal treaty rights addressed? 3. Use "shall select." 4. Don't stop at minimum standards for the outfall.	1. Yes; this criterion addresses both commercial and recreational uses of the marine environment. 2. See revision. Tribal treaty rights are addressed by this broad criterion. 3. County will use "shall seek" for all criteria. 4. Comment noted.	E-3A. King County shall seek outfall locations that avoid, ~~or~~ minimize, or allow mitigation of the potential adverse health effects on people using areas for ~~public~~ recreation, fishing, ~~or~~ shellfish harvesting, seafood ~~for~~ consumption, tribal usage or other human use activities.
4 – Contamination Potential	E-4A. King County shall seek NTF sites that avoid disruption or mobilization of hazardous materials into the environment.	1. State this criterion in the positive rather than in the negative. 2. Does this conflict with Criterion 7B, which indicates King County shall seek potential opportunities to benefit a community through site selection and plant development, such as remediation of a contaminated site? 3. Use "shall select." 4. Add statement about either avoiding or mitigating the contamination issue at a reasonable cost.	1. OK; see revision. 2. This criterion assesses the level of constraint that hazardous contamination on a site might pose. Community Criterion 2B (formerly Environmental Criterion 7B) assesses the potential opportunity for clean-up and benefit to the community that the same contamination may represent. These two criteria provide two distinct but important views of the same issue. The two criteria don't conflict; rather they will provide the County with useful information about the trade-offs that may be associated with a site that has hazardous contamination. 3. County will use "shall seek" for all criteria. See response under Technical 1A. 4. OK; see revision.	E-4A. King County shall seek NTF sites that avoid, minimize or allow mitigation of disruption or mobilization of hazardous materials into the environment.

SAC NTF POLICY CRITERIA REVIEW
RESPONSE TO COMMENTS

CRITERIA #	ORIGINAL POLICY SITING CRITERIA	COMMENTS/SUGGESTIONS	RESPONSE / ACTION	REVISED POLICY CRITERIA
5 – Cultural Resources Protection	E-5A. King County shall seek NTF sites that avoid or minimize impacts to known significant cultural resources.	1. Should address "potential" resource sites as well as "known" sites. Delete the word "known." Many Native American resource sites are as yet undiscovered. 2. Move this criterion to community category, rather than environmental. 3. Who determines what is cultural/historical?	See responses for Community Criterion 2A, below.	This criterion, E-5A, has been moved to Community Criterion 2A.
6 – Traffic and Circulation	E-6A. King County shall seek to locate and construct conveyance pipelines that minimize disruption of local and/or regional traffic and circulation patterns.	1. Should this be a criterion for siting if it is only a temporary impact, during construction? May need to impact traffic during construction. Not a priority criterion or decision driver for site selection. 2. Add plant and outfall to this criterion. 3. Add criterion that addresses opportunities to coordinate with or benefit planned regional or local transportation projects. 4. Add concept that County should either avoid or mitigate at reasonable cost.	1. King County would like to compare the NTF sites under consideration for the level of traffic/circulation disruption potential they represent relative to one another and to minimize this where possible. This is in the interest of both the community and the County's construction schedule. This remains a useful aspect to be addressed by the criterion. However, the County finds that this issue is already covered by Community Criterion 1B, which addresses a site's potential for appropriate and effective mitigation of community impacts, such as noise, odor, *and* traffic effects. Therefore, this separate criterion has been deleted. 2. All NTF facilities will be evaluated for traffic effects, the plant and outfall as well as the conveyance pipelines. 3. Opportunities to partner on local or regional transportation projects are already addressed by Community Criterion 2A. 4. The County has added to the criteria, where appropriate, the concept that the County should consider sites where a constraint may exist but could be mitigated at reasonable cost.	~~King County shall seek to locate and construct conveyance pipelines that minimize disruption of local and/or regional traffic and circulation patterns.~~ Criterion E-6A has been deleted; traffic disruption issues are already addressed by Community criterion 1B.
7 – Enhancement Opportunities	E-7A. King County shall seek NTF sites that offer the potential for enhancement of habitat, wetlands, surface waters, groundwater, and/or cultural resources associated with mitigation of impacts resulting from proposed facilities.	1. Don't seek sites for their enhancement potential but keep under consideration sites with constraints that can be mitigated at reasonable cost and effort. Seek to minimize impact but not necessarily enhance. 2. Add recreational opportunities. 3. Change "seek" to "consider." Change "enhancement to" "mitigate." 4. Is enhancement a realistic goal? 5. Seems redundant with Technical Criterion 2B.	See responses provided under Community Criterion 3B, below.	This criterion, E-7A, has been revised and moved to the Community section and renumbered as Community Criterion 3B, see below.
	E-7B. King County shall seek NTF sites that provide opportunities to enhance the environment by remediating existing hazardous materials contamination.	1. Avoid sites with hazardous contamination. Don't seek sites for their enhancement potential but keep under consideration sites with constraints that can be mitigated at reasonable cost and effort. Seek to minimize impact but not necessarily enhance.	1. It may be feasible and appropriate to mitigate hazardous contamination affecting perhaps a portion of a proposed NTF site, thereby providing a benefit to the environment and community as part of project development. This is just one example of many potential opportunities that may exist for siting the NTF project. The County will delete this stand-alone criterion and instea, incorporate hazardous contamination remediation into Community Criterion 3B, which addresses a broad range of possible environmental enhancement opportunities to be considered	This criterion E-7B has been incorporate into the new Community Criterion 3B, below.

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CRITERIA #	ORIGINAL POLICY SITING CRITERIA	COMMENTS/SUGGESTIONS	RESPONSE / ACTION	REVISED POLICY CRITERIA
		2. Does this criterion conflict with Environmental Criterion 4A?	during site evaluation. 2. This criterion does not conflict with Environmental Criterion 4A, regarding hazardous contamination constraints. Please see the responses under that criterion, above, for further explanation.	
	E-7C. King County shall select NTF sites that provide opportunities to support growth management or regional planning goals.	1. Add "local" to consideration of planning goals. Make sure project complies with local planning. 2. How can wastewater facilities support growth management goals? 3. Create a new criterion to address consistency with local planning goals and policies.	1. This issue is already addressed by Community Criterion 1A. Therefore, the County is deleting this stand-alone criterion. 2. Siting of the NTF will be evaluated for consistency with the Essential Public Facilities policies contained in the state GMA. This is what is intended by the concept of NTF siting supporting growth management goals (e.g., policies include that facilities be located in area of service need, within the growth management area, etc.) 3. By merging this criterion with Community Criterion 1A, we are connecting the issues of compatibility with surrounding land uses and regional growth management planning. Please see responses to comments on Community Criterion 1A for further discussion.	~~King County shall select NTF sites that provide opportunities to support growth management or regional planning goals.~~ This criterion E-7C has been deleted; consistency with GMA is addressed under Community Criterion 1A.
FINANCIAL				
F-1 – Overall System Costs	F-1A. King County shall seek NTF sites that will result in reasonable lifetime costs for the plant, conveyance activities, and outfall considering acquisition costs, capital costs, operations, and maintenance.	1. Seems too brief; financial should have more criteria. 2. Does this address cost in terms of rate to taxpayers. 3. "Reasonable" cost is not well defined. 4. Shall select, rather shall seek. 5. Not all costs are within County control, such as mitigation, ESA compliance. 6. Specify the goal of trying to get federal and state funding.	1. OK; see new criterion, below. 2. See new criterion. In addition, the following Detailed Evaluation Questions will be added: a. Will the site and attendant facilities support prudent financial forecasting and budget planning? b. Can the site and attendant facilities be supported by adequate revenue through reasonable rates? c. Will the site and attendant facilities allow for continued bonding capacity in the future? d. Will the site and attendant facilities maintain adherence to bond covenants with reasonable rates - ending fund balances - debt service coverage - reserve requirements e. Will the site and attendant facilities be supported by a reasonable capacity charge under a policy of growth pays for growth? .f. Can the site be supported by a level of debt financing that can be sustained over the long-term given other capital programs and potential impacts on credit ratings? 3. King County has used the word "reasonable" because it is a generally recognized term used in bonding "Official Statements" for municipalities. ("Official Statements" are the information documents submitted to financial institutions to determine eligibility for issuing debt). Cost estimates will evolve as the project moves from siting to design to construction, and will be evaluated relatively, based on comparisons between feasible NTF systems. A determination of whether the costs are reasonable, will be influenced by many factors taken into account at the time the comparisons are made. 4. The County will use "shall seek" for all criteria. See response under Technical 1A. 5. Comment noted; the County will attempt to develop and include in its consideration a ballpark assessment of cost for all items, including mitigation. 6. The opportunity to obtain state and/or federal funding will be included as one of the detailed evaluation questions considered in the assessment of overall costs for the project.	F-1A. King County shall seek NTF sites that will result in reasonable lifetime costs for the plant, conveyance activities, and outfall considering acquisition costs, capital costs, operations, ~~and~~ maintenance and mitigation.
				F-1B. King County shall seek NTF sites that

CRITERIA #	ORIGINAL POLICY SITING CRITERIA	COMMENTS/SUGGESTIONS	RESPONSE / ACTION	REVISED POLICY CRITERIA
				are consistent with existing King County financial policies, guidelines and obligations.
COMMUNITY				
C-1 – Community Impacts	C-1A. King County shall seek NTF sites that are compatible with surrounding land uses.	1. Change "compatible" to "consistent." 2. Change "surrounding" with "local community zoning requirements." 3. Reword – how is any current use compatible with a treatment plant except a treatment plant? 4. Add the word "reasonably" before compatible. 5. Future land uses may need to change zoning of existing land uses.	1. The County believes that it is appropriate for the site alternative screening process to consider compatibility with surrounding uses. One of the specific detailed evaluation questions will evaluate local plan policies and zoning information relevant to each site, however, land use compatibility is the key issue for NTF siting. The NTF project is an Essential Public Facility (EPF). Because EPS have been traditionally difficult to site, the Washington State Growth Management Act (GMA) places a particular emphasis on the need for local jurisdictions to not use their local plans, development regulations and permitting procedures to make siting of EPFs impossible or impractical. Local jurisdictions do not generally anticipate or provide for siting of needed regional EPFs, such as a new regional treatment facility, in their comprehensive plan or zoning documents. Instead, the County must look for areas where NTF siting would be compatible with local existing and planned land use and land use patterns. Evaluation of local plans and policies will be one measure of overall compatibility used for each site. Mitigation is applied where needed to address site-specific compatibility issues and to achieve compatibility. Further, because local plans, policies and regulations can and will change over time in most jurisdictions, in ways that could have impacts on siting EPFs that can not be anticipated at this time, the County can not restrict the siting process with a criterion that requires NTF sites to be consistent with all future land use plans and policies, currently unknown. King County's siting of this regional EPF is being conducted on a collaborative basis with those local jurisdictions where sites are being considered. The County will consider information contained in local comprehensive plans, local development regulations, and existing environmental documents. Further, the County is committed to effective mitigation of significant environmental impacts of the PTF project in host jurisdictions. 2. See discussion under 1., above. 3. The County will be assessing the compatibility of proposed facilities with surrounding land uses; with mitigation the NTF facilities can be compatible with many types of adjacent land uses. 4. For each criterion, including this one, the County will evaluate a range, in this case from very compatible to incompatible and with this information will weigh the trade-offs presented by the site alternatives under consideration. Thus, it is not necessary to add the "reasonably" to qualify this criterion. 5. Comment noted.	C-1A. King County shall seek NTF sites that are compatible with surrounding land and maring uses, and are consistent with the Growth Management Act.
	C-1B. King County shall seek NTF sites that can be appropriately and effectively mitigated against potential impacts to the community such as noise, visual, odor, and traffic effects.	1. Work against land use? 2. How can we compensate for community loss [of land, tax revenue?]?	1. Comment not clear. 2. The NTF facilities, once sited, may be exempt from payment of local property tax, just as other properties used for public and non-profit purposes, such as schools, libraries, parks, and churches. Under state law and the Washington constitution, it is not permissible for King County (county taxpayers) to compensate a local jurisdiction for this tax exemption or to provide other financial "incentives" that are not appropriately tied to mitigation of the NTF	No Change

CRITERIA #	ORIGINAL POLICY SITING CRITERIA	COMMENTS/SUGGESTIONS	RESPONSE / ACTION	REVISED POLICY CRITERIA
			facilities. King County is committed to working with host communities and local jurisdictions to develop effective mitigation and to enhance and benefit the community through this mitigation. If, for example, the siting of the NTF facilities displace lands used or designated for recreational purposes, then King County would work with the community and local government to effectively mitigate this impact and restore and enhance recreational uses.	
C-2 - Cultural Resources 29	[This was originally Environmental Criterion E-5A but has been moved to the Community Section]	1. Should address "potential" resource sites as well as "known" sites. Delete the word "known." Many Native American resource sites are as yet undiscovered. 2. Move this criterion to community category, rather than environmental. 3. Who determines what is cultural/historical?	1. From experience the County finds that it is difficult if not impossible to evaluate sites for the potential for cultural resources. Because of the patterns of habitation and cultural significance of some geographic areas to Native Americans, the "potential" for significant cultural resources to occur may be high in an area where, upon further site-specific investigation, a cultural site may not in fact exist. It is not until a very site specific analysis is conducted that a determination can be made about the likely presence of (previously unknown) cultural resources with an adequate degree of accuracy. Although the County team will evaluate areas for potential cultural resource sensitivity, virtually any site could have a potential cultural resource that is not yet known; resources may be buried and would not be "known" until discovered during site preparation activities for development. King County has encountered previously unidentified archaeological materials during construction on some major projects. When this occurs, construction activity stops immediately while the situation is assessed and future action is determined according to state and federal laws. For site screening purposes, the County will assess potential effect on known cultural resources. 2. Criterion has been moved from the Environmental category to the Community category. 3. Historical and Archaeological (Cultural Resources) are designated and defined by the Washington State Historic Preservation Office, the Office of Archaeology and Historic Preservation, and King County Landmarks Division. Locally important cultural/historical resources will be identified through the Discovery Process and public outreach efforts. A detailed evaluation question will be included to address this: "Are there community resources in the area that are not officially designated or recognized and yet provide important meaning or hold particular value for the community?"	C-2A. King County shall seek NTF sites that avoid, minimize, or allow for mitigation of impacts to known significant cultural resources.
C-3 – Community Amenity	C-3A. King County shall seek to enhance and provide benefit to the community as part of project development and operation through implementation of appropriate and effective mitigation.	1. Enhancement and community benefit is something the County should provide on any site; it is not a criterion for siting. Reword at least, to determine how feasible it would be to achieve enhancement and community benefit. 2. County indicates that stakeholder support/acceptance is important but there is no criterion addressing this. 3. How is a community defined? Should we assess only benefit to local community or also to the region? 4. Incorporate Technical Policy Criterion 9 – system opportunities that addresses partnership	1. It is intended that this criterion would assess the degree to which a site provides an opportunity for enhancement and benefit to the community, not if it will. County agrees that each site will and must provide such opportunity to be viable and acceptable. 2. Although it is not a separate criterion, community acceptance will be an important factor in assessing how various sites meet Community Criterion 3A – Community Amenity. One of the detailed evaluation questions that will be used to measure this criterion states: "What is the extent of community support for the proposed NTF site?" 3. Benefit to the "community" will be considered on neighborhood, city, and regional levels. 4. Technical Criterion 9 is covered by this criterion.	C-3A. No Change

CRITERIA #	ORIGINAL POLICY SITING CRITERIA	COMMENTS/SUGGESTIONS	RESPONSE / ACTION	REVISED POLICY CRITERIA
		with other wastewater agencies, here.		
	C-3B - new	1. Don't seek sites for their enhancement potential but keep under consideration sites with constraints that can be mitigated at reasonable cost and effort. Seek to minimize impact but not necessarily enhance. 2. Add recreational opportunities. 3. Change "seek" to "consider." Change "enhancement to" "mitigate." 4. Is enhancement a realistic goal? 5. Seems redundant with Technical Criterion 2B.	NOTE: This criterion was originally presented as Environmental Criterion 7A and B. 1. The County is interested in evaluating both constraints to be avoided or minimized, as well as opportunities for enhancement and community benefit through appropriate mitigation. Therefore, County is interested in having siting criterion that address potential opportunities such as this rather than only constraints. 2. Recreational opportunities are addressed in Community Criterion 2A. 3. The County will use "shall seek" for all criteria. See response under Technical 1A. We have clarified the connection to mitigation. 4. The County believes that development of the NTF project provides the opportunity for environmental and community benefit through appropriate mitigation efforts and that this is a realistic goal. 5. Technical Criterion 2B addresses shallow groundwater. It is a distinct issue.	C-3B. King County shall seek opportunties to enhance and provide benefit to the environment, such as ~~seek NTF sites that offer the potential for enhancement of~~ habitat, wetlands, surface waters, groundwater, environmental contamination management and/or cultural resources through appropriate ~~associated with~~ mitigation of project impacts ~~resulting from proposed facilities~~.

NOTES

NTF sites = all facilities: plant, pipelines, pump stations, and marine outfall

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Council Meeting Date: August 21, 2000 **Agenda Item: 6(c)**

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Endangered Species Act Response - Program Assessment
DEPARTMENT:	Public Works
PRESENTED BY:	William L. Conner, Public Works Director WLC Gail Perkins, Operations Manager GP

EXECUTIVE / COUNCIL SUMMARY

The purpose of this report is to provide your Council with additional background on the subject of the Endangered Species Act (ESA) and the listing of Chinook salmon as a threatened species. This is intended to be the second of three reports to your Council with the final presentation being a risk assessment and a recommended ESA response program for Council consideration.

The issues to be addressed in these reports can be divided into the following areas:

- What the regulations require and prohibit (*May 15 and August 21 Staff Reports*)
- The extent to which Shoreline complies or does not comply with the regulations (*May 15 and August 21 Staff Reports*)
- How Shoreline compares to other cities in terms of compliance (*August 21 Staff Report*)
- The options available to respond to the risk (*August 21 Staff Report*)
- The level of risk associated with various levels of non-compliance (*August 21 Staff Report*)
- The cost associated with the various response options (*Third Staff Report*)

The first report (May 15 Council Workshop) provided an overview of the regulatory context regarding ESA and a preliminary assessment of the City's programs in regards to these regulations. This report provides a more detailed analysis of the potential regulatory requirements and describes a possible response to the various regulatory requirements. We are not recommending the staffing levels outlined in Table 1 of this report. Rather we are identifying one possible program response to the emerging Tri-County 4(d) proposal to show your Council the magnitude and potential impacts. Once the Tri-County 4(d) options come into focus and we understand the Suburban Cities response to the 4(d) rule, we will come back to your Council with a more specific proposal with detailed budget analysis. Information on ESA implications, the Federal and State requirements for surface water programs and potential City actions are provided in Attachment A. This is an updated version of the May 15 report Attachment

A. Attachment B provides a comparison of several surface water program elements for Shoreline and other cities. Table 1 (Page 5 of this report) presents a list of potential activities and additional resources that may be needed to create a balanced response to ESA that is primarily being driven by the Tri-County 4(d) rule proposal. It is not intended to be prescriptive at this time, but rather establishes a benchmark for discussion. Attachment C is a more detailed version of Table 1. Attachment D is excerpted from the May 15 Staff Report, ESA Strategy. It is included as an attachment to this report as it provides background on two Federal and State Stormwater regulatory programs that are consistent with the ESA 4(d) rule. These programs are the Puget Sound Water Quality Management Plan and the Environmental Protection Agency NPDES (National Pollutant discharge Elimination System).

The third ESA staff report will refine this information and offer a final recommended program to respond to ESA and other regulatory requirements and the cost implications of the recommended response.

RECOMMENDATION

There is no Council action required at this time. This report is provided for your information only.

Approved By: City Manager LB City Attorney N/A

BACKGROUND / ANALYSIS

Summary of Shoreline Programs and Benchmarking Results

Attachment A summarizes the requirements of the draft Tri-County 4(d) Rule and compares them to other environmental regulations and City of Shoreline programs. The other regulations include the Puget Sound Water Quality Management Plan, the National Pollutant Discharge Elimination System (NPDES) Phase 2 Municipal Stormwater Permits and the July 10 Federal ESA 4(d) rule for various salmon listings under the ESA. Attachment B compares City of Shoreline programs to other cities. By reviewing these attachments, it can be seen that Shoreline already has in place some of the programs and regulations, but more will be required of the city. It is hard to perform a clear apples to apples comparison due to the structure of the different organizations, but Attachment B outlines relevant programs and services and what other cities are doing.

Areas where Shoreline is ahead of some cities and already has services required by new regulations:

- An adopted stormwater manual
- Adopted maintenance standards
- Appropriately funded maintenance program
- Participation in regional planning efforts
- Critical Areas Ordinance

Areas where additional funding or refinement of existing activities is likely:

- Shoreline management and land use regulations
- Consideration of cumulative impacts to aquatic resources in land use decisions (SEPA)
- Management zone standards (buffers from streams)
- Road maintenance standards and practices
- Program to work with developers to experiment with low-impact development alternatives
- Codes and procedures to ensure maintenance of privately owned detention facilities
- Funding for inspection including protection of stream buffers in existing developments
- Develop a comprehensive surface water management program plan and detailed drainage basin plans
- Implement a formal assessment program (monitoring)
- Implement a formal, on-going public education program
- Inventory and assess conditions of drainage system (e.g. pipes, ditches, catch basins, detention facilities)
- Inventory and assess condition of aquatic resources and identification of management zones (e.g. streams, wetlands, lakes, marine)
- Implement new city code standards prohibiting discharge of pollutants to City drainage systems and aquatic resources

Areas where new or additional services may be required include:

- Additional funding for habitat acquisition and enhancement
- Implement a source (of water runoff) control program for existing land uses
- Implement a program to investigate and eliminate illicit discharges

While each of these services is required by the various regulations, there is room for judgment in the level of effort and funding for each. For some, there may be opportunities to partner with other jurisdictions to provide economies of scale. For others, there may be opportunities to increase the value of the services by consolidating activities such as park development and habitat acquisition or enhancement with drainage improvements or mitigation for new road projects.

ESA Response Options and Preliminary Recommendation

There is a range of options for the City to consider in developing a strategy for ESA response and risk management and several factors should be considered. As a generalization, the options for response could be categorized as follows:

- Aggressively leading the pack to enhance habitat and recover salmon
- Being moderately proactive
- Take a median approach, balancing costs, benefit, known science and ability to pay
- Waiting until ordered to do more
- Resisting all efforts to do more to protect habitat or comply with regulatory mandates.

The fact that the City is embarked on an effort to develop an ESA response strategy suggests that we are at the median or perhaps moderately proactive. This sentiment must be balanced against: desires to control taxes, known science, desires to stimulate economic development, respect for property rights, and the City's tolerance for risk. These issues require difficult policy judgments to be made by your Council.

Policy discussions should consider what is achievable within Shoreline and the City's regional responsibilities and opportunities. That is, Shoreline is an existing urban community. The available science suggests that some urban streams will never recover to support harvestable levels of wild salmon. So, the question becomes, what level of productivity can be achieved and what is the community willing to invest to achieve it. This policy issue is a key driver of the financial impacts of the Tri-County proposed 4(d) rule.

The benefits of restoring aquatic habitats and riparian corridors extend beyond just recovering threatened species. Programs that protect threatened species also rejuvenate entire ecosystems, thus meeting the overall intent of the nation's environmental laws to achieve a sustainable balance between civilization and the environment. Investments in aquatic resources provide a sense of community pride, valuable open space, and recreational, aesthetic and educational benefits. Yet, the expense could be very large.

Table 1 presents a list of potential additional activities intended to create a balanced response to ESA that is primarily being driven by the Tri-County 4(d) rule process. It is a program that, when combined with existing activities, may achieve compliance with regulatory mandates. Such compliance would, pending National Marine Fisheries Service (NMFS) approval, eliminate the risk of Federal regulatory enforcement under ESA and provide for a viable defense against third party lawsuits. It would also minimize the risk for enforcement actions against the City pursuant to the Clean Water Act (CWA). The program includes actions needed to be in compliance with Phase 2 National Pollutant Discharge Elimination System (NPDES) municipal stormwater permits. It will likely enhance aquatic habitat and increase populations of trout and salmon but it will not achieve recovery of historic levels of fish populations in Shoreline. Attachment C presents a more detailed version of Table 1, compares it with the existing City programs and provides cross-references to the specific regulations.

The City will always face a risk of being challenged by individual developers and individual citizens under ESA as a result of citizen opposition to potential development projects. The development of a program will not eliminate this risk but would likely reduce the risk of such challenges being successful. Based on the Regulation Actions outlined in Table 1, several approaches could be formed. Currently we do not have enough information to provide your Council with specific program options that include detailed costs, benefit, known science, or the City of Shoreline's ability to pay. Also it is hard to quantify the potential level of risk, as it is in part dependent on the level of response from other cities. The current assumption is NMFS would likely target jurisdictions that do the least. Again to show your Council the magnitude and potential impacts Table 1 is just one possible program response to the emerging Tri-County 4(d) proposal. Once the Tri-County 4(d) options come into focus and we understand the Suburban Cities response to the 4(d) rule, we will come back to your Council with a more specific proposal and budget analysis. Most of these new programs will be funded from the Surface Water Management (SWM) Fund. We also believe there should be regional resource funds for some items such as habitat acquisition.

TABLE 1: A Median Response to ESA listings of Salmon

Administration

Future Program	Future FTEs	Fiscal Impact
Incidental increases in program management costs	A proportional increase in administrative staff for increases in overall program	7% – 15% of increased program costs

Regulatory Actions

Future Program	Future FTEs	Fiscal Impact
Inspection and enforcement: expand plat inspection and enforcement program to provide	1.0 new FTE	1 FTE plus expenses

additional erosion control and sensitive area protection.		
Source Control: develop and implement a source control program for existing properties to reduce stormwater pollution.	0.4 new FTE	0.4 FTE plus expenses
Monitoring: expand monitoring of streams, wetlands and lakes to address water quality, rainfall and runoff and aquatic habitat	0.5 new FTE	0.5 FTE plus expenses
Permitting: grading and drainage review: continue existing level of review, no LOS change, review and update codes and policies pursuant to final 4d Rule.	No new FTEs	$20,000 one time code review and update of land use regulations pursuant to final 4(d) Rule
Illicit Connections: create program for detection, education and enforcement of illicit discharges. Adopt an ordinance to prohibit discharges of pollutants into the City's aquatic systems. Complete a survey of city drainage systems to identify and eliminate illicit connections.	0.1 new FTE	0.1 new FTE. $50,000 one time cost for illicit connection survey.

Capital Program

Future Program	Future FTEs	Fiscal Impact
Retrofit stormwater system for water quality treatment. Needs unknown will be defined in basin plans or citywide stormwater plan. Include line item in annual budget.	0.5 new FTE to manage projects	Needs and cost unknown. Budget $250,000/per year for retrofitting system for water quality treatment.
Habitat acquisition and enhancement: needs and cost unknown. Needs will be defined in basin plans and WRIA plans. Include line item in annual budget.	0.5 new FTE to manage projects	Needs and costs unknown. Budget $200,000/per year for habitat acquisition and enhancement, and include removal of fish barriers.

Operations and Maintenance

Future Program	Future FTEs	Fiscal Impact
Operations: regular maintenance of city systems and annual inspection of private systems.	0.5 FTE	0.5 FTE plus expenses
Emergency Response: develop spill response capability in Public	No change	$15,000 one - time cost to develop plan, procedures and training.

Works. Prepare spill response plan and provide training for staff.		$5,000/yr equipment and supplies, staff education.

Public Involvement

Future Program	Future FTEs	Fiscal Impact
Expand education and volunteer programs.	0.5 new FTE	0.5 FTE plus $10K/year materials.
Expand public involvement for program planning	0.3 new FTE	0.3 FTE plus $10K/year materials
Expand volunteer programs	0.2 new FTE	0.2 FTE plus $10K/year materials

Parks

Future Program	Future FTEs	Fiscal Impact
Incorporate park and open space planning and development opportunities in stormwater comprehensive plan. Identify watershed-wide opportunities for mitigation of impacts to aquatic resources from transportation or other City capital projects.	No change	Update Parks Plan and maintenance procedures pursuant to final 4(d). Cost included in comprehensive stormwater plan. May result in reduced overall costs or increased value for City.

Planning

Future Program	Future FTEs	Fiscal Impact
Complete inventory and condition assessment of drainage system and aquatic habitat (this is currently an ongoing action).	No change	$90,000 one time cost to inventory drainage system and develop condition assessment. $75,000 one time cost to inventory and map aquatic habitat and develop condition assessment.
Complete comprehensive stormwater plan that develops specific strategies to address drainage, flooding, water quality and aquatic habitat. Review and update comprehensive land use plan in response to final 4(d) Rule.	No change	$300,000 to complete Stormwater Management Plan, $20,000 to review and update land use plan, regulations and policies in accordance with final 4(d) Rule.
Management Zones: one-time cost for definition of management zones (stream buffers) and revision of City ordinances. On-going enforcement of existing management zones	0.25 FTE	$20,000 update ordinances and map management zones, $15,000 update Shoreline Management regulations pursuant to final 4(d) rule, 0.25 new FTE

Biological Evaluation: performed for federally funded projects under Section 7 of ESA.	No change	Costs recovered via permit fees.
Improve drainage technical standards: update drainage manual. Work with developers to experiment with low impact development	0.2 FTE	Requires 400 hours of time from staff to update technical manual. Staff cost merged with other items including regulatory-inspection. 0.2 FTE for on-going implementation of low-impact development standards.
Develop comprehensive stormwater program plan including individual basin plans to address water quality, water quantity and aquatic habitat. Continue staff participation in regional planning efforts. Contribute financial support to regional planning effort.	0.5 FTE	Comprehensive plan costs included under Comprehensive Plan item. 0.5 FTE for staff participation in regional planning activities. Estimate $20,000 share for Shoreline to support annual WRIA planning efforts.

Transportation

Future Program	Future FTEs	Fiscal Impact
CIP: mitigation requirements will be increased for new road projects. Identify opportunities for watershed based mitigation for capital projects through basin plan process. Projects are likely to be delayed by increased permit review actions of Federal agencies.	No change	Cost of new construction will increase due to increased mitigation requirements and permitting delays. Costs will be incorporated in budgets for individual projects. Consolidated, watershed-based mitigation offers the potential to reduce mitigation costs and provide increased net benefits citywide.
Road maintenance: implement minimum requirements in 4(d) Rule following Oregon Department of Transportation (ODOT) standard of practice	FTE requirements due to ESA cannot be estimated at this time.	Uncertain, will increase costs

Solid Waste

Future Program	Future FTEs	Fiscal Impact
Expand opportunities for hazardous waste collection and recycling. Expand opportunities for re-using yard wastes for composting and soil amendments. Amend stormwater regulations to require high organic content topsoils.	0.5 FTE	0.5 FTE and shift funding from grants to permanent City funding.

RECOMMENDATION

There is no Council action required at this time. This report is provided for your information only.

ATTACHMENTS

A. Comparison of Regulatory Requirements
B. Responses to Benchmarking Survey of Stormwater Services
C. City of Shoreline Program Implications for a Cautiously Proactive ESA Response Strategy
D. Excerpt from May 15 2000 Staff Report, ESA Strategy, Attachment B, ESA Implications, and Federal and State Requirements for Municipal Stormwater Program

ATTACHMENT A

ATTACHMENT A: Comparison of Regulatory Requirements

Program/Service	Description of Requirement[5]				
	Puget Sound Water Quality Management Plan PSWOMP [1]	NPDES Phase 2 Municipal Stormwater Permits [2]	Draft Tri-County ESA 4d Rule [3]	Final ESA 4(d) Rule OR, WA [4]	City of Shoreline
1) Management Zones (buffers)	Local SWM ordinances must protect streams, aquatic habitat and wetlands		Within 2 years of the anniversary date of the final 4(d) rule for the Puget Sound, cities and counties need to have enacted ordinances implementing management zones (i.e. buffers), including the definition of development (p.10). (note that appropriate setbacks for urban areas still under discussion	"(C)…adequately protective riparian area management requirements to attain or maintain PFC [properly functioning conditions] around all rivers, estuaries, streams, lakes, deepwater habitats, and intermittent streams. Compensatory mitigation is provided, where necessary, to offset unavoidable damage to Properly Functioning Conditions (PFC)…" "(E)…protects historical stream meander patterns and channel migration zones and avoids hardening of stream banks and shorelines." (p. 42480)	Current: Adopted the King County Environmentally Sensitive Areas Ordinance in place when the City incorporated in 1995. In the process of adopting Phase II of Shoreline Development Code, which will revise buffer widths and change stream and wetland classifications to be consistent with DNR and DOE. To do: Inventory resources (i.e. identify and classify streams) Compare critical areas ordinance to Tri-County 4d requirements, i.e. buffers, management zones, and prohibitions.

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Program/Service	Description of Requirement[5]				
	Puget Sound Water Quality Management Plan PSWQMP [1]	NPDES Phase 2 Municipal Stormwater Permits [2]	Draft Tri-County ESA 4d Rule [3]	Final ESA 4(d) Rule OR, WA [4]	City of Shoreline
2) Intake Fish Screens				**"(J)...ensures that water supply demands can be met without impacting flows needed for threatened salmonids either directly or through groundwater withdrawals and that any new water diversions are positioned and screened in a way that prevents injury or death of salmonids" (p. 42480)**	**Not applicable**

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Program/Service	Description of Requirement[5]				
	Puget Sound Water Quality Management Plan PSWQMP[1]	NPDES Phase 2 Municipal Stormwater Permits[2]	Draft Tri-County ESA 4d Rule[3]	Final ESA 4(d) Rule OR, WA[4]	City of Shoreline
3) Improved Technical Standards for Stormwater Discharges and Water Quality	Ordinances are required for all new development and redevelopment which address control of off-site water quality, the use of source control BMPs, the effective treatment of the water quality design storm, the use of infiltration where appropriate, the protection of stream channels and wetlands, and erosion and sediment control. The adoption of DOE's technical manual or a substantially equivalent manual is required.	Operators of regulated small municipal stormwater systems are required to design their programs to reduce the discharge of pollutants to the max. extent possible, protect water quality, and satisfy the appropriate water quality requirements of the CWA.	Tri-County jurisdictions will adopt storm water standards & programs equivalent to or better than the revised DOE manual (p. 18) Jurisdictions will ensure that developers are encouraged to experiment with innovative construction and development techniques that reduce stormwater runoff, & that development that reduces effective impervious Surfaces & enhances retention of native vegetation is promoted (p. 21)	(B) "....adequately avoids stormwater discharge impacts to water quality and quantity or to the hydrograph of the watershed, including peak and base flows of perennial streams." "G) preserves the hydrologic capacity of permanent and intermittent streams to pass peak flows." "(L)...complies with all other state and Federal environmental and natural resource laws and permits. (p. 42480)	Current: Adopted King County Surface Water Manual (1992). In the process of adopting KCSWM (1998) including an addendum to modify for City needs, and adopting Department of Ecology's Urban Land Use BMPs Volume IV, and future amendments by reference as the Source Control BMP Manual for the City of Shoreline. To do: Determine if KCSWM meets minimum requirements of DOE manual. Revise Development Code to include incentives to encourage experimentation with innovative construction and development techniques.

Program/Service	Description of Requirement[5]				
	Puget Sound Water Quality Management Plan PSWQMP[1]	NPDES Phase 2 Municipal Stormwater Permits[2]	Draft Tri-County ESA 4d Rule[3]	Final ESA 4(d) Rule OR, WA[4]	City of Shoreline
4) Source Control of Runoff Pollution	Source control BMPs shall be applied to all projects to the max. extent possible (p. A-9)	Post construction site controls required: appropriate enforcement must be implemented. Construction Site Source Controls: Developing, implementing, and enforcing an erosion and sediment control program to address discharges of post-construction stormwater runoff for construction activities that disturb 1 or more acres of land are required.	Source control standards will be adopted by the jurisdictions that will reduce runoff pollution. (p. 20)	(B) "....adequately avoids stormwater discharge impacts to water quality and quantity or to the hydrograph of the watershed, including peak and base flows of perennial streams." "(H)...adequate provisions for landscaping with native vegetation to reduce need for watering and application of herbicides, pesticides, and fertilizer. (I)...prevent erosion and sediment run-off during construction." (p. 42480)	Current City reviews new construction activities but has no program for existing land uses. To do Develop regulations to require source controls from existing industrial and commercial development Develop inspection program for existing commercial and industrial sites. Expand educational program to include visits to individual existing commercial and industrial sites.

Program/Service	Description of Requirement[5]				
	Puget Sound Water Quality Management Plan PSWQMP [1]	NPDES Phase 2 Municipal Stormwater Permits [2]	Draft Tri-County ESA 4d Rule [3]	Final ESA 4(d) Rule OR, WA [4]	City of Shoreline
5) Inspection and Enforcement	**Inspection, compliance, and enforcement measures are required for urbanized areas (p. 29)** **Each county and city shall develop and enforce within local governments' authority, operation and maintenance programs and ordinances for new and existing public and private stormwater systems (p.20)**	**The NPDES permit that the operator of a small municipal separate storm sewer system is required to obtain is federally enforceable. The permittee could be subject to potential enforcement actions and penalties.** **Must enforce:** – Illicit discharge prohibition – Const. site and post-construction site BMPs	**Local jurisdictions have the authority to regulate stormwater pursuant to their general police power authority (p. 19)**	**(K) "…development ordinance or plan provides necessary enforcement, funding, reporting, and implementation mechanisms and formal plan evaluations at intervals that do not exceed 5 years." (p. 42480)** **(ii) The City… provides NMFS with annual reports regarding implementation and effectiveness of the ordinances, including: any water quality monitoring information the jurisdiction has available; aerial photography (or some other graphic display) of each MRCI development or MRCI expansion area…" (p. 42480)**	**Current:** **Adopted King County Surface Water Manual (1992). Appendix A addresses maintenance requirements for privately owned drainage facilities.** **Drainage facility maintenance program includes annual inspection of privately owned facilities. Program also includes annual inspection and maintenance of public retention systems, and scheduled vactoring of public conveyance systems.** **To do:** **Develop codes and procedures for enforcing standards of private retention systems**

Program/Service	Description of Requirement[5]				
	Puget Sound Water Quality Management Plan PSWOMP [1]	NPDES Phase 2 Municipal Stormwater Permits [2]	Draft Tri-County ESA 4d Rule [3]	Final ESA 4(d) Rule OR, WA [4]	City of Shoreline
6) Public Education	Public education programs are required for residents, businesses and industries. Proper management and disposal of pesticides, herbicides, fertilizers and oil. Training construction contractors in ESC Explain illicit connections to individual property owners	Public education programs required	Jurisdictions will implement programs to educate their citizens have on water quality, stormwater runoff and protection of endangered species (p.21)		Current: The City has funded public education programs in the past but the grant funding and the program has expired. To do: Public education will be required by regulations.
7) Public Involvement		Public must be involved in developing local SWM program	Jurisdictions will implement programs to ensure public involvement in the jurisdiction's decision making process involving stormwater management programs and priorities.		Current: Public involvement is included in annual budget review process. Future: Same as current plus additional public involvement as various plans are prepared and recommended for council approval.

Program/Service	Description of Requirement[5]				
	Puget Sound Water Quality Management Plan PSWQMP[1]	NPDES Phase 2 Municipal Stormwater Permits[2]	Draft Tri-County ESA 4d Rule[3]	Final ESA 4(d) Rule OR, WA[4]	City of Shoreline
8) Elimination of Illicit Discharges	Education programs are required to educate citizens about stormwater and its effects on water quality, flooding, and fish/wildlife habitat, and to discourage illicit dumping into storm drains. All pollutants other than sediment that occur on-site during construction shall be handled & disposed properly Investigate sources of pollutants Eliminate illicit connections Respond to spills (p. A-8)	Developing and implementing a plan to detect and eliminate illicit discharges to the storm sewer system is required. Must develop a map of receiving waters and outfalls Must prohibit discharges of pollutants	Jurisdictions must have or participate in a program for preventing, detecting, and removing illicit discharges from industrial, commercial, and residential sites. (p. 21)	(B) "....adequately avoids stormwater discharge impacts to water quality and quantity or to the hydrograph of the watershed, including peak and base flows of perennial streams." (p. 42480) (L)...complies with all other state and Federal environmental and natural resource laws and permits. (p. 42480)	Current: The City investigates illicit discharges identified by customer reports and by routine City field operations. To do: Adopt ordinance to prohibit discharge of pollutants to City's system. Implement a program to systematically identify and remove illicit connections to the City's storm drain system.

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Program/Service	Description of Requirement[5]				
	Puget Sound Water Quality Management Plan PSWQMP [1]	NPDES Phase 2 Municipal Stormwater Permits [2]	Draft Tri-County ESA 4d Rule [3]	Final ESA 4(d) Rule OR, WA [4]	City of Shoreline
9) Intergovern-mental Coordination	Taking cooperative actions in watersheds shared by other jurisdictions for urbanized areas is required (p. 25) Each local jurisdiction in the Puget Sound Basin is expected to coordinate with neighboring jurisdictions in stormwater growth management and basin planning (p. 22)	Public participation is required in developing the municipality's stormwater program.	Jurisdictions shall have a program or policy directive for ensuring that adequate inter-jurisdictional agreements exist for controlling storm water runoff conveyed between jurisdictions & for coordinating of watershed planning efforts & activities (p. 21)	(i) …development occurs pursuant to city, county, or regional government ordinances or plans that NMFS has determined are adequately protective of listed species…NMFS approval or determinations about any MRCI development ordinances or plans, … shall be a written approval…" (p. 42480)	Current: City participates in Regional Water Quality, King County Interagency Regional Analysis, Regional Funding Advisory Committees, Cedar/Lake WA and Central Puget Sound Watershed Forums, WRIA 8 Steering Committee, Thornton Creek Watershed Management Committee. Involved public in current code revision of stormwater program. To do: Identify regional stormwater facilities. Use watershed approach on projects.

Program/Service	Description of Requirement[5]				
	Puget Sound Water Quality Management Plan PSWQMP [1]	NPDES Phase 2 Municipal Stormwater Permits [2]	Draft Tri-County ESA 4d Rule [3]	Final ESA 4(d) Rule OR, WA [4]	City of Shoreline
10) Monitoring	**Measures to assess program effectiveness required**	**Measures to assess program effectiveness required, monitoring requirements to be determined by State.** **Local govt. must evaluate:** – program compliance – appropriateness of BMPs – progress toward goals	**Must have or participate in a program for monitoring implementation and gathering maintaining and using adequate information to conduct planning, priority setting and program evaluation activities (p. 22).**	**(ii) :The City… provides NMFS with annual reports regarding implementation and effectiveness of the ordinances, including: any water quality monitoring information the jurisdiction has available; aerial photography (or some other graphic display) of each MRCI development or MRCI expansion area…" (p. 42480).**	**Current:** **The City does not presently monitor water quality or habitat in a systematic way.** **Future to do:** **Investigate options for assessing effectiveness of program including shared funding of monitoring with other jurisdictions.** **Implement appropriate monitoring program for rainfall, streamflow, and water quality and habitat condition.**

Program/Service	Description of Requirement[5]				
	Puget Sound Water Quality Management Plan PSWQMP [1]	NPDES Phase 2 Municipal Stormwater Permits [2]	Draft Tri-County ESA 4d Rule [3]	Final ESA 4(d) Rule OR, WA [4]	City of Shoreline
11) Consideration of Ecosystem Impacts in Zoning/Land Use Decisions	The goals of the local stormwater program shall be incorporated into the goals of the comprehensive plan and incorporate the ordinances required by the element into the development regulations (p. 22) Development of local government stormwater management programs should include compliance with chapter 43.21C RCW, the State Environmental Policy Act; and Chapter 34.05 RCW the Administrative Procedures Act (p. 33)		During the first 2 years of phase I, cities and counties will analyze their existing comprehensive planning policies and plans as required by the state Growth Management Act (p. 10) Jurisdictions shall use best available science and adaptive management to continue to evaluate development regulations and permit programs that may jeopardize the continued existence of listed salmon, adversely modify their critical habitat or both. Improvement could potentially be made to SEPA procedures (p. 17). Jurisdictions will ensure that impacts are assessed when land use decisions are made (p. 21) Experiment with innovative construction and development techniques that reduce impervious areas and retain native vegetation. P. 22	(i) …development occurs pursuant to city, county, or regional government ordinances or plans that NMFS has determined are adequately protective of listed species…NMFS approval or determinations about any MRCI development ordinances or plans, … shall be a written approval…" (p. 42480)	Current: There are policies in Shoreline Comprehensive Plan related to siting of new development in areas that are environmentally suitable. To do: Adjustment of zoning based on land suitability (drainage, soils) using watershed basin planning techniques. Revise SEPA policies.

Program/Service	Description of Requirement[5]				
	Puget Sound Water Quality Management Plan PSWQMP [1]	NPDES Phase 2 Municipal Stormwater Permits [2]	Draft Tri-County ESA 4d Rule [3]	Final ESA 4(d) Rule OR, WA [4]	City of Shoreline
12) Surface Water Maintenance Standards	Each county and city shall develop and enforce within the local governments' authority, operation and maintenance programs and ordinances for new and existing public and private stormwater systems (p.20)	Developing and implementing a program with the goal of preventing or reducing pollutant runoff from municipal operations is required. Must assure that private SWM facilities are maintained.	Jurisdictions must have maintenance standards & programs for ensuring proper and timely maintenance of public and private stormwater facilities (p. 22)		Current: Adopted King County Surface Water Manual (1992). Appendix A addresses operations and maintenance. Drainage facility maintenance program includes annual inspection of privately owned facilities. Program also includes annual inspection and maintenance of public retention systems, and scheduled vactoring of public conveyance systems. King County Roads is maintaining stormwater facilities. To do: Provide staff training. Evaluate County maintenance standards. Determine if KCSWM is consistent with DOEs manual.

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Program/Service	Description of Requirement[5]				
	Puget Sound Water Quality Management Plan PSWQMP[1]	NPDES Phase 2 Municipal Stormwater Permits[2]	Draft Tri-County ESA 4d Rule[3]	Final ESA 4(d) Rule OR, WA[4]	City of Shoreline
13) Shorelines Management Program updates			During phase I, cities and counties will review their shoreline master program and make changes to conform with NMFS-approved State shoreline regulations (p. 11)		Current: Adopted King County Shorelines Management regulations and have adopted new policies related to shoreline management. To do: Revise and adopt a Shoreline Management Program that is consistent with the City's Comprehensive Plan and compliant with state requirements.
14) Integrated Pest Management regulations				"vii) NMFS finds the Portland Parks and Recreation Pest Management Program activities to be consistent with the conservation of listed salmonids' habitat ..." (p. 42479) Note: the rule does not describe a method for other jurisdictions to use the Portland guidance.	Current: City staff is using King County Integrated Best Management Plan and requiring contractors as well.

Program/Service	Description of Requirement[5]				
	Puget Sound Water Quality Management Plan PSWQMP [1]	NPDES Phase 2 Municipal Stormwater Permits [2]	Draft Tri-County ESA 4d Rule [3]	Final ESA 4(d) Rule OR, WA [4]	City of Shoreline
15) Road Maintenance BMPs		**Developing and implementing a program with the goal of preventing or reducing pollutant runoff from municipal operations is required. The program must include municipal staff training on pollution prevention measures and techniques (e.g. regular street sweeping)**	**Road maintenance BMPs will be part of the early action program (p. 9)** **In the first 2-yrs beginning on the effective date of the final 4(d) rule for the Puget Sound, the Early Action Program will require development of road maintenance standards (p. 6)**	**Take prohibitions do not apply to routine road maintenance work "(i)…that complies with a program substantially similar to that contained in the ODOT Guide…NMFS approval of state, city, county, or port programs that are equivalent to the ODOT program, or of any amendments, shall be a written approval by NMFS…" (p. 42479).**	**Current:** **City contracts with King County for road maintenance.**

Program/Service	Description of Requirement[5]				
	Puget Sound Water Quality Management Plan PSWQMP [1]	NPDES Phase 2 Municipal Stormwater Permits [2]	Draft Tri-County ESA 4d Rule [3]	Final ESA 4(d) Rule OR, WA [4]	City of Shoreline
16) Critical Areas Protection	Requirements in wetland areas and water quality sensitive areas (p. A-10 –11)	Developing, implementing and enforcing a program to address discharges of post construction sw runoff. Applicable controls could include preventive actions such as protecting sensitive areas (e.g. wetlands).	Within 2 years of the anniversary date of the final 4(d) rule for the Puget Sound, cities and counties need to have enacted ordinances implementing management zones (i.e. buffers adjacent to streams, lakes, wetlands, and marine shorelines) (p.12)	"(A)… development ordinance or plan ensures that development will avoid inappropriate areas such as unstable slopes, wetlands, areas of high habitat value, and similarly constrained sites. …(D)…ordinance or plan avoids stream crossing by roads, utilities, and other linear development… (E)… ordinance or plan adequately protects historical stream meander patterns and channel migration zones and avoids hardening of stream banks and shorelines. (F)… adequately protects wetlands and wetland functions, including isolated wetlands." (p. 42480)	Current: Adopted the King County Environmentally Sensitive Areas Ordinance in place when the City incorporated in 1995. In the process of adopting Phase II of Shoreline Development Code, which will revise buffer widths and change stream and wetland classifications to be consistent with DNR and DOE. To do: Compare critical areas ordinance to Tri-County 4d requirements, i.e. buffers, management zones, and prohibitions. Inventory aquatic resources. Identify and classify streams and wetlands

Program/Service	Description of Requirement[5]				
	Puget Sound Water Quality Management Plan PSWQMP [1]	NPDES Phase 2 Municipal Stormwater Permits [2]	Draft Tri-County ESA 4d Rule [3]	Final ESA 4(d) Rule OR, WA [4]	City of Shoreline
17) Implement projects to restore habitat and water quality	Develop a schedule for retrofitting existing system for compliance with water quality treatment requirements and implement improvements.		In the first 2-yrs beginning on the effective date of the final 4(d) rule for the Puget Sound, the Early Action Program will include commitments to habitat acquisition and restoration (p. 6) Jurisdictions shall have or participate in a program for constructing habitat enhancements and ensuring their long-term viability & protection through formal stewardship (p. 22). Commit to implementing WRIA plan recommendations (p. 46).	State, local, and private habitat restoration activities are exempt from take prohibitions if they are conducted in accordance with watershed conservation plans certified by the state and pursuant to planning guidelines to be approved by NMFS (p. 42478)	Current: The Capital Improvement Plan includes an annual $25k budget for identifying stream restoration and habitat enhancement projects. To do: Identify projects and incorporate into CIP.
18) Adaptive Management			Must have a formalized process to monitor progress and modify actions as appropriate including policies, procedures, programs and projects (p. 37-43).	"(K) …development ordinance or plan provides necessary enforcement, funding, reporting, and implementation mechanisms and formal plan evaluations at intervals that do not exceed 5 years." (p. 42480)	Current Although all city programs are periodically reviewed during the annual budget process. To do The 4(d) rule would require a more formal monitoring and review process.

Program/Service	Description of Requirement[5]				
	Puget Sound Water Quality Management Plan PSWQMP [1]	NPDES Phase 2 Municipal Stormwater Permits [2]	Draft Tri-County ESA 4d Rule [3]	Final ESA 4(d) Rule OR, WA [4]	City of Shoreline
19) Comprehensive Stormwater Program	A comprehensive stormwater program was required to be in place by June of 1999. Elements: Ordinances containing min. req. for new development and redevelopment; Operation & maintenance programs & ordinances; Technical manual containing source control and treatment BMPs; Education programs; Growth management planning & interlocal coord.; Implementation schedule; Id & ranking of significant water pollution sources; Investigation & correction of problem storm drains; Inspection, compliance & enforcement measures; Water quality response program; Adequate funding, and local coord. Agreements.	At a minimum: Specify BMPs for the following control measures & implement them to the max. extent possible: public education & outreach, public involvement & participation, illicit discharge detection & elimination, construction site stormwater runoff control, post construction stormwater management in new development & redevelopment, and pollution prevention/good housekeeping. Id measurable goals for control measures. Show an implementation schedule. Evaluate & assess effectiveness of program.			Current: City adopted King County Drainage Manual, a Development Guidelines Manual and many other required program elements. To do: Currently in the process of evaluating program with respect to regulatory requirements. Prepare a comprehensive surface water plan to address water quantity, water quality and aquatic habitat and demonstrate compliance with various regulations.

The information in the table was obtained from the following sources:

[1] Washington State Department of Ecology, Stormwater Program Guidance Manual for the Puget Sound Basin, (July 1992)

[2] various sources from the Environmental Protection Agency web site
[3]Draft Proposed Tri County 4(d) Rule Framework, January 21, 2000
[4] Federal Register, Department of Commerce, 50CFR Part 223, July 10, 2000
TMDL and DNR requirements are uncertain at this time.

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ATTACHMENT B

ATTACHMENT B: Responses to Benchmarking Survey of Stormwater Services

Issues	Shoreline	Bellevue	Edmonds	Everett	Kent	Lynnwood	Olympia
Stormwater utility rate per ERU	$65.02 per year ($7.09/month)	Based on size and development intensity	$3.70 per ERU/month, 40% rate increase proposed for 2001 (ERU = Equivalent Residential Unit)	Sewer utility surcharge, $3.70/month	$2.44/dwelling + basin charge from $0.06/ESU to $8/ESU (ESU = Ecologically Significant Unit)	$2.5/ERU	$8/month
Total SWM budget (year 200) and # of FTEs	$676,798 operations, and $2,773,157 CIP. 1 FTE, plus % of 9 positions funded by SWM budget, equivalent to 2.85 FTE.	$6,000,000. 45 FTE	$1,533,000. 8 FTE	$2,000,000. 6 FTE	$2,651,410. 24 FTE	$1,215,787. 3 FTE	$2,500,000. 7 FTE
Do you have an adopted SWM Comprehensive Plan	No	Yes	Yes	No	Yes	Yes, twice	Yes
Drainage basin plans completed	No program yet. The Capital Improvement Program (2000-2005) includes engineering studies for sub-basins with identified flooding problems.	1976 study	Proposed for next year	Yes	Yes	Yes, included in SWM Comp plan	Yes
Watershed plans w/ other jurisdictions	Participate in Lake WA, and Central Puget Sound Watershed Forums, WRIA 8 Steering Committee, ILA Customization Committee, and Thornton Creek Watershed Management Plan	Yes	Yes	Yes	Yes	Yes	Yes
Budget for capital projects. FTEs for CIP	$638,000 (2000 budget) small projects. Total CIP budget (2000-2005) is $9 million.	$11,662,000/6 years. Less than one FTE	$686,000	$720,000	no response	$ varies. Same 3 FTEs	$700,000/yr. 1 FTE
Budget for stormwater maintenance	$533,000/year - includes maintenance service contracts.	$1.5 million/year	$716,530	40% of budget	$1,600,000	Over 50% of budget	$120,000/yr.
Does SWM budget pay for street sweeping? Budget for street sweeping, FTE	SWM funds pays 40% of total ($140k) street sweeping. 1.5 FTE total - stormwater maintenance.	$0/No FTEs	Yes/1 FTE	Street department	Yes/9 FTE	Portion paid for by stormwater utility	No/None
Does the City maintain private facilities	No	No	No	No	No	No	Major periodic maintenance performed only on newer residential facilities
Does the City inspect private facilities	Yes, annually	Yes. Once every two years	Yes, annually	Yes, annually	Yes	When time and staff allows	Yes, annually
Budget for public education	No permanent program.	$100,000/year. 1.5 FTE	$1,000/year	5% of budget	no response	$10,000/yr	$100,000. 1 FTE, 1 intern
Public education activities covered	Activities: Educate commercial drainage facility owners through inspection process. Recycling guide $11,000, business (recycling and hazardous waste management) outreach program $9,883, and beach naturalist program $15,000, are grant funded, and not part of a permanent budgeted program.	Stream team and partners program	Student Projects (Earth Day)	School presentations, subsidizing school supplies, citizen involvement, stream clean-ups, distribution, CB stencil, signs.	no response	Stormwater grants to schools, publish articles in City newsletter,	Day camps, Stream Team, general water resources education
Budget for monitoring stream flow, water quality	None	0.1 FTE	None	5% of budget	no response	no response	$20,000
Type of monitoring	None	Minimal water quality	None	Stormwater, baseflow and benthic invertebrates	In-stream for temp, pH, turbidity, nutrient levels, etc.	Interns sample water quality, some schools also	Stream flows, integrated stream habitat surveys
Mapped fish habitat	Fish habitat mapping is scheduled for this year.	Just started	Discussed in basin studies	Only in general sense	Yes	Yes, included in Comp Plan	No
Monitor habitat annually	No annual habitat monitoring program has been budgeted.	Yes, for the last 3 years	No	No	Yes	No, time and staff constraints	Volunteers most areas regularly
Program for illicit connections	No	Yes	No	Yes	Yes	No	No
Details of illicit connections program	Respond to complaints and as they are discovered	Aggressive inspection during construction but no storm drain sampling.	Respond on complaint basis	Inspect businesses	Annual inspection program	Respond to complaints and as they are discovered	A few special surveys in downtown area to find, correct
Program for source control	No budgeted program	Yes	Yes	Yes	Yes	Yes	Yes
Details of source control program	Use Dept. of Ecology's Urban Land Use BMPs Volume IV, and future amendments by reference as the Source Control BMP Manual.	0.5 FTE, part of private maint. inspect program, more aggressively look for in future.	Through public education efforts	Through industrial pre-treatment program	NPDES Process	ID illegal discharges, targeting automotive related businesses (discharge to sanitary sewer)	Included in stormwater facility maintenance agreements for new developments.
Program for habitat acquisition and enhancement	Yes	Council approved approach with respect to ESA	No	Yes	Yes	No	No
Budget, details of habitat acquisition and enhancement program	Capital Improvement Program (2000-2005) includes $25,000 per year budget for stream rehabilitation and habitat enhancement.	no response	no response	$50,000 through capital project budget, retrofit culverts for fish passage.	Depends on size of project, wherever there is a need based on City's master plan	Have acquired many parcels. Contract out for replanting work.	Maybe capital monies in future, some $ spent to fix fish passage.
FTEs who inspect and enforce erosion control	0.3 FTE	Not in SWM utility, 3 full time clearing and grading inspectors	0.17 FTE	Outside of SWM program	5 FTE	2 private development inspectors, 4 capital facilities project inspectors	1 FTE
FTEs who inspect and enforce stream buffers	0.2 FTE included in private development inspectors duties.	Only inspect when a permit to construct has been issued	None	Outside of SWM program	Same 5 FTE	2 private development inspectors, 4 capital facilities project inspectors	None
FTEs who inspect construction	2 FTE private development inspectors.	Building, clearing, grading, right-of-way and utility inspectors	0.67 FTE	Outside of SWM program	Same 5 FTE	no response	1 FTE, same as erosion control
Adopted drainage ord. equivalent to Ecology	No	Yes, since 1974	Yes, in March of 1995	Yes	Yes	No, but will before end of year	Yes

ATTACHMENT C

Attachment C: City of Shoreline Program Implications for a Median ESA Response Strategy

Administration	Current Program	Current FTEs	Future Program	Future FTEs	Fiscal Impact	Cross Reference to Regulatory Requirements in Table 1
Program Management	Administration is funded through utilities and current expense funds	Portions of Operations Manager, SWM Coordinator and several admin support staff	Incidental increases in program manag	A proportional increase in admin staff for increases in overall program	7% - 15% of increased program costs	n/a

Regulatory	Current Program	Current FTEs	Future Program	Future FTEs	Fiscal Impact	Xref
Inspection and enforcement	Plat inspection. Includes source control, erosion control, and plat inspection. Adequate for existing activities.	0.5 FTE for plat, erosion control, sensitive area inspection and code enforcement.	Expand plat inspection and enforcement program to provide additional erosion control and sensitive area protection.	1 additional FTE	1 FTE plus expenses	5) Inspection and enforcement
Source Control	Source control for new development included in erosion control, and plat inspection.	FTE requirements merged with other items	Develop source control program for existing properties	0.4 new FTE	0.4 FTE plus expenses	4) Source control and 5) Inspection and enforcement
Monitoring	None	No current stormwater FTEs	Expand monitoring to address water quality, rainfall and runoff and aquatic habitat	0.5 new FTE	0.5 FTE plus expenses	10) Monitoring and 16) Adaptive Management
Permitting	Grading and drainage review	0.5 FTE	No LOS change	No new FTEs	$20,000 one time code review and update of land use regulations pursuant to final 4(d) Rule	11) Consideration of Exosystem Impacts in - Zoning/Land Use Decisions. Also see other related items
Illicit Connections	None	None	Create program for detection, education and enforcement	0.1 new FTE for enforcement; detection	0.1 new FTE. $50,000 one time cost for illicit connection survey.	8) Elimination of Illicit Discharges

Capital	Current Program	Current FTEs	Future Program	Future FTEs	Fiscal Impact	Xref
Retrofit stormwater system for water quality treatment	None	None	Needs and cost unknown. Include line item in annual budget. Will be defined in basin plans or city-wide stormwater plan	0.5 FTE to manage projects	Budget $250,000/per year for retrofitting system for water quality treatment.	17) Implement Projects to restore habitat and water quality
Habitat acquisition and enhancement	$25,000/year	Existing FTE requirements merged with other items	Needs and cost unknown. Include line item in annual budget. Will be defined in basin plans and WRIA plans.	0.5 FTE to manage projects	Budget $200,000/per year for habitat acquisition and enhancement, to include fish barrier removal.	17) Implement Projects to restore habitat and water quality

Operations and Maintenance	Current Program	Current FTEs	Future	Future FTE	Fiscal Impact	Xref
Operations	Program of regular maintenance for city owned systems. All private facilities inspected annually. Maintenance for City systems performed by King County. Transitioning from King County to City for maintenance. Adding City staff for this purpose.	1 FTE Supervisor + 5 FTE crew per Roads 3 year plan.	Develop codes and procedures for enforcing standards of private retention systems.	0.5 FTE	Anticipate increased costs pursant to final 4(d) BMP requirements.	12) Surface water maintenance standards
Emergency Response	Handled by Fire Department	None, handled by Fire Department	Develop spill response capability in Public Works	No new FTEs	$15,000 one - time cost to develop plan, procedures and training. $5,000/yr equipment and supplies, staff education.	8) Elimination of Illicit Discharges

Public Involvement	Current Program	Current FTEs	Future Program	Future FTEs	Fiscal Impact	Xref
Education	City has used grant funding to pay for education programs but grants have expired.	No stormwater FTEs	Expand education and volunteer programs.	0.5 new stormwater FTE	0.5 FTE plus $10K/year materials.	16) Critical Areas Protection
Public Involvement	Provided during annual budget process and as part of individual projects	None	Expand public involvement for program planning	0.3 new FTE	0.3 FTE plus $10K/year materials	7) Public Involvement
Volunteer Activities	Minimal	None	Expand volunteer programs	0.2 new FTE	0.2 FTE plus $10K/year materials	7) Public Involvement

Parks	Current Program	Current FTEs	Future Program	Future FTEs	Fiscal Impact	Xref
Park planning, development and maintenance	Planning and development of parks handled independently. Maintenance uses integrated pest management policy.	No stormwater FTEs	Incorporate park and open space planning and development opportunities in Stormwater comprehensive plan and for mitigation of impacts to aquatic resources from transportation or other City capital projects.	No new FTEs	Update Paks plan and maintenance procedures pursuant to final 4(d). Costs would be included in Comprehensive SWM Plan development. May result in reduced overall program costs or increased value for City.	14) Integrated Pest Management. 16) Critical Areas Protection

Attachment C (Continued): City of Shoreline Program Implications for a Median ESA Response Strategy

Planning	Current Program	Current FTEs	Future Program	Future FTEs	Fiscal Impact	X-Ref
Inventories of drainage system and aquatic resources	Partial inventory available	No FTEs	Complete inventory and condition assessment of drainage system and aquatic habitat.	No new FTEs	$90,000 one time cost to inventory drainage system and develop condition assessment. $75,000 one time cost to inventory and map aquatic habitat and develop condition assessment.	16) Critical Areas Protection. 8) Elimination of Illicit Discharges (NPDES stormwater permits)
Comprehensive Planning	Comprehensive Stormwater Program Plan has not been completed. A strategic plan was completed the first year the City was created and the City has developed and implemented a CIP primarily to address high priority drainage projects. The City has completed a comprehensive land use plan.	0.1 FTE	Complete comprehensive stormwater plan, update comprehensive land use plan.	No new FTEs	$300,000 to complete Stormwater Management Plan, $20,000 to review and update land use plan, regulations and policies.	3) Improved Technical Standards for Stormwater. 9) Intergovernmental Coordination
Management Zones	City adopted King County critical area ordinance and policy	None	One-time cost for definition of management zones and revision of City ordinances. On-going enforcement of existing management zones	0.25 new FTE	$20,000 update ordinances and map management zones, $15,000 update Shoreline Management regulations pursuant to final 4(d) rule, 0.25 new FTE	1) Management Zones. 13) Shorelines Management Program updates. 18) Critical Areas Protection
Biological Evaluation	Performed on projects using federal funding. If private project, City review funded by permit fees. If City project, cost merged with capital project cost.	Merged with other items	No policy change	No new FTEs	Pass through cost recovered via permit fees. Capital cost increases recorded separately. $15k/yr. for on-call biological services for city projects and development review.	Section 7 of ESA
Improved Technical Standards	Adopted King County stormwater manual, in process of updating manual	0.1 FTE	Update drainage manual. Experiment with low impact development	0.2 FTE	Requires 400 hours of time from staff. Staff cost merged with other items: Regulatory-Inpsection and Administration/Oversight. 0.2 FTE for on-going implementation of low-impact development standards.	3) Improved Technical Standards for Stormwater
Basin Planning	City participates in Regional Water Quality, King County Interagency Regional Analysis, Regional Funding Advisory Committees, Cedar/Lake WA and Central Puget Sound Watershed Forums, WRIA 8 Steering Committee, Thornton Creek Watershed Management Committee. Staff cannot keep up with regional meetings.	Small portions of several FTEs	Develop comprehensive stormwater program plan including individual basin plans to address water quality, water quantity and aquatic habitat. Continue staff participation in regional planning efforts. Contribute financial support to regional planning effort.	0.5 FTEs	Comprehensive plan costs included under Comprehensive Plan item. 0.5 FTE for staff participation in regional planning activities. Estimate $20,000 share for Shoreline to support annual WRIA planning efforts.	9) Intergovernmental Coordination

Transportation	Current Program	Current FTEs	Future Program	Future FTEs	Fiscal Impact	X-Ref
Road CIP	6 year and annual CIP	1.5 FTE	Identify opportunities for watershed based mitigation through basin plan process	No new FTEs	Cost of new construction will increase and will be incorporated in budgets for individual projects. Consolidated, watershed-based mitigation offers the potential to reduce mitigation costs and provide increased net benefits city-wide.	
Road Maintenance	Contract with King County. City is in the process of assuming maintenance responsibilities from King County and adding staff for this purpose.	4 FTEs plus King County contract.	Implement 4d Rule 8 minimum requirements	FTE requirements due to ESA cannot be estimated at this time.	Uncertain, will increase costs	15) Road Maintenance BMPs

Solid Waste	Current Program	Current FTEs	Future Program	Future FTEs	Fiscal Impact	X-Ref
Hazardous waste and recyclable materials	Solid waste pick-up is handled by private hauler. County owns and operates transfer station. Existing hazardous materials and recycling programs are grant funded.	0.5 FTE for administration of contracts and grant activities.	Expand opportunities for hazardous waste collection and recycling. Expand opportunities for re-using yard wastes for composting and soil amendments. Amend stormwater regulations to require high organic content topsoils.	0.5 FTE	0.5 FTE and shift funding from grants to permanent City funding.	3) Improved Technical Standards for Stormwater Discharges and Water Quality 4) Source Control of Runoff Pollution 8) Elimination of Illicit Discharges

ATTACHMENT D

Excerpt from May 15 Staff Report, ESA Strategy, Attachment B.

ESA Implications and Federal and State Requirements for Municipal Stormwater Programs

Section I of this document summarizes the implications (on City of Shoreline activities) of the listing of Puget Sound Chinook (and other local fish species) as threatened under the Endangered Species Act. Section II outlines other federal and state laws and regulations that will impact the duties that fall under surface water management for the City of Shoreline. Consideration of these duties is important, as they will affect the future configuration of the City's surface water management program, and how it interfaces with Public Works, Planning and Development Services, Parks and other relevant departments.

SECTION I

IMPLICATIONS OF ESA LISTINGS ON CITY OF SHORELINE ACTIVITIES

Chinook Listing

In March 1999, National Marine Fisheries Service (NMFS) listed Puget Sound Chinook salmon as threatened under the Endangered Species Act (ESA). The listing prohibits "take", which translates as harm to threatened or endangered species and includes hurting its habitat. NMFS is the lead agency on developing a recovery plan which must include three key components: substance (*significant, science based commitments*), assurance (*commitments are real, agreed to by politicians and adequately funded*), and adaptability (*progress can be monitored and tracked, and the plan is flexible enough to maintain progress*).

NMFS 4(d) Rule

On January 3, 2000, the NMFS published their draft ESA 4(d) ruling to protect threatened and endangered Chinook salmon from Northern California to the Canadian border. NMFS plans to publish the final rule by June 19, 2000. This rule would set protective measures that NMFS considers to be necessary to provide for conservation of the species. NMFS has broad discretion and flexibility in fashioning this rule and identifying necessary protective measures.

When the 4(d) rule is finalized, ESA "take" prohibitions will apply to many municipal activities including development permitting, road and parks maintenance, storm water

management, and capital improvement projects. The proposed 4(d) rule may also list certain activities that can continue without violating the rule.

Violating the requirements spelled out in the 4(d) rule could result in federal fines and other penalties, as well as third party lawsuits. Compliance with the 4(d) rule would not necessarily preclude third party lawsuits. However, NMFS staff has stated at public meetings, that activities compliant with the standard set by the 4(d) rule would have little risk of liability. Furthermore, activities compliant with the 4(d) rule would not be at risk of enforcement action by NMFS.

Potential Impacts of the Final 4(d) Rule on City Operations

- Public Works projects:
  - Rank projects using criteria that reflect the importance of fish friendly projects.
  - Longer, more costly, environmental review with respect to wetlands, erosion control, sediment control, water flow control, and water quality issues.
  - Projects that are federally funded or involve federal permitting will require biological assessments, and mitigation measures to address any potential take of listed species. These would include the Aurora Corridor project and Community Block Grant development funds utilized for the City's curb ramp program. With current and planned staffing levels NMFS is struggling to keep pace with the workload to review project proposals. Typical turnaround times for project review is as long as 135 days. The final 4(d) rule is expected to increase this workload, as NMFS will also be reviewing urban development plans and habitat conservation plans.
  - More mitigation requirements will increase project complexity and cost.
  - Some small projects may not be economically feasible.
  - Construction inspectors will need to be trained on best management practices for construction site stormwater runoff control.
  - Large projects, i.e. the Aurora Corridor project will include regional stormwater control and water quality facilities.
- Increased need to develop a citywide storm system map that shows major pipes, outfalls, and topography.
- Roads operations will need to adopt best management practices.
  - To include: schedules of activities, prohibitions of practices, maintenance procedures, and the use of pollution and control devices to prevent or reduce the amount of pollution introduced to receiving bodies of stormwater runoff.
  - Roads staff will need to be trained.
- Pesticide, herbicide, fertilizer use restrictions. Training for staff.
- Municipal regulation of construction site stormwater runoff control (at new developments and re-developments):
  - Building inspectors will need to be trained on best management practices.
  - Code enforcement will need to be defined and implemented.

Bull Trout Listing

On October 28, 1999 the United States Fish and Wildlife Service (USFW) listed Bull trout within the coastal Puget Sound area as "threatened" under the ESA. Research on Bull trout habitat preferences is limited. But, it is known that Bull trout primarily inhabit higher elevation watersheds in rural areas. The USFW has not yet specified which specific areas the listing would impact, nor have they set a date for publishing a 4(d) ruling. However, the USFW "take" prohibitions are in effect as of the listing date.

Coho Listing

As of April of 2000, the expected USFW ruling on the listing of Puget Sound Coho has been delayed. Listing Coho as threatened under ESA could have stronger impacts to activities in urban areas than the listing of Chinook. Coho are known to populate many more urban streams then Chinook. In Shoreline Coho have been found in Boeing Creek, Thornton Creek, McAleer Creek, and Lyon Creek.

SECTION II

OVERVIEW OF FEDERAL AND STATE REQUIREMENTS FOR MUNICIPAL STORMWATER PROGRAMS

Background of Relevant Federal and State Laws and Regulations

The federal Clean Water Act (CWA), and state statutes RCW 90.48 (Water Pollution Control Act) and RCW 90.70 (re-codified under RCW 90.71 Puget Sound Water Quality Protection) establish federal and state authority for stormwater management in the Puget Sound basin. The CWA was enacted by Congress to prohibit unauthorized discharge of pollutants to waters of the United States. The Washington State Department of Ecology (Ecology) is designated, under RCW 90.48, as the State Water Pollution Control Agency for all purposes of the federal Clean Water Act. RCW 90.70 requires the Puget Sound Water Quality Authority (Authority) to prepare and adopt a comprehensive Puget Sound water quality plan.

In March 1988 the United States Environmental Protection Agency (EPA) formally designated Puget Sound as an estuary of national significance under Section 320 of the Clean Water Act, as amended by P.L. 100-4 (the Water Quality Act of 1987). This made Puget Sound part of a nationwide program to develop management plans for the protection of the nation's estuaries. The Authority, together with EPA Region 10, and Ecology, co-manage the Puget Sound Estuary Program. Section 320 requires the development of a comprehensive conservation and management plan (CCMP) for each designated estuary. The CCMP for Puget Sound is the Puget Sound Water Quality Management Plan (PSWQMP).

RCW 90.71 transfers all powers, duties (including implementation of the PSWQMP), and function of the Authority to the Puget Sound Water Quality Action Team. The Action Team has 17 members: a governor-appointed chair; the heads of 10 state agencies involved in carrying out the PSWQMP; a representative of federally recognized tribes; representatives of federal agencies; and representatives of cities, and counties, appointed by the governor.

The 1987 PSWQMP called for: (1) stormwater programs to be developed in urbanized areas of Puget Sound in a phased program, starting with the largest cities; and (2) all cities and counties to develop operation and maintenance programs, adopt ordinances for new development, and develop stormwater education programs. It also called for Ecology to develop technical manuals, guidelines, regulations and model ordinances. The 1994 plan revision includes the addition of performance criteria for BMPs (best management practices) to help track performance, emphasize coordination among watersheds, address vactor waste, and better integrate stormwater controls with Growth Management Act requirements.

The PSWQMP includes a stormwater program goal that is relevant to the City of Shoreline's developing surface water management program. The goal includes protecting shellfish beds, fish habitat and other resources; preventing the contamination of sediments from urban runoff; and achieving standards for water and sediment quality by reducing and eventually eliminating harm from pollutant discharges from storm water.

The implementation strategy for achieving this goal includes: (1) requiring that all cities and counties meet minimum requirements for a comprehensive stormwater program; (2) developing stormwater programs in urbanized areas of Puget Sound in a phased program starting with the largest cities; and (3) developing NPDES (described below) permits for municipal storm water that incorporate the plan's stormwater requirements and federal requirements, and phasing in additional NPDES permits for municipal storm water for smaller jurisdictions.

PSWQMP Storm Water Program Guidelines for Municipalities

According to the PSWQMP, a "basic" surface water management plan should have five elements. The five basic plan elements are:

1. Ordinances containing minimum requirements for new development and redevelopment.
2. Technical manual containing source control and treatment best management practices (BMPs). BMPs are defined below.
3. Operation and Maintenance programs and ordinances.
4. Education programs.
5. Growth management planning and interlocal coordination.

In addition to these five basic plan elements, the PSWQMP calls for storm water program plans to include additional "comprehensive" plan elements. The State's target for local governments to implement the "comprehensive" program is June 30, 2000. Ecology staff has indicated they are encouraging municipalities to implement the plan recommendations. However, there would be no enforcement action taken against municipalities that demonstrate an earnest effort to comply, yet miss the deadline.

A preliminary comparison with other cities (i.e. Redmond, Federal Way, and Auburn) indicates that Shoreline is comparable in terms of its own regulations and programs. Many, but not all of the program elements necessary for compliance with PSWCMP are already in place in Shoreline. For example, the City has adopted a drainage manual, and a stormwater maintenance program. But Shoreline does not have an adopted Comprehensive Surface Water Management Program plan in place or program elements for a water quality education program or monitoring.

The "comprehensive" plan elements include all of the basic plan elements plus 7 additional elements.

1. Implementation schedule (*to include a scope of work identifying program elements that are missing or need improvement and a schedule for addressing those shortfalls).*
2. Identification and ranking of significant water pollution sources (*this is an ongoing program to assess and identify potential and actual water quality problems associated with storm water runoff*).
3. Investigation and correction of problem storm drains (*to prevent or eliminate illicit connections and reduce the incidence of improper disposal and spills into the storm water drainage system*).
4. Inspection, compliance, and enforcement measures.
5. Water quality response program.
6. Adequate funding for the program.
7. Local coordination agreements (*to identify shared waterbodies and drainage basins and those issues that must be addressed in cooperation with other jurisdictions to achieve effective storm water programs*).

Additionally, the recommendations for the Public Education program element are more specific and more strongly stated in the Comprehensive Program.

Best Management Practices (BMPs) Defined:

BMPs for storm water management are schedules of activities, prohibitions of practices, maintenance procedures, the use of pollution control devices and other management practices used to prevent or reduce the amount of pollution introduced to receiving bodies of storm water runoff.

Non-structural BMPs include: ordinances and zoning requirements (such as erosion and sediment control ordinances); maintenance activities (such as storm drain cleaning and street sweeping); and education/outreach activities.

Structural BMPs include structures like detention ponds; grassed swales; sand filters and filter strips; infiltration basins; and porous pavement, etc.

Generally non-structural BMPs are more cost-effective than structural BMPs. If structural BMPs are needed, they can be implemented in a more cost-effective manner if they are included in initial plans.

NPDES Permit Requirements for Small Municipalities

In 1972, Congress amended the Federal Water Pollution Control Act (referred to as the Clean Water Act) to prohibit the discharge of any pollutant to waters of the United States from a point source unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) permit. The NPDES program is a permit program designated to regulate point source discharges.

Initial efforts to improve water quality under the NPDES program primarily focused on reducing pollutants in industrial process wastewater and municipal sewage. As pollution control measures for industrial sewage were further developed, refined, and implemented, it became increasingly evident that more diffuse sources of water pollution were significant causes of water quality impairments. Specifically, storm water runoff draining large surface areas, such as agricultural and urban land, were found to be a major cause of adverse water quality impairments. In 1987, Congress amended the CWA to require implementation of a comprehensive approach for addressing storm water discharges under the NPDES program. As a first step to implementing this approach the NPDES Phase-I storm water program was issued in 1990. The purpose of this program is to reduce polluted runoff from priority sources, including major industrial facilities, large and medium city storm sewers, and construction sites that disturb 5 or more acres. Larger local jurisdictions such as King County, the City of Seattle, and the City of Bellevue are now permitted under Phase-I.

In October of 1999, the United States Environmental Protection Agency (EPA) set into law the NPDES Phase-II storm water program. Phase-II sets storm water management requirements for municipalities under 100,000 population. The City of Shoreline is included in the EPA listing of incorporated places and counties that were designated under the Storm Water Phase-II rules.

Ecology will administer the NPDES Phase-II permit for the State of Washington. Ecology is also charged, under the PSWQMP, with reviewing progress made by local governments in developing and implementing storm water programs. Ecology staff expects that municipal storm water programs that comply with the PSWQMP Comprehensive Program requirements would also comply with most (if not all) of the NPDES Phase-II requirements.

At a minimum, jurisdictions regulated under Phase-II must:

- Specify BMPs for six minimum control measures and implement them to the "maximum extent practicable." The control measures are:

1. Public education and outreach on storm water impacts;
2. Public involvement/participation *(in developing the municipality's storm water program)*;
3. Illicit discharge detection and elimination (*BMPs would include developing storm sewer maps, prohibiting illicit discharges into the separate storm sewer system, and enforcement procedures*);
4. Construction site storm water runoff control;
5. Post-construction storm water management in new development and redevelopment;
6. Pollution prevention/good housekeeping for municipal operations;

- Identify measurable goals for control measures (*e.g. inspecting or repairing a certain number of drain inlets each year, surveying all municipal right-of-ways to identify illicit discharges, reducing sediment loading*);
- Show an implementation schedule of activities or frequency of activities (*e.g., vacuum storm drain outlets x times per year, conduct classroom storm water education x times per year*);
- Define the entity responsible for implementation. (*There may be one individual in one department who is responsible for the entire program, or the responsibility may be shared among several departments.*); and
- Conduct periodic evaluations and assessments of the storm water management practices, maintain records, and prepare required reports.

According to Ed O'Brien, Ecology NPDES Project Manager, the State's strategy to respond to the ESA listing of Chinook includes updating local storm water programs by September of 2002. These updates could be reflected in additional requirements for municipal comprehensive storm water programs and NPDES permits.

Proposed PHASE II Permitting Process

There are two types of NPDES permits – general and individual. An individual permit is a permit specifically tailored for an individual facility (i.e. a municipal storm water system, or a construction site where more than one acre will be disturbed) based on the information contained in the application. The permitting authority (Ecology is the designated authority for the State of Washington) develops a permit for that facility based on the information contained in the permit application, such as type of activity, nature of discharge, receiving water quality, etc. The permit is then issued to the facility for a specific time period (not to exceed five years).

A general permit is developed and issued by a permitting authority to cover multiple facilities within a specific category. Ecology and EPA are planning to develop a general permit for municipalities. General permits may offer a cost-effective option for agencies because of the large number of facilities that can be covered under a single permit.

Permittees usually submit a Notice of Intent (NOI) to the permitting authority (Ecology) to be covered under a general permit.

Generally both types of NPDES permits (individual and general) are obtained by application to the EPA or to the appropriate state agency. Facilities covered under the Phase-II rule would be required to identify and submit to the NPDES permitting authority (Ecology) the following information:

- The BMPs that will be implemented;
- The measurable goals for the minimum control measures;
- The month and year in which each BMP will be started and completed, or the frequency of action if it is ongoing; and
- The person(s) responsible for implementing or coordinating the storm water management program.

The information could be submitted in a NOI, if the community wishes to apply under a general permit or on an individual application if the community seeks an individual permit. The permit application legally binds the stormwater program commitments that need to be implemented within five years.

Timeline for the Phase-II Permit

10-1999	Final Phase-II regulations signed into law
10-2000	EPA completes a menu of BMPs to assist municipalities in meeting minimum measures
10-2000	EPA prepares a model general permit
10-2001	EPA prepares guidance document on measurable goals
12-2002	State issues general permits for small municipalities and construction
03-2003	Permit application deadline for small municipalities and construction
02-2008	Small municipal programs developed and implemented