



City Council Study Session

AGENDA

April 12, 2011

6:30 pm – 8:00 pm

Call to Order

Public Comment

This is an opportunity for the public to address the Council. Three-minutes limit per person or 5 minutes if representing the official position of a recognized community organization.

Topics

1. Update: Natural Gas Pipeline Safety
2. Discussion: Account Receivables
3. Presentation: Title 23 Code Compliance
4. Presentation: Storm Water Manual Update

Adjournment

City Council meetings are wheelchair accessible. American Sign Language (ASL) interpretation is available upon request. Please phone (425) 295-0500 at least 48 hours in advance. Assisted Listening Devices are also available upon request.



Memorandum

Date: 05 APR 11
To: City Council Members
From: Pete Butkus
Re: Natural Gas Pipeline Briefing

The Council has previously indicated a desire to learn more about the large diameter natural gas pipeline that traverses the city from north to south. This line, owned by Williams NW, will be the subject of a presentation at the Council meeting on Tuesday, 12 April.

Included will be a presentation from a member of the Bellingham Fire Department who has been involved with pipeline safety for several years. This presenter will be able to describe the actions taken in June 1999 with a liquid fuel pipeline rupture.

Eastside Fire & Rescue will describe their on-going response plan development for a potential pipeline rupture in the city.

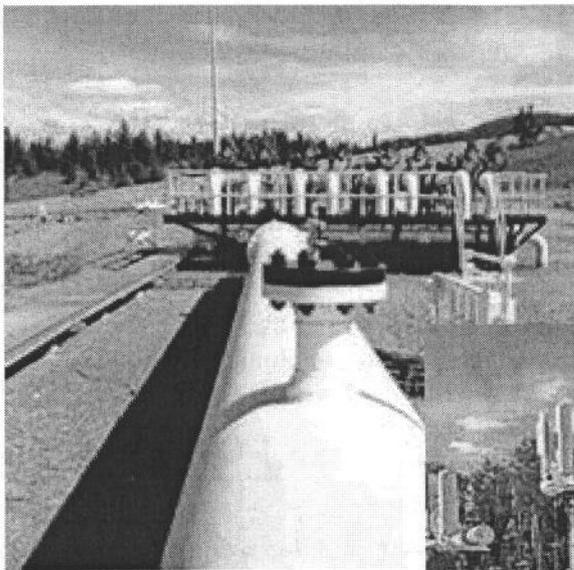
A representative from Williams NW will be providing information on the federal and state regulatory environment, the company response plan and pipeline maintenance.

Following the presentations, the presenters will be available to respond to questions.

I have included as attachments a copy of a Whatcom County report on pipelines in general and selected copies of information on pipeline safety from the Washington State Utility and Transmission Commission (UTC). The UTC is the state regulatory agency for natural gas pipelines of the type located in Sammamish.

Attachments

NATURAL GAS AND HAZARDOUS LIQUID PIPELINE BACKGROUND REPORT



Whatcom County, Washington

October, 2001

NATURAL GAS AND HAZARDOUS LIQUID PIPELINES BACKGROUND REPORT

October, 2001

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Natural Gas and Hazardous Liquid Pipelines Background Report

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EXECUTIVE SUMMARY

Within a 28 month period from February 1997 to June 1999, Whatcom County experienced two major pipeline ruptures from the Northwest/Williams natural gas line and the Olympic petroleum fuel line. In each accident, the product from the rupture ignited and caused extensive harm to the community and environment of Whatcom County. The petroleum fuel line rupture occurred at Whatcom Falls Park in Bellingham and resulted in the fatalities of two boys and a young man.

In response to these occurrences and as there were proposals made for the construction of natural gas and petroleum products transmission lines where none existed, the Whatcom County Council imposed a moratorium on all new pipeline facilities, and formed the Utilities Planning and Advisory Committee to, along with other utility-related tasks, address the issues of regulating and siting pipeline facilities within the county.

The Federal Department of Transportation through the Office of Pipeline Safety is the regulator of interstate natural gas and hazardous liquid pipelines. The Federal Energy Regulatory Committee has authority to site interstate natural gas lines. State and local safety provisions regulating interstate pipelines are expressly preempted by federal jurisdiction, with the exception that the state is allowed to increase safety standards on intrastate pipelines. A recent development has been new legislation that allows Washington's Utilities and Transportation Commission authority to conduct inspections for the Office of Pipeline Safety.

The general rule from the federal regulations and case law on the subject is that state and local governments are preempted from imposing any safety regulations on interstate pipeline operators. However, other requirements may be imposed, such as franchise restrictions, and user fees, so long as they do not create a conflict with OPS safety regulations. The questionable part is whether these other requirements can be imposed against *interstate* lines, as federal cases in this area is scant.

Whatcom County can impose regulations upon landowners or developers that have pipeline easements on or near their property. These regulations can lessen the risk of third party damage to a pipeline. In particular, setbacks, restricting allowable uses on and adjacent to pipeline easements, identifying pipelines on building site plans, and notification requirements before construction are mechanisms that the County could employ to reduce the potential for another devastating pipeline rupture. In addition, nothing stops the County from establishing guidance for siting new pipelines, the difficulty is that local policies and regulations lack enforcement capability on proposals permitted by federal or state agencies.

Additionally, this report explores Whatcom County's current situation with regard to demand for pipelines. With anticipated increasing demand for natural gas, it is expected that the pipeline infrastructure will need to be increased in the near future. Economic impacts of pipelines on property values are discussed with somewhat surprising results, including property sales adjacent to the Olympic pipeline, in the area damaged by the

explosion. Owners of land near the pipeline explosion did not experience a negative stigma from the pipeline. Throughout the report, recommendations are made for improving safety for County residents adjacent to existing and future pipeline proposals.

Here is a quick summary of the majority of proposed recommendations. The complete set of recommendations are found at Appendix B.

Regarding Safety: require complete updated information to accompany any proposal; pipeline safety/one-call educational programs; encourage following existing corridors; seek comments on development near pipelines from pipeline companies; require pipeline vicinity disclosures on parcels near existing pipelines; keep Whatcom County's Division of Emergency Management's information up-to-date.

Regarding Adjacent Uses: recommend minimum distances from critical and high occupancy facilities; encourage siting in agricultural and forestry resource land; discourage siting in urban growth areas, towns, and cities.

Regarding the Environment: require full mitigation of hazard for crossing critical areas, or site alternate routes; ensure siting in accordance with shoreline, and wetland regulations; hazardous liquid pipelines shall not be closer within a 10-year rate of travel from wellhead protection areas; and restrict pipelines in high-risk landslide zones.

Regarding Supply and Demand: encourage high efficiency and energy conservation.

Regarding the Impacts to the Community: require several meetings as requirements for shorelines and land use permits when siting new lines, encourage meetings in multiple formats; require that significant local or regional benefit be shown; require a pipeline company to provide funds for a presentation to inform landowners of their rights in negotiation and about the process of eminent domain.

Regarding Franchise Agreements made with the Pipeline Company: have the County carefully scrutinize all proposed franchise agreements and to review and evaluate model franchise agreements for provisions to be incorporated into negotiation discussions regarding proposed provisions in the franchise agreement.

A. INTRODUCTION

Whatcom County is uniquely situated in Washington as a gateway for natural gas and crude oil from Canada to the Western United States. Natural gas is received from gas fields in Alberta, and the Sumas entryway is the primary route to transport this product to the Western United States via 26" and 30" lines. Oil is received via a pipeline owned by Trans Mountain Oil Pipeline Corporation, which also crosses into the county at the Sumas border. The county is part of a regional energy market that includes all of the Pacific Northwest states, extends into Canada and continues south as far as Arizona. Since transmission pipelines cross jurisdictional boundaries, decisions on siting must be made in cooperation with planning bodies in adjacent counties and in British Columbia.

County Council re-established the Whatcom County Utilities Planning and Advisory Committee (UPAC) on June 27, 2000. UPAC's purpose is to ensure the protection of public health and safety and the environment, and also preserve custom, culture, and economic stability, when new electric, natural gas, and petroleum transmission facilities are proposed.

Two pipeline ruptures in Whatcom County prompted the County Council to direct UPAC to address the issue of pipeline siting in Whatcom County. As a bit of background, a Williams natural gas pipeline ruptured from a landslide and ignited near Everson 1997 causing property damage to the surrounding area. However, the most devastating occurrence happened in 1999 when an Olympic petroleum product pipeline ruptured in Whatcom Falls Park, killing two children, a young man, and causing extensive property and environmental damage when around 250,000 gallons of gasoline spilled and ignited. In response to these events, the fact that the County's land use regulations at the time did not provide sufficient criteria for evaluating the siting of transmission pipelines, and there were two transmission pipeline proposals in the County, the Whatcom County Council placed an emergency moratorium on all new pipeline facilities in Whatcom County, which is in place as of the date of this writing. (Ord. 2000-026).

In response to the moratorium, the committee spent considerable time addressing and identifying issues of importance to be considered in the process of siting transmission pipelines. Feedback from the public was also sought in a series of three separate public meetings held in Everson, Bellingham, and Custer. Valuable feedback was received from these meetings and gave the committee new and unique ideas to consider.

The Utilities Committee had a number of issues that related to natural gas and hazardous liquid lines, one purpose of this report is to address these issues, and in many instances propose recommendations for improvement. The primary issues that were identified were:

- the federal preemption of pipeline regulations and the effect on a county moratorium;
- safety issues and reporting requirements;
- uses adjacent to pipelines;

- environmental issues;
- the regional supply and demand situation for natural gas;
- the community impacts of pipelines and the power of eminent domain; and
- franchise agreements on county roads and property.

These issues are all addressed in this report with particular focus on recommendations that are within the ability of the county to pursue. But before the substantive topics are taken up, a short description of what types of pipelines exist may help clarify the situation. In short, there are transmission, distribution, gathering, and service lines.

How are the different types of pipelines defined?

There exists the possibility for confusion over how a pipeline should be classified. This is especially the case about how a line that serves a single large consumer should be classified. The definition below is given in an attempt to help reduce this confusion. Whether it should be treated as a transmission line, a distribution line, or some other classification of line needs to be known because state and federal regulations differ according to the type of line. Title 49 of the Code of Federal Regulations section 192.3 defines a transmission line as

“a pipeline, other than a gathering line, that: transports gas from a gathering line or storage facility to a distribution center, storage facility, or large volume customer that is not downstream from a distribution center; Operates at a hoop stress of 20 percent or more of SMYS (specified minimum yield strength); or transports gas within a storage field. A large volume customer may receive similar volumes of gas as a distribution center, and includes factories, power plants, and institutional users of gas.”

A gathering line means a pipeline that transports gas from a current production facility to a transmission line or main. A distribution line is defined as a line other than a gathering or transmission line. Finally, the smallest diameter pipe is the service line. This is a line that is a distribution line that transports gas from a common source of supply to a customer meter or the connection to a customer's piping, whichever is farther downstream, or the connection to a customer's piping if there is no customer meter. (49 CFR 192.3).

Washington State's definition of a transmission line incorporates the Federal definition into its own. Washington defines a transmission line as

“a gas pipeline which connects to an existing transmission line without pressure regulation to lower the pressure; which is downstream of the connection of two or more gathering lines; and as defined in 49 CFR, Part 192, section 192.3.”
WAC 480-93-005.

Washington uses the same Federal definition of a distribution line.

These definitions allow for a case by case determination as to whether a line serving a single customer is considered a transmission line or a distribution line based on where the

pipeline leads or what the hoop stress level of a pipe is. As service lines are laced throughout the county supplying natural gas to many residences and business, they are too small to present the community hazard that a transmission or major distribution pipeline (interpreted as 14" or larger in diameter) can although such pipeline ruptures can still be devastating on a smaller scale. This threshold size was selected to follow Washington's Energy Facility Siting Evaluation Council (EFSEC) thresholds, and these are typically operated under pressures that require special attention. As a consequence, service lines and distribution lines of smaller size should only be interpreted in the following discussions when specifically referenced. Service lines and smaller distribution lines will not be included in transmission and major distribution pipeline siting criteria.

B. PIPELINE PREEMPTION

This section briefly outlines the aspects where the County does or does not have authority to regulate natural gas and petroleum transmissions. It answers the questions of who has the authority to regulate a pipeline; the answer is dependent on several factors that will be discussed in detail. The answer is based on what agency has authority, which is determined from the priorities that exist. Federal priorities and interests outweigh state interests, which outweigh the interests of the local government. If or when an agency of lesser authority (local government) attempts to regulate an area already regulated by a higher authority (federal or state agencies), it can be said to be preempted, meaning the lower regulations are invalid. This inherently makes sense, otherwise all the local governments would be able to subvert and put strangleholds on national or state policy. As this relates to pipelines, Table 1, found within this section, is a quick reference as to what local government's role can be regarding siting for pipeline proposals.

Who is the regulatory authority for interstate natural gas lines?

An interstate pipeline is one that crosses the boundary of one state into another state, country, or province. An intrastate pipeline is one that is contained wholly within the boundary of the state. The federal Natural Gas Act regulates design, location, construction and modification of interstate natural gas facilities. If any attempt by the County to place land use restrictions on these lines could be determined by a court to be preempted by federal law. Several cases have been presented attempting to regulate natural gas lines, even some from the state level, with no success. The result has been the same; the federal Natural Gas Act preempts the entire field of law dealing with the regulation of natural gas pipelines.

Despite this obstacle, the County still has means to influence siting. The County can intervene in the process and have an opportunity to formally express its concerns and objections. Commenting on a project is a more informal option available. The County's Comprehensive Plan and zoning codes must be considered and addressed by the applicant as elements of their application process. Furthermore, where applicable, the County's involvement extends to the granting of shoreline permits as a requirement of the Coastal Zone Management Act, which will need to be obtained from the County for a project to be approved.

As an example of how the County is involved, the National Environmental Policy Act (NEPA) requires a description of planned development within a quarter mile of proposed facilities, and proposed coordination to minimize impacts on land use, indicating that existing and proposed future land use considerations are at least considered. This information is included in the Environmental Impact Statement done by the applicant to evaluate the feasibility of the project.

In addition, the county and the state have the authority to require the shoreline permit to comply with SEPA (the State Environmental Policy Act). As such the County and the state may require additional environmental studies and impose additional conditions above and beyond those included in the adopted FERC NEPA document.

Who is the regulatory authority for interstate hazardous liquid lines?

Hazardous liquid pipelines, which include petroleum product pipelines, present siting difficulties similar but not identical to those faced by natural gas pipelines, despite the fact that there is no corresponding petroleum act. However, to answer the question of whether the county can regulate the use of a hazardous liquid pipeline, an analysis of the federal laws helps to clear the issue. 49 U.S.C. sec. 60104 preempts States from imposing any additional safety standards on interstate pipelines and indicates that “a state authority may not adopt or continue in force safety standards for interstate pipeline facilities or transportation”. (49 U.S.C. sec. 60104(c)). The Secretary of Transportation is required to establish the minimum safety standards for pipeline facilities. (49 U.S.C. sec. 60102). The Secretary has delegated to the Department of Transportation’s Office of Pipeline Safety to prescribe pipeline safety standards that address the issue of pipeline location based on public safety. (See 49 CFR sec. 195.210, 195.250).

Under the Hazardous Liquid Pipeline Safety Act, the precursor to the federal pipeline safety provisions, federal courts concluded that safety regulations of interstate pipelines by either the State or local government bodies was preempted as it was a field for exclusive federal regulation. (Shell Oil Co. v. City of Santa Monica (9th Cir. 1987), 830 F.2d 1052, 1065, cert. denied. 487 U.S. 1235, 108 S. Ct. 2901, 101 L. Ed.2d 934 (1988).)

As the County policies on utilities are important to the County’s Comprehensive Plan in general, the County should develop policies that clarify how and where pipelines should or shouldn’t go, as they should be influential, even if they may ultimately be preempted. However, any attempt by the County to completely restrict future lines would likely be determined to be preempted by federal law and unconstitutional.

Who has authority over intrastate lines?

State Authority

A pipeline will fall under the regulation of the Washington's Energy Facility Siting Evaluation Council (EFSEC) if it is an intrastate natural gas transmission line that is greater than 14” diameter and extends more than 15 miles. Also, an intrastate petroleum pipeline will be under the regulation of EFSEC if it is a transmission line that is greater than 6” diameter and extends more than 15 miles. Despite the differences in pipe width, which appears to be due to potential environmental differences between the two types of products (one gaseous, the other a liquid), the situation is identical. The regulations allow for local government to be involved in the process including siting, but can override local county or city regulations when it approves a new energy facility. EFSEC is required to conduct a land use consistency hearing. If EFSEC determines that the project is inconsistent with local land use laws, the applicant must attempt to resolve the conflict with local government. If the conflict cannot be resolved, the applicant may request state preemption. Specifically if certain conditions and determinations are met, EFSEC is allowed to recommend to the governor that the state preempt local land use plans or zoning ordinances for the site of an energy facility. Upon the governor’s approval, this effectively preempts local planning and zoning.

Local Authority

If a pipeline does not meet any of the above criteria, jurisdiction is left with local authorities. These are the small in-state projects. It appears that here local comprehensive plan policies, land use and zoning ordinances can control the siting of a pipeline as there is no other authority that claims jurisdiction in this area. It is important to note that the design and construction standards for pipelines remain under the authority of Washington's Utilities and Transportation Commission.

In summary, rational local policies regarding utilities can provide guidance as to how utilities should be regulated, or in the event that a higher authority preempts local actions, can serve as an influential agent to balance the desires of the utility proposing a pipeline with the goals of the County.

Table 1: Summary of Local Government's Role in Siting for Pipeline Projects

Type of Project	General Description	Local Government's Ability to Regulate Siting	Local Government's Role in the Process	Local Government's Approach
Interstate projects	Pipeline that extends beyond state borders (including into Canada)	Preempted by federal authority	Intervenor or Commentor on proposed projects	Develop policy, comprehensive plan development, implement land use siting criteria, and manage shoreline permits
Intrastate projects that meet the Energy Facility Site Evaluation Council's (EFSEC) requirements	New intrastate natural gas & crude oil/petroleum product transmission lines > 15 miles and pipe diameter requirements that are dependent on the product in the line.	Potentially preempted by state authority (EFSEC). State preemption must be requested by the applicant.	Intervenor, Commentor or potential regulator depending on the outcome of local government and applicant's ability to resolve noncompliance issues.	Develop policy, comprehensive plan development, implement land use siting criteria, and manage shoreline permits
Intrastate projects that do not meet EFSEC requirements	Projects that do not meet the threshold requirements listed above	Not preempted from siting regulations	Can act as regulator	Develop policy, comprehensive plan development, and implement land use siting criteria

Source: Whatcom County PDS 2001

Possible Challenges to the County's Pipeline Moratorium

Federal Preemption

The federal pipeline safety regulations indicate in precise detail, the minimum safety regulations to assure safety in design, construction, inspection, testing, operation, and maintenance of natural gas and hazardous liquid pipeline facilities and in the siting, construction, operation, and maintenance of liquid natural gas facilities. The regulations do not, however, provide many details for the siting of petroleum facilities. The only criteria that has been found detailing siting that would be applicable to crude and

petroleum products is found in Title 49 Code of Federal Regulations Part 195.210 titled "pipeline location" which states:

(a) Pipeline right-of-way must be selected to avoid, as far as practicable, areas containing private dwellings, industrial buildings, and places of public assembly.

(b) No pipeline may be located within 50 feet (15 meters) of any private dwelling, or any industrial building or place of public assembly in which persons work, congregate, or assemble, unless it is provided with at least 12 inches (305 millimeters) of cover in addition to that prescribed in (49 CFR 195.248).

These could be considered rudimentary guidelines that must be followed by the pipeline companies. Pipeline companies may at their discretion adhere to siting and construction standards over and above the minimum proscribed standards.

Federal Energy Regulatory Commission (FERC) representatives provided insight into how hazardous liquid pipelines should be considered. Bob Arvedlund of FERC was not aware of a federal agency that dealt with oil and product line siting. FERC only deals with tariff issues regarding petroleum and product lines. Arvedlund did qualify that the federal government may be involved in siting to the extent that a pipeline is crossing federal land. Peter Roidakis in the FERC legal counsel confirmed the information that FERC does not provide any siting criteria regarding petroleum pipelines. Jim Taylor of the Federal Department of Transportation's Office of Pipeline Safety Division stated that his office deals with the design, construction, inspection and operation of pipelines, but has no authority to site new lines either petroleum product or natural gas. Interstate projects are subject to the requirements of the National Environmental Policy Act (NEPA) which must address land use and planned development as a part of the reporting requirements.

With regard to the issue of a moratorium on new petroleum pipelines, Arvedlund felt that while it may not be invading any federal agencies jurisdiction, such restrictions that a moratorium would place would interfere with interstate commerce and likely be held unconstitutional. The commerce clause of the U.S. Constitution states:

"The Congress shall have power to ... regulate commerce with foreign nations, and among the several states[.]" Art. I, 8, cl. 3.

FERC only has environmental review authority for natural gas facilities. Once a pipeline company states that they're going to meet DOT regulations, FERC is prohibited from adding more standards. Arvedlund described a situation where a state was requiring pipelines to be placed deeper than the DOT required for agriculture mitigation (4' to 5' deep instead of 3' deep). The pipeline companies complied, but Arvedlund expressed the opinion that if the pipeline companies had sued regarding the state regulations on the interstate pipelines, that the pipeline companies would likely have been successful.

Preemption by the State

Washington State law covers the issue of pipeline safety in RCW 81.88. The siting issue is briefly addressed in the statutes here at RCW 81.88.060 where it states:

The commission shall coordinate information related to pipeline safety by providing technical assistance to local planning and siting authorities.

Doug Kilpatrick of Washington's Utilities and Transportation Commission (WUTC) Pipeline Division stated that the WUTC was involved in two areas regarding pipelines: pipeline safety and economic regulations. Kilpatrick stated that they were generally not involved in siting issues (except with regard to service territories where utility monopolies were involved). Kilpatrick's statements along with the above statutes provide confidence that the UTC is not a siting authority. This leaves the field of siting to the Washington Energy Facility Site Evaluation Council (EFSEC) for large intensive projects, and local government for projects that do not rise to the level of intensity for EFSEC's involvement (see Table 1 above). Local planning cannot preempt the authority of EFSEC if it takes authority, but it is free to intervene, comment, and be involved in the process. EFSEC ultimately results in a recommendation of approval or denial of a proposed project to the Governor. The Governor's certification of an energy facility permits the construction and operation at the location specified irrespective of any contrary provisions of the local zoning code (Opinion of Attorney General 1977, no 1). As land use, zoning, and easements can dictate how land is to be used, local planning departments can be directly involved in the process (as opposed to being an intervenor or commentor) if the scale of the project does not rise to EFSEC standards since the pipeline must then comply with the local government's permitting process.

Conclusion

In summation, when analyzing the issue of whether a local moratorium could freeze the new development of pipelines, the type of the pipeline that is involved suggests the answer. Although in the short term, it could be effective to delay a project at least until challenged. A moratorium against a proposed interstate pipeline could be anticipated to encounter legal challenges based on federal preemption and restrictions on interstate commerce. A moratorium against a project within the jurisdiction of EFSEC could encounter preemption issues as well, by attempting to circumvent state authority to site pipelines that reach the scale of EFSEC. Finally, what remains is intrastate projects where EFSEC does not take jurisdiction, these might be able to be controlled by a moratorium, however, this is a limited category.

Local planning is an essential tool for the county to have an impact on pipeline siting. Interstate and intrastate pipelines require reports that must address land use and planned development, among a list of other requirements and compatibility will be sought with a pipeline proposal and the County's Comprehensive Plan and land use regulations.

C. SAFETY ISSUES AND REPORTING REQUIREMENTS

One set of questions from the Utilities Planning Advisory Committee, dealt with the issue of pipeline safety and a desire for information regarding the reporting requirements that pipelines must comply with. As the Committee identified this as an area of high importance, these issues are being addressed, although it may be appropriate to say from the outset that much of these safety issues are outside of the authority of the County to regulate. The purpose of this section is to bring together information regarding pipeline safety and related regulations applicable to pipeline safety to provide understanding as to what is covered under the state and federal regulations. First, a brief summary of what causes pipeline leaks will be given, and then this report will discuss safety issues covered by state and federal regulations. In addition, this section will look at the issue of when fines may be issued, and how records can be obtained.

Overview

The Office of Pipeline Safety keeps statistics on the safety performances of both hazardous liquid and natural gas lines for the entire U.S. There is a summary table that shows some of these statistics listed below in Table 2. Since 1986 to the start of 2001 there were 2903 hazardous liquid accidents from pipelines. These have resulted in a total of 36 fatalities, and 239 injuries. Property damage from these accidents caused nearly \$587 million dollars of damage. Gross loss of material was over 2.7 million barrels. Net loss was reported at just over 1.6 million barrels. The total miles of hazardous liquid pipes are approximately 155,000 pipe miles. To put this in perspective, there was on average one fatality per year for approximately every 64,600 miles of interstate hazardous liquid pipelines, one injury per year for every 9,730 miles, and one recorded incident for every 800 miles.

From natural gas transmission lines, there were 1202 incidents reported to the Office of Pipeline Safety in the fifteen years between 1986 and the end of 2000. Of these, there were 56 fatalities and 214 injuries. Property damage caused as a result of these incidents caused more than 260 million dollars in damage. The fatalities and injuries associated with smaller width distribution lines were considerably higher over the same period (278, and 1221 respectively). The total miles of natural gas transmission lines are about 300,000 miles while there is approximately 1 million miles for natural gas distribution lines. This similarly equates to one fatality per year for approximately every 80,000 miles of interstate natural gas pipeline, one injury per year for every 20,600 miles, and one recorded incident for every 3700 miles.

From the period from 1985-1999, Washington State has had 47 pipeline accidents reported to the Office of Pipeline Safety, that caused 5 fatalities, 16 injuries, over \$10.7 million dollars damage and a gross loss of 14,162 barrels. Loss of natural gas product was not quantified.

Table 2: Safety Statistics on Interstate Natural Gas and Hazardous Liquid Pipelines

Occurrences on Interstate Pipelines from 1986-2000	Hazardous Liquid Pipeline	Natural Gas Transmission Pipeline
Fatalities	36	56
Injuries	239	214
Incidents Reported	2903	1202
Miles of Pipeline	Approx. 155,000 miles	Approx. 300,000 miles
Average miles of pipeline per fatality per year	Approx. 1 per 64,600 miles of pipeline per year	Approx. 1 per 80,000 miles of pipeline per year
Average number of miles of pipeline per injury per year	Approx. 1 per 9700 miles of pipeline per year	Approx. 1 per 20,600 miles of pipeline per year
Average number of miles of pipeline per incident per year	Approx. 1 per 800 miles of pipeline per year	Approx. 1 per 3700 miles of pipeline per year

Source: Compiled from Office of Pipeline Safety data.

What are the causes of pipeline leaks?



Figure 1: Ruptured 16" pipeline being removed from Whatcom Falls

Source: Office of Pipeline Safety Website

Using statistics covering 1968 to 1999, it was found that 40% of oil pipeline leaks were caused by structural problems (corrosion, defective pipes, or from defective welds), 27% were caused by third party damage, 6% by operator error, 2% by control problems, and the remaining 25% by other events. This shows that a large proportion of these leaks could possibly be controlled or reduced by the pipeline industry through proper maintenance, construction, and other activities under their control. Data from natural gas accidents from 1994 to 2000

indicate that 36.2% was from outside forces, 27.5% from corrosion, 14.3% from material or construction defects, and 22% from other causes.

The one-call system

One safety mechanism that is in place in Washington is the one-call system. Contractors, excavators, even homeowners are required to call the one-call system before doing any digging deeper than twelve inches, regardless of the reason. The phone number to call in Whatcom County is 1-800-424-5555. It is a requirement in Washington that the one-call system be notified two days before excavation is to begin to verify that there is no known hazards underneath the soil, particularly pipelines and power lines. If the notification is made less than two business days prior to digging, the utility is entitled to compensation

for responding, unless it is an emergency. Upon making the call, all utilities will come out and mark the location of their lines. However, a person who did not call the one-call system for a locate which results in damaging a utility line may be liable for up to three times the actual amount of the damage. Civil penalties of up to ten thousand dollars are also possible for failing to use the one-call system and damaging a hazardous liquid or natural gas pipeline. There currently is no federal one-call system.

What are the existing agencies that deal with issues of pipeline safety?

On the federal level, there is the Office of Pipeline Safety (hereafter OPS). The state agency is the Utilities and Transportation Commission (UTC). RCW 81.88, WAC chapter 480-93.



Figure 2: Washington One-Call Notification Reminder
Source: Whatcom County PDS 2001

The federal regulations that deal with pipeline safety are title 49 of the Code of Federal Regulations (CFR), specific chapters include: 49 CFR 190 (Pipeline Safety Programs and Rulemaking Procedures), 49 CFR 191 (Transportation of Natural and other Gas by Pipeline – Safety Related Condition Reports), 49 CFR 192 (Transportation of Natural and other Gas by Pipeline – Minimum Federal Safety Standards), 49 CFR 193 (Liquefied Natural Gas Facilities - Federal Safety Standards), and 49 CFR 195 (Transportation of Hazardous Liquid by Pipeline). Any pipeline that is deemed to be under federal jurisdiction is bound by these regulations. If there is no federal jurisdiction over the pipeline that runs inside the state of Washington, then the UTC has jurisdiction, and their set of regulations are to be enforced. The Washington regulations are in excess of those required by the Office of Pipeline Safety. The Washington Administrative Code details out the regulations regarding safety of gas companies at WAC 480.93.

The federal regulations are too voluminous to be discussed here, and as they can be obtained readily by accessing the above codes, they will not be discussed in any detail. It can be noted, however, that these federal safety standards appear to be fairly encompassing. Here is a list of the subchapters that are covered in the federal regulations:

- Materials used for the pipeline
- Pipe design
- Design of Pipeline Components
- How welding of steel in pipelines is to be conducted
- The joining of materials other than by welding
- General construction requirements for transmission lines and mains
- Customer meters, service regulators, and service lines
- Requirements for corrosion control
- Test requirements
- Upgrading pressure
- Operations

- Maintenance
- Reporting system

The federal regulations make “class locations” which extends 220 yards on either side of any continuous 1 mile length of pipeline. The ratings go from class 1 locations, which is the minimum, which has 10 or fewer buildings intended for human occupancy, to class 4. A class 2 location is more than 10 but less than 46 buildings, class 3 is 46 or more within the 660 foot area, and a class 4 location is where buildings four or more stories are prevalent. The class location unit is then used for regulating the design of the pipe, the maximum distance that block valves are to be placed apart, and other technical information. The 660 foot guideline is also used as a factor to determine whether incident reports are required. (see generally, 49 CFR 192.5)

Pipeline operating plans, procedures, and emergency policies

In Washington state, every gas company under the jurisdiction of the UTC shall develop operating, maintenance, safety, and inspection plans and procedures and an emergency policy. Such plans, procedures, changes and amendments, shall be promptly filed with the UTC, for review and determination as to their adequacy, when properly executed, to achieve an acceptable level of safety. The UTC may, if the plans and procedures are found to be inadequate, after proper notice and a hearing, require such plans and procedures to be revised. In determining the adequacy of such plans and procedures to achieve an acceptable level of safety, the UTC shall consider relevant

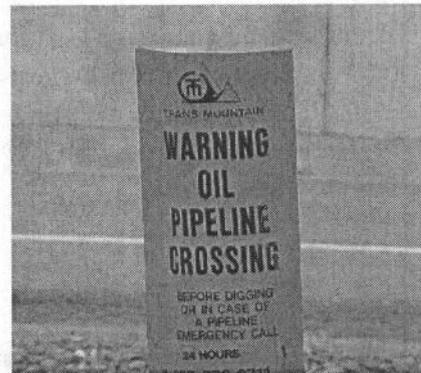


Figure 3: pipeline marker
Source: Whatcom County PDS 2001

available pipeline safety data, whether the plans and procedures are appropriate for the particular type of pipeline operations being performed by the gas company, the reasonableness of the plans and procedures, and the extent to which the plans and procedures, if properly executed, will contribute to an acceptable level of public safety being achieved by the company. Every gas company shall be responsible for establishing and maintaining such records, making such reports, and providing such information as the commission may require to enable it to determine whether the gas company has acted and is acting in compliance with these rules and regulations and the standards established thereunder. If the UTC requests, a gas company shall permit the UTC and its authorized representatives to inspect books, papers, records, and documents relevant to determining whether the gas company and its agents have acted and are acting in compliance with these rules, regulations, and standards which it must comply with. (WAC 480-93-180).

Reporting Requirements

There is a requirement that gas companies report incidents of leaks, as required by WAC 480-93-187. Such reports are to be maintained by the company as well as filed with the Washington UTC. The information that must be reported include at a minimum:

- Date and time detected, date and time reported, date and time and name of employees dispatched, and the date and time the leak was investigated;
- Date and time the leak was reevaluated before repair, and the name of the employee involved;
- Date and time of repair, when a Grade 1 (most serious) leak is involved, and the name of the employee in charge of the repair;
- Date and time the leak was rechecked after repair and the employee involved;
- If leak was reportable to an environmental agency, date and time report made to regulatory authority and name of reporting employee;
- Location of leak (sufficiently described to allow ready location by other competent personnel);
- Leak grade;
- Line use (distribution, transmission, etc.);
- Method of leak detection (if reported by outside party, list name and address);
- Part of system where leak occurred (main, service, etc.);
- Part of system which leaked (pipe, valve, fitting, compressor or regulator station, etc.);
- Material which leaked (steel, plastic, cast iron, etc.);
- Origin of leak;
- Pipe description;
- Type repair;
- Leak cause;
- Date pipe installed (if known);
- Whether under cathodic protection; and
- Magnitude of CGI (Combustible gas indicator) readings at appropriate locations, which are a part of the classification procedures contained in Table 1 of WAC 480-93-186 (codified as WAC 480-93-18601).

The data to be included on Grade 3 leaks (least serious) are at the company's discretion, but must include information necessary to allow for proper follow-up action to be accomplished. (This information was found at WAC 480-93-187.)

There are additional instances where reports must be issued, including when service is disrupted for interruption of service (WAC 480-93-210). On the commission's request, reports must also be filed within 3 months, of events causing fatality, injury requiring hospitalization, property damage exceeding \$5,000 dollars, an event that results in taking a transmission pipeline or major distribution line out of service or below 50 percent normal operating pressure, an event that is significant in the judgment of the company, or an event reported by news media, even if it does not meet any other of the above criteria (WAC 480-93-200).

There are federal requirements to report incidents and annual reports for natural gas and other gas pipelines (49 CFR 191) and for incident reports of hazardous liquid pipelines (49 CFR 195.50 –195.63). Reporting requirements are similar but in somewhat less detail than those required by the UTC.

Fines for Violations

Any gas company, which violates any public safety provision of RCW 80.28.210, or regulation issued thereunder is subject to a civil penalty not to exceed twenty-five thousand dollars for each violation for each day that the violation persists. The maximum civil penalty under this subsection for a related series of violations is five hundred thousand dollars.

Any gas company violating any other provision of RCW 80.28.210 (not related to public safety) or regulations promulgated thereunder, including reports of proposed construction and failure to give notice to the commission of a news media reporting on an pipeline occurrence even if otherwise not required to be reported, shall be subject to a civil penalty not to exceed one thousand dollars for each violation for each day that the violation persists, but the maximum civil penalty shall not exceed two hundred thousand dollars for a related series of violations.

These civil penalties are discretionary by the UTC. (WAC 480-93-223.)

Public Records

The above leak reports to the Washington Utilities and Transportation Commission are among the many utility related public records that are at the Washington UTC. Access to these documents can be obtained by making a request for public records to the UTC. Their physical address is 1300 S. Evergreen Park Drive SW - Olympia, WA 98504. Phone: 360-664-1160 (in state toll-free: 1-800-562-6150) FAX: 360-586-1150. Their web site location is found at www.wutc.wa.gov.

For federal reports from the Office of Pipeline Safety, a Freedom of Information request must be made in writing to:

Freedom of Information Act
Research and Special Programs Administration
DPS-22
U.S. Department of Transportation
Room 7128
400 Seventh Street, SW
Washington, DC 20590

Fees are typically charged for copies made as well as for the employee's time in tracking down the information request. It will be processed within twenty business days unless notified otherwise. The requested records are released unless the record falls into one of the nine exemptions set forth under the Freedom of Information Act (i.e., personal privacy, confidential business information, law enforcement documents, etc).

Local Response Procedure

Neil Clement, Whatcom County's Deputy Director of the Division of Emergency Management, was very helpful in giving insight as to how they respond to an incident. In the case of a pipeline leak (without ignition), there will be odor complaints received from the area of the leak from the odorant. On notice of an odor complaint, a fire engine will

be dispatched. Approximately 100 odor complaints are received each year, and in a large majority of them, the odor is gone by the time the fire engine arrives at the site. An odor complaint triggers a Hazmat level 1, meaning an accident or incident may have occurred and there may be a need to evacuate the initial site. A car accident with a gasoline spill is enough to trigger a level 1 response.

If numerous odor complaints are received or other circumstances denote that the incident involves a greater hazard or larger area, this triggers a Hazmat level 2. On Hazmat level 2, the state patrol is notified, a Hazmat response team is notified, evacuations of people in the immediate area are carried out, and roadways are secured, and barricades placed to prevent citizens from entering the evacuation zone. The Olympic pipeline incident triggered level 2 prior to ignition.

The Hazmat level 3 is an incident involving a severe hazard or a large area which poses an extreme threat to life, property or environment and/or will require a large scale evacuation.

There are three levels of OSHA training that are pertinent to pipeline incidents. The first and most basic level of training is the first responder awareness level. Police officers and emergency services have at least this level of training. The next level is the first responder operations level. This training is accomplished through an eight hour course. Firefighters have this level of training. Where to establish the perimeter, and related topics are covered. Finally, there is the technician level of training, which requires from 24 to 48 hours of training. This is the level of training required for dealing directly with the hazardous material with the Hazmat suits.

Staff confirmed that the Division of Emergency Management has response manuals for all the pipelines running through the county as well as updated maps supplied by the GIS department. Reports varied in size from a small notebook for Williams to four large volumes for the Olympic pipeline. The amount of information appeared to be dependent on whether the line was a natural gas line or a hazardous liquid line, with hazardous liquid lines being much more detailed as a result of the obvious environmental impacts. Whatcom County's Division of Emergency Management also has a training video from Trans-Mountain for training with fire departments.

In addition, Whatcom County's Division of Emergency Management has a hazardous materials plan that provides a series of actions to be taken by emergency responders from a potential incident to extreme hazard conditions. When the fire department is responding to an odor complaint, the cause may be a number of things, with a pipeline leak or rupture being only one of many possibilities.

Analysis of the New State Pipeline Safety Legislation

On May 11, 2001, the Washington state legislature passed a bill, which the governor signed, allowing the Utilities and Transportation Commission (UTC) to fund a pipeline safety program through the establishment of regulatory fees imposed on hazardous liquids and gas pipelines. The effective date of this bill was July 1, 2001. The aggregate

amount of the fees will be sufficient to fund the pipeline safety program when federal funds are taken into account. The fees shall be used to adequately fund pipeline inspection personnel, the timely review of pipeline safety and integrity plans, the timely development of spill response plans, the timely development of accurate maps of pipeline locations, participation in federal pipeline safety efforts to the extent allowed by law, and the staffing of the citizens committee on pipeline safety. The pipeline safety fees shall be deposited in the pipeline safety account.

The UTC is seeking federal delegation for the purpose of enforcement of federal hazardous liquid pipeline safety requirements. If inspection authority is delegated, the UTC shall inspect hazardous liquid pipelines periodically as specified in the inspection program, collect fees, order and oversee the testing of hazardous liquid pipelines as authorized by federal law and regulation, and file reports with the U.S. secretary of transportation. This is different than a previous bill that sought to give this authority to the department of ecology, which has been amended in the current bill to give the Utilities and Transportation Commission these duties.

The Utilities and Transportation Commission will inspect the routes every year for intrastate pipelines and every other year for interstate pipelines. The Office of Pipeline Safety (OPS) retains authority for enforcement, but the Washington Utilities and Transportation Commission is effectively the eyes and ears for OPS in Washington.

Conclusion

The area of pipeline safety is already occupied by federal and state authority, and there is no real opportunity for the county to set design and construction standards on pipelines. Whether the county would have the expertise to do so is also clearly questionable. Local government can still have control over the safety of the county. The county's permitting process would still have to be completed, and the county's comprehensive plan policies can influence the routing of a pipeline through the county, which would have a large influence on safety (i.e. Suggested routing through less populated areas, avoidance of hazardous adjacent uses, etc).

Recommended Approaches

- Require pipeline operators to provide accurate "as-built" pipeline maps as a condition of approval for any county development permit (shoreline, conditional use or major development). In addition to scaled plan maps which shall be accurate to the parcel level, pipeline information (pipe size, allowable pressure, fuel type, average or approximate right of way width, etc) shall also be provided.
- The County should implement an educational program/pamphlet that explains the basics of pipeline safety including how to access the one-call system. This system is to be developed in cooperation with the pipeline industry.

- Continue to encourage pipelines to follow adjacent to established corridors where possible. If deviations are proposed, the applicant shall provide a justification for each deviation.
- The County should seek intervenor status on all pipeline proposal that are not within the County's regulatory authority, so as to preserve the County's legal rights and to retain a voice in the proposal. The County will review a pipeline proponent's application materials and file comments with the reviewing body according to the appropriate procedure and within the timelines provided. Staff shall engage in continual and ongoing communication with the regulatory authority regarding the project as the need or occasion arises.
- If not preempted by federal or state authority, have pipelines allowed only by a conditional use permit, except possibly in industrial zones, with an objective analysis of the pipeline to determine its suitability in relation to the County's siting criteria.
- Notify and seek comment from pipeline operators concerning land use development applications. Take comments received under advisement.
- For natural gas pipelines, encourage siting of critical facilities and high occupancy facilities within the regulations of WAC 480-93-020, and 480-93-030, (not closer than 500' from 500 or greater psig pipe, or 100' from 250 to 500 psig pipe) and as are hereafter amended.
- Require evidence of compliance by the applicant with all right-of-way easement provisions as a condition of all discretionary and non-discretionary land use approvals.
- Put a flag on county databases for permit applications. Through the permitting process flag or control excavation activity in areas adjacent or within 50' of the pipeline. Place a higher level of scrutiny on construction in such areas.
- A pipeline vicinity (within 660' of a pipeline) disclosure statement shall be recorded with/on property deeds in the County Auditor's Office and shall be treated in the same manner as critical areas notes. A statement identifying that a significant natural gas or hazardous liquid pipeline is within the vicinity and the auditor's file number for it shall be on the final plat or short plat map under surveyor's notes prior to final approval by the county. (See WCC 21.04.170, 21.06.070).
- Require use of the "one-call" system on all County land use development permits where excavation is required. The County may impose a county fine for failure to properly use the one-call system.
- Whatcom County's GIS department is to provide updated copies of all major pipeline routes to Whatcom County's Division of Emergency Management. Require as built of all new pipeline projects, extensions and reports to be submitted to the County for

update to gas mapping layers. Provide updates to Whatcom County's Division of Emergency Management.

- A performance bond, assignment of savings, or other like security shall be required for installation and mitigation projects in the amount necessary to insure full performance of all required and approved construction. Upon completion of the project, the performance bond shall be released.

D. ADJACENT USES

The purpose of this section is to examine possible adjacent uses to an oil or natural gas pipeline that may present a hazardous situation to life, the environment, or the community. A careful evaluation of the compatibility of existing and future adjacent uses can help the County develop procedures and policy that direct the siting of future pipeline proposals. The committee has expressed repeatedly that they feel that there are areas where a pipeline should not be sited. This section will explore those opinions expressed by the committee.

Adjacent uses that seemed incompatible or problematic with oil and gas transmission lines included high occupancy residences, schools, uses that may destabilize the soil, such as surface mining, and critical areas. Critical areas include the following areas and ecosystems: (a) wetlands; (b) areas with a critical recharging effect on aquifers used for potable water; (c) fish and wildlife habitat conservation areas; (d) frequently flooded areas; and (e) geologically hazardous areas. (GMA Definition) Some of these critical areas seem to be of more importance than others, as a frequently flooded area may not matter to an underground piping system so long as the integrity of the structure is maintained. Others such as geologically hazardous areas, specifically steep, unstable slopes or areas subject to liquefaction during earthquakes may be particularly unsuitable.

One problem that exists with these uses is that what existed at the time the line was installed may change over time into less desirable uses. For example, the BP/Olympic pipeline runs through the eastern part of Bellingham through Whatcom Creek. At the time it was installed, this area was not heavily populated. Now, however, due to development encroachment, it is a heavily developed residential section of Bellingham, the pipeline now bypasses many smaller lots, and runs in close proximity to schools. One difficulty that the County faces is to try to have pipelines in places that not only are appropriate locations today, but those that are projected to remain in appropriate locations in the future. As urban growth areas have been identified as portions of the county which anticipate higher levels of growth and possible incorporation into the adjacent municipality, these areas may be inappropriate locations for natural gas or hazardous liquid transmission lines.

Major pipeline corridors, linear areas where multiple pipelines are co-located, should be located in areas of least impact to the citizens and environment of Whatcom County as measured by proximity to populous and environmentally sensitive areas. What should be paramount to the County is avoiding locations where the health and safety of Whatcom County residents may be negatively affected, and where environmental costs may be too high. Secondly, pipelines should be located in areas where it will not have, or be perceived as having, a negative effect on property values. One such area that comes to mind is agriculture since the area on the right of way can often be utilized by the landowner.

The following examines the compatibility of various adjacent uses with pipelines.

High Occupancy Areas and Critical Facilities

Environmental and other damage in rural areas are preferred to loss of life. In the event that a pipeline does rupture, it is preferable to have it do so in an area with a low population density to minimize the injuries and loss of life. Pipeline siting must take risk assessment into account, and aim to make the most reasonable tradeoffs between risk avoidance and pipeline cost, with the utmost priority to be on avoiding potential risks.

Areas that the Utilities Committee sees as deserving special treatment are high occupancy residences and critical facilities. Critical facilities are understood to include essential facilities, hazardous facilities, and special occupancy structures (i.e. schools) that are particularly vulnerable in the event of an emergency.

Critical facilities are unique uses that would either likely result in a large number of people potentially exposed or would lessen the ability of the county to be able to properly respond in the event that a major incident occurred (such as endangering a hospital, or a fire station). There may also be special problems associated with these uses (i.e. senior centers, schools, and jails that have particular groups of people with reduced ability to evacuate from a situation).

A similar argument can be made with regard to other high occupancy areas. It is irresponsible to site high pressure transmission pipelines in areas that, in the event of a rupture, could result in high numbers of injuries or fatalities.

The report, *A Model for Sizing High Consequence Areas Associated with Natural Gas Pipelines*, which found the high consequence area from a natural gas pipeline based on a relationship between pipe diameter and operating pressure. This model generally results in a high consequence area that is irregular (i.e. the high consequence area of a 20" diameter pipeline running at 1000 psig would have a high consequence area of 433 feet). To keep things simpler, UPAC is encouraging following WAC regulations regarding proscribed distances for that are dependant on the pressure in the system, with regard to critical and high occupancy facility siting. (See WAC 480.93.020, 480.93.030).

Soil Destabilizing Uses

Pipelines should not be situated in areas where the soil is unstable. This includes geological hazardous areas, as well as man made conditions. This includes areas with steep slopes, as well as areas which present landslide or mudslide hazards. Man-made conditions to be wary of are those that destabilize the soil, such as operating a surface mine. Heavy construction and grading are other activities where the operators need to be extremely cognizant of the pipeline's location to not cause inadvertent third-party damage.

Critical Areas

To the extent possible, critical areas should be avoided. Even though a pipeline constructed through a critical area may not in itself present a problem, the act of placing the pipe underground may disrupt sensitive environmental qualities or fish and wildlife

habitats. However, having a pipeline avoid all critical areas, may not be practical or even possible. A preference shall be placed on avoiding these areas where possible, and minimizing any negative impacts from the installation, and placement of such lines. Mitigation can often be taken to reduce the negative effects.

There is a more in depth discussion concerning critical areas in the environmental section of this report.

Encouraged Areas

In the event that pipelines are going to be sited, areas where the Utilities committee felt that pipelines should be preferred and encouraged are discussed and reviewed. Rationales are given why these areas should be preferred over areas lacking these qualities.

Agriculture/Forestry Resource Lands

The main reason that this is a preferred area is that this land will be of low population density, lessening potential for devastating negative impacts in the event of a rupture. Additionally, resource land is more stable, and less likely to convert to a more intensive use. Another secondary reason is the relative ease in which a pipeline can be installed in these areas. Over farmland, the land can typically still be farmed to its full extent, with the exception being crops that require deep soils are typically restricted.

Commercial Forestry and Rural Forestry are viewed as preferable locations for pipeline siting. The reasons are that this is an area of sparse population density, and unlikely to convert to more intensive uses over time. A minor downside is that the area of the pipeline right of way will have to be cleared of trees and other large vegetation to prevent damage from roots, as well as to provide access to the pipeline and enable visual inspections. The area not able to be used for forestry over the pipeline will be compensated for by the pipeline company by way of an easement (right-of-way) agreement.

The exception to this preference is mineral resource lands. While it is stable, a pipeline could seriously restrict the ability of neighboring landowners to utilize the land. Specifically, one of the main uses in mineral resource land is processing the resources such as by surface mining. Surface mining near a buried pipeline could cause instability in the soil around the pipeline, endangering the integrity of the pipe, people, or the environment near it.

Relative Close Proximity to other Pipelines

This is important from a perspective of control and planning for the future of the county. As there likely will be activities that are precluded next to a pipeline route, having new pipelines relatively close to others solves the problem of having pipelines widely dispersed throughout the county, creating obstacles to landowners on what they can do with their land in large sections of the county. By placing pipelines within a relatively short distance from other pipelines, the areas affected will be more limited. Relative proximity also gives some predictability as to where future lines may be placed.

There are also safety benefits with siting lines together. "Easements with multiple pipelines and utility uses tend to have better safety records than those with just one use," said Bev Chipman, spokeswoman for Williams in a July 24, 2001 article for The Olympian newspaper. "When you co-locate lines, the corridor is usually well-marked and well-known ... The biggest threat to a pipeline is someone digging into it."

A guideline distance is that pipelines running in a corridor should be closer than 660 feet. This length was determined from analyses of high consequence areas, as well as Office of Pipeline Safety regulations that place 220 yards (660') as a threshold point where safety reports are required. The 660-foot standard is also a guideline for determining the class of pipe that needs to be installed. More specifically, if right-of-way's can not be shared then new right-of-ways should be located immediately adjacent to existing right-of-ways unless development encroachment or other site factors not previously considered preclude adjacent placement.

Conclusions

The act of pipeline siting must examine the uses that are adjacent or in close proximity to a proposed pipeline route. Some adjacent uses may be completely incompatible with a pipeline, others should be discouraged, some minimized, and others encouraged as ideal land conditions for pipelines. Those uses that regularly hold large numbers of people, or have other special circumstances may be inappropriate for siting transmission pipelines.

Recommended Approaches

- Designated agricultural and forestry lands are preferred locations for pipelines.
- Pipelines are discouraged in urban growth areas, small towns, crossroads commercial, and other areas of intense rural development as such areas are likely to have future high population density development which would render such pipeline siting inappropriate.

E. ENVIRONMENTAL ISSUES

This section will explore how a pipeline can or will affect the environment. This section will look at how critical areas may be affected, what the affect is on the environment from installation or removal of a pipeline, the effect on the environment from the normal operation and maintenance of a pipeline, as well as how a pipeline rupture can affect the environment.

Critical Areas

The following have been identified as critical areas, in which special heed needs to be given to the environment.

- Wetlands
- Aquifer recharge areas
- Frequently flooded areas
- Geologically hazardous areas
- Fish and wildlife habitat conservation areas

Wetlands

The possible impacts that pipeline construction and maintenance can have on wetlands is a sensitive one. A study by the Wetlands Corridor Program conducted by Argonne National Laboratory found little evidence of long term environmental degradation by underground pipelines. It was found that pipelines installed in accordance with wetland regulations are revegetated within a few years with dense, diverse plant life similar to that naturally found in adjacent areas. The negative impacts were short term, and diminished in time. (Source: <http://www.es.anl.gov/htmls/wetlands.html>).

Aquifer Recharge Areas and Wellhead Protection Areas

Aquifer recharge areas are crucial for replenishing underground aquifers. As a large part of the county is dependent on wells as a source for drinking water, this issue cannot be overlooked. These are areas that are highly susceptible to ground water contamination and pipelines need to be placed in areas that do not damage the recharge areas, so as to not adversely affect the replenishing rate of the aquifers. Particularly careful consideration needs to be made before placing a hazardous liquid pipeline in an aquifer recharge area or wellhead protection area. While a natural gas pipeline is not a threat, a hazardous liquid pipeline presents the risk that a spill will contaminate the ground and seep down into an aquifer or into a wellhead protection area. Chemicals used during the construction and installation process is a possible concern for all types of pipelines. Having inspections and strictly following development regulations can mitigate this risk.

Frequently Flooded Areas

Frequently flooded areas do not pose much hazard or threat to an underground fuel pipeline, except for possible buoyancy situations. The pipeline industry has techniques such as weighing sleeves, concrete swamp anchors, and other techniques for addressing this. As the integrity of the pipeline must be maintained for safety reasons and for the fuel to travel effectively, a pipe that crosses areas that are frequently flooded carries no additional concerns so long as proper mitigation measures are made.

Geologically Hazardous Areas

There are several geologically hazardous areas in Whatcom County. First, the entire region is within the influence on the Cascadia subduction zone. This could cause large magnitude earthquakes (magnitude eight or greater), although this would be very rare. However, smaller earthquakes have been noted with liquefaction. If the shaking is powerful enough, pipelines could be ruptured.

Landslides are also significant geological hazards. Hillsides that are underlain by unstable rock formations, are naturally steep, composed of moisture-sensitive soils, or made so by man-made conditions may be susceptible to landslides that could damage pipelines. Case in point, in 1997, a landslide on Sumas Mountain ruptured one of two Williams Natural Gas pipelines which ignited, no one was seriously hurt, but damage was caused to the area, and the pipeline was eventually rerouted to an area of more stability. Efforts should be made to avoid having pipelines sited in areas where there is a significant possibility of a landslide effecting a pipeline.

Fish and Wildlife Habitat Conservation Areas

Protecting natural systems that support native fish and wildlife populations and habitats have been identified as a goal under the Whatcom County Comprehensive Plan. The policy of disturbing native vegetation as little as possible along stream banks and restoring the conditions back to as natural an environment as possible is encouraged. One technique that is used in pipeline construction is boring under the stream with a drill and placing the pipe through without disturbance to the stream or water source.

The act of placing a pipeline could be a disturbance, but with proper restoration measures the impact on fish and wildlife habitat should be able to be minimized.

Shorelines of State-wide Significance

Shorelines of this category need to be protected from unnecessary intrusion. Whatcom County has a few that are deemed to be of statewide significance. Areas in Whatcom County with this designation are Lake Whatcom, Ross Lake, Baker Lake, the main stem of the Nooksack River as well as the north fork and the south fork, parts of the Skagit River near Newhalem Creek, Birch Bay from Birch Point to Point Whitehorn, and all other marine waters, water columns, and bedlands seaward of extreme low tide. Title 23 of the Whatcom County Code describes the shoreline management program regulations. The code sets forth a series of policies that apply to all projects proposing to cross a shoreline of statewide significance, including all types of pipeline projects. There are five general policies to be applied.

1. The statewide interest should be recognized and protected over the local interest in Shorelines of Statewide Significance.
2. The natural character of Shorelines of Statewide Significance should be preserved.
3. Uses of Shorelines of Statewide Significance should result in long term benefits to the people of the state.

4. Resources and ecological systems of Shorelines of Statewide Significance should be protected.
5. Public access to publicly owned areas in Shorelines of Statewide Significance should be increased.

These policies contemplate a statewide interest, or at least a local interest in a project crossing these areas. The interest in the project is a legitimate characterization on which to evaluate a pipeline project proposal that crosses and impacts shorelines of statewide significance.

Installation and Removal of a Pipeline

The installation of a pipeline will typically require disturbance of the area in which the pipeline is to be placed. Usually it is with an open trench, but boring is done in instances where the surface should not be disturbed, such as on a road or a stream. An open trench and the associated construction area, which can be as wide as 150 feet will result in the disruption of plant life, and some plants will have to be permanently removed as they are either too large to remain on the pipeline right-of-way, or need to be removed because it would create unsafe conditions for them to remain. If the pipeline is to cross streams, and wetlands, disturbances of these areas are a possibility but can be mitigated.

As for the removal of a pipeline, a similar situation exists. The area above where the pipeline is placed will be disturbed and removed to allow for the pipe to be removed.

Normal Maintenance and Operation of Pipeline

The maintenance of a pipeline easement will typically be maintained so pipeline workers can get to a particular area on the pipeline if they need to. Pavement over the pipeline right of way is also not uncommon, as it will typically cross many roads (as shown in figure #2). The picture shows how now unnoticeable a pipeline easement can be. There is very little indication that a pipeline is even there (just a strip of land without trees and a pipeline marker to provide for visual inspections and equipment access). If a pipeline crosses under a farm, normally that area may be able to be farmed (although there may be restrictions on the types of crops that can be planted over a pipeline easement). Since the operation of a pipeline is typically underground and sealed, the normal operation of a pipeline has no ongoing effect on the environment unless a leak or rupture occurs.



Figure 4: maintained pipeline right of way
Source: Whatcom County PDS 2001.

The Event of a Rupture of a Pipeline

The rupture of a pipeline is rare, although they have occurred with serious negative effects on the environment. Whatcom County has been particularly unfortunate to defy

the odds and have two major pipeline explosions in just over two years. The consequences of ruptures really needs to be broken down into what material the pipeline is transporting, and whether or not a fire or explosion occurs. The environmental hazards of each are very different.

Natural Gas

With natural gas, a spill or leak that does not ignite is going to have little effect on the environment and will be harmlessly dissipated into the atmosphere because natural gas is lighter than air. If it does ignite, there could be serious explosions and fires that may occur. Intensive damage and destruction to plant and wildlife, not to mention human life is very possible. The explosion in New Mexico in August 2000 that killed 12 people resulted from an explosion from a natural gas transmission line that is believed to have corroded. This happened in a Class One location, (low development density area) where several groups of families were camping.

Petroleum Based Product

A spill or leak from petroleum will result in an oil spill that must be contained and



Figure 5: Air photograph of the Whatcom Falls explosion's scorch area
Source: City of Bellingham Website (photo was taken 6/16/99)

removed. As this product is a liquid rather than a gas, it has a larger opportunity to damage the environment. A spill is likely to result in soil saturated with petroleum, damage to nearby plants, and damage to wildlife that is in the area of the spill. Streams and water sources may be contaminated even far away from the source of the spill. In the

event of an explosion, this may result in intensive damage or destruction to nearby plant and wildlife, as well as human life. The Whatcom Falls incident that killed 3 people occurred from a ruptured petroleum gas line, and caused extensive environmental damage. Although it is still in litigation, it is conjectured that the expense from the rupture could top 500 million dollars taking all damage and lawsuits into account.

Conclusion

While important, environmental concerns must take lesser priority to concerns over human health and safety. Encouraging and directing pipelines to travel through resource lands can reduce the risk to human life, and the possibility of environmental damage cannot be eliminated. Insuring that pipelines are not placed in environmentally hazardous areas is a prudent move to reduce the risk of any rupture from occurring, or if occurring does as little long-term environmental damage as possible. In addition, efforts should be made to have a pipeline installed with as little disturbance as possible to the environment.

Recommended Approaches

- No pipeline facilities shall be constructed or located in critical areas without fully mitigating the project impact. If impacts can not be adequately mitigated, alternative routes should be selected.
- Monitor and participate to ensure that pipelines are installed in accordance with all applicable critical area regulations.
- Hazardous liquid pipelines should not be sited within a 10-year rate of travel of a known and established wellhead protection area as defined in the Whatcom County critical areas ordinance.
- Establish siting criteria that restricts the location of pipelines in high-risk landslide zones where evidence of instability could be ascertained by recent events, or verifiable historical events.
- With installation or removal of pipe, require disturbed fisheries conservation areas to be restored to as good a condition as before the disturbance. Disturbances in wildlife conservation areas should be mitigated to the extent possible. The removal of an abandoned pipeline should only be approved if there is a good cause to remove the section of pipe as opposed to leaving it in place.
- With new applications, pipeline proponents shall notify all fire districts, water districts, and municipalities in which the proposed siting crosses those locations.

F. REGIONAL DEMAND FOR NATURAL GAS AND HOW THAT DEMAND RELATES TO EXISTING AND FUTURE CAPACITY

The purpose of this section of the report is to break down the figures and information from various sources and compile it to be of use to the community and government of Whatcom County. This information will deal specifically with regional demands for natural gas and how that relates to capacity on transmission pipelines travelling through the county. Knowing the existing capacity and anticipated demand for natural gas will give the County greater understanding of future pipeline need through Whatcom County. Once the situation is known and projected, Whatcom County can determine what needs to be accomplished to deal with the situation reasonably. This report deals with some scientific measuring terms that are not common knowledge, and definitions of these terms can be found at the end of this section. Much of this information summarizes information contained in Cascade's report and Washington State's Office of Trade and Economic Development report on the current situation for natural gas.

Background

At the time of this report, there are two interstate natural gas pipelines serving the Pacific Northwest. The first is PG&E Gas Transmission, Northwest. This pipeline initiates in Alberta and travels into Washington State near Spokane, and crosses into Oregon near the Tri-Cities. As this pipeline does not transverse Whatcom County it will not be discussed further. The other natural gas pipeline that is situated in Washington is the Northwest Pipeline, a subsidiary of the Williams Corporation. This pipeline is bi-directional, meaning that gas can flow in either direction of the pipeline. Gas can enter Washington from two locations on the Northwest pipeline. The first is through eastern Washington and the Columbia Gorge, where the gas originates from the Rocky Mountain Supply Basins. The other location where gas enters Washington via the Northwest pipeline is the Sumas entrance in Whatcom County. This gas originates from Alberta and British Columbia gas fields and travels through the state parallel of the I-5 corridor through the eastern portion of the county.

Proposed and Anticipated Pipeline Projects in Whatcom County

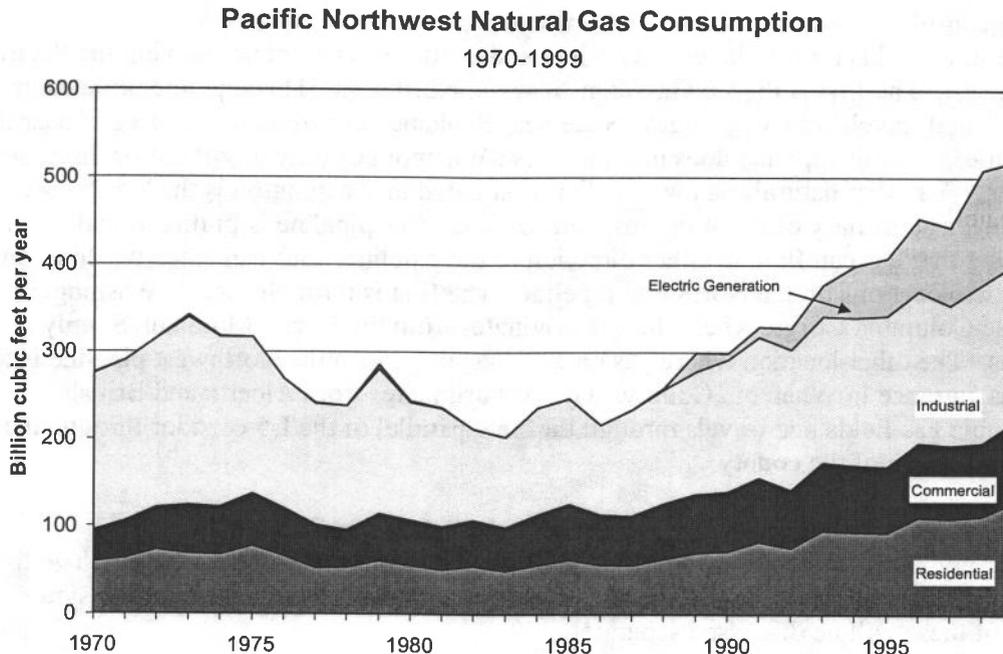
As of May, 2001, there are two expansion plans that involve Whatcom County. The first is the Georgia Strait Pipeline proposal, the other is the Sumas to Chehalis Expansion. Each of these will be discussed separately.

There currently is an application before the Federal Energy Regulatory Committee for a pipeline to extend from the Sumas hub to Cherry Point, and then under the Strait of Georgia to serve the area of Vancouver Island. This would be, if allowed as the application proposes, a 33 mile pipeline in Washington of 20 inches in diameter, and 10 miles of pipeline in U.S. waters with a 16 inch diameter. Demand for this proposed natural gas exists on Vancouver Island, primarily for power generation purposes. Powerex Corp., a BC Hydro subsidiary, has contracted for the entire initial design capacity of 94 MDth/day (94,000 Decatherms/day). The total miles of new pipe would be 85, and the cost is roughly anticipated at 159 Million dollars.

The other Northwest pipeline expansion plans is an expansion of the pipe from Sumas to Chehalis. This pipe is proposed to result in new capacity of 224 MDth/day. Williams submitted this application to FERC in October 2001. This likely is to be done by laying pipes in parallel to increase capacity, however, no additional pipe is proposed in Whatcom County for this project. Northwest/Williams hopes to have their certificate for construction in July 2002, and begin operation in June 2003.

Demand for Natural Gas

A report by the Washington State Office of Trade and Economic Development, found that natural gas consumption has been steadily increasing since 1985 in the Pacific Northwest from less than 250 Billion cubic feet per year to more than 500 Billion cubic feet per year in 1999. Users of natural gas in 1985 consisted of residential, commercial, and industrial uses. Around 1990, electrical generation entered as a fourth significant consumer of natural gas.



Source: Energy Information Administration
via Washington State Office of Trade and Economic Development, Natural Gas and Electricity Report
Figure 6

Demand for natural gas from energy generation has increased dramatically since 1985. Such demand was not significant (>1%) before 1985, to representing between 25% to 33% of the total natural gas demand in 1999. This is a tremendous increase in growth. This is illustrated in Figure 6. There were 12,000 MW of new natural gas-fired generation plants in the Pacific Northwest in some stage of construction, permitting, or planning in May 2001. If 50% of these plants were completed, the natural gas consumption in the region would immediately increase by 50%.

With regard to natural gas demand for residential and industrial users, natural gas demand has increased over time as a result of energy conditions, while such demand has remained largely flat among commercial users. Lower gas prices relative to other sources of energy during this period created a situation where many residences were equipped with natural gas water and space heating, and as a result of this, residential consumption doubled between 1985 and 1999. Residential natural gas prices in Washington State remained at, or typically below that of the national average from 1985 - 1998. Industrial demand from 1985 to 1999 grew by 50% even with higher efficiency industrial plants because of a booming economy.

According to the Cascade Natural Gas Corporation, population and demand for natural gas are expected to grow steadily over the next twenty years in the region. A chart of expected rates of growth is found below at Table 3. Their 1999 integrated resource plan, made projections regarding expected population and annual therm usage forecast. They break the system into three forecasts: the high forecast, the medium forecast, and the low forecast. The medium forecast is considered the most likely scenario. The variables that were used to forecast customer growth were population, employment, and housing conditions for residential customers. Commercial and industrial growth projections were based on population, commercial/industrial employment, fuel prices, and real personal income. A fair amount of uncertainty is going to be present in any projections set out twenty years, but this was Cascade's forecast in 1999.

As a bit of background, Cascade has service areas in 90 communities in Washington and Oregon, all of which are small cities and towns. Moreover, Cascade's sales volume had a ratio of approximately 75% in Washington State with the remaining 25% in Oregon.

In 1998, Cascade had 150,000 residential customers representing 8% of the total throughput on Cascade's system, 26,000 commercial customers representing 7%, and 470 core industrial customers representing 2% of total gas throughput. The remaining 180 non-core industrial customers represented approximately 83% of total throughput.

In Whatcom County, Cascade serves the western and central portion of the county, with service running from Sumas down south to Acme, out of the county and ends in Arlington. Cascade also serves areas generally west of those locations. Here are the results that Cascade obtained, which are for the region.

Table 3: Demand Forecast Highlights

**Compound Annual Growth Rates
1998/1999 – 2018/19 Heating Season Planning Horizon**

Forecast	Customers	Total Annual Therms
High	4.52%	4.22%
Medium	2.24%	2.34%
Low	0.37%	0.96%

Source: CNG 1999 Integrated Resource Plan

Under the most probable scenario (medium forecast), Cascade expects that there will be 2.24% more customers per year for 20 years on a compounded basis or 55.7% more customers in the region in 2018/19 than were in the region in 1998/99. Within the range of their forecasts, customer growth at 2018/19 could be expected to be an increase between 7.7% (low projection) and 142.1% (high projection) from 1998/99 levels. The therms used are also anticipated to increase over time.

Under the most probable scenario, Cascade expects that there will be 58.8% more therms used in 2018/19 than was demanded in 1998/99. Within the range of their forecasts, total annual therms at 2018/19 could be expected to be an increase between 21.1% (low projection) and 128.6% (high projection) from 1998/99 levels.

From a residential customer forecast conducted by Cascade Natural Gas Corp., the Bellingham area had 30,277 residential customers in fiscal year 2000, and is anticipated to increase steadily to 46,062 residential customers by 2015. This represents a 52.1% total growth from 2000 to 2015, or 2.83% annualized growth anticipated. Largest growth areas in the County over the next fifteen years are expected to be Blaine (147.6% increase), and Ferndale (70.5% increase), followed by Bellingham (46.2%) and Lynden (41.2%). Of the residential customers in Whatcom County, Bellingham comprises just over 55% of the natural gas residential customers in the area, and that is expected to increase slightly to 61% by 2015.

As the supply of natural gas that needs to be delivered to other locations in the state or region will increase, it is not complete to only consider the demands of Whatcom County. As already mentioned, Williams pipeline serves the counties down the I-5 corridor. As natural gas fired electrical energy generators are constructed, the demand on this system will increase. This can help explain the two expansion plans that Williams has involving Whatcom County. There are currently 16 Washington State based natural gas power plants either under construction, permitted, or proposed. As of May 2001, the maximum capacity of currently operating plants in Washington, Idaho, and Oregon is 3,069 Megawatts (MW). To give some perspective, the peak energy demand of the city of Seattle is approximately 2,000 Megawatts. The maximum fuel use of all the currently operating plants in the Pacific Northwest is 555 MDth/day. Theoretically, if all of these plants that are under construction, permitted, and proposed were in operation, the generation capacity of the region would increase to 16,015 MW and maximum fuel use

could reach 2,631 MDth/day. Of course, it is unlikely that every plant would become operational, but this illustrates how much strain could occur on the natural gas pipeline system.

Conclusion

Trends existing in the county and region anticipate the need for increased consumption of natural gas. The capacity levels of natural gas pipelines are currently fully subscribed, meaning that they are serving at full current capacity. However, there are two ways that increased volumes can be served. The first is to increase the pressure of the system, the other is to increase the capacity of the pipe or add pipe in parallel to the current system. Adding pipe in parallel is probably preferred to replacing with a larger pipe, as it does not require taking any pipes out of service during the installation process.

While the County may be able to make some indirect influence over consumption of natural gas in the county (ex. by encouraging conservation, encouraging higher efficiency, and controlling land uses), it cannot control the fact that a large part of the supply needs to travel through the county to reach demand elsewhere. Market forces will heavily influence the demand for natural gas or power generation that exist in the region. As a result of a recent power crunch in the winter of 2000/2001 increased need for electrical energy generation has been on the minds of many in the region, and it could very well result in more natural gas power generators coming on-line in the future.

Recommended Approaches

- The County should encourage energy conservation and energy efficiency in all proposed residential, commercial, and industrial projects.

Appendix For Natural Gas Supply and Demand Chapter: Units of Measurement

- *Btu* stands for British thermal unit, a standard unit of energy content. One Btu is the amount of energy expended to raise one gallon of water by 1 degree Fahrenheit.
- *MDth* is a thousand decatherms, or a billion Btu.
- *Therm* is 100,000 Btu. This is the standard measurement used for retail natural gas sales. One therm is equivalent to 29.3 kilowatt hours at 100% efficiency.
- *kW* stands for Kilowatt, which is a standard unit of instantaneous electric energy generation.
- *MW* stands for Megawatt, which is equal to 1,000 kW, and is the standard unit for expressing power plant generation capacity.

G. COMMUNITY IMPACTS

This section will explore the effects that a pipeline has on the community. First, the effects of an existing pipeline and then the placement of a new pipeline will be examined. After that, how a pipeline can have an impact on the community at large, as well as the region, will be briefly reviewed.

What effect has the Olympic pipeline explosion had on Bellingham property values near Olympic pipeline?

To determine what effect the Olympic pipeline explosion has had on sales of real estate on or near the pipeline route, an interview was conducted with the Chief Deputy Assessor of Whatcom County, John Romaker, to see how property values have been affected. The Assessor's office found neither the frequency of sales nor market transaction resale values had been affected as a result of the pipeline explosion. In terms of market values or length of time it took to sell a property, there was no noticeable stigma that could be attributed to being located abutting or within 300 feet from the Olympic pipeline. He did note that site specifically there can be problems, such as a location where a pipeline may split a property. Romaker said that he thought that these outcomes were somewhat surprising but noted that there was little controversy from the public, and the majority of the questions regarding this subject have been from the media, although a few calls were made by neighboring citizens shortly after the explosion. Three anecdotal cases of before and after sales along the pipeline route were mentioned. The first property was sold in June of 1997 for \$184,000, and then sold July 1999, after the June 10, 1999 explosion, for \$202,000. A second property was sold in April of 1994 for \$230,000 and sold again in the year 2000 for \$222,000, showing a slight decline over the 6-year period. A final example was given of a house in the View Ridge neighborhood, a location close to the scorched area of the Whatcom Falls explosion. It changed ownership in 1998 for \$219,900 and again in 2000 for \$235,000. The following is a chart of these sales.

Table 4: Sample Housing Sales near the Olympic Pipeline Explosion

Property	Date of First Sale	Selling Price	Date of Second Sale	Second Selling Price	Increase or (Decrease) in %
Property 1	6/1997	\$184,000	7/1999	\$202,000	9.8%
Property 2	4/1994	\$230,000	1/2000	\$222,000	(3.5%)
Property 3	?/1998	\$219,900	?/2000	\$235,000	6.9%

These three examples, two with slight increases in value, one with a slight decrease indicate the effect or lack thereof that the June 1999 explosion in Bellingham has had on the local real estate market. Romaker did not have the numbers of properties sold along the pipeline route readily available, but felt fairly confident that other sales would reflect similar trends or lack thereof.

It might have been anticipated that the property values in the immediate area would drop quickly from the time of the explosion, with a remaining short term impact depressing property values for a period of 5-7 years, until the event was no longer fresh in the minds

of prospective buyers. This apparently is not the case, and the explosion has had little effect on property values even shortly after the event. A couple possible explanations are that it is highly unlikely that the pipeline will rupture on or near any particular owners stretch of land, and that processes are now in the works to insure that Olympic pipeline, now BP/Olympic, operates its pipe in an extremely safety-conscious way.

General Economic Impact of Being Located on a Pipeline

The results in Whatcom County are generally similar to that of a national case study on the subject. INGAA, the Interstate Natural Gas Association of America, conducted a case study to look at the impacts of property on a pipeline. The *INGAA Foundation Natural Gas Pipeline Impact Study* was a case study to determine where 4 communities from various regions of the U.S. were examined to determine what, if any, the impact was of having a property located on a pipeline compared with a property not located near a pipeline. The study found that there was no significant impact on the sales price of properties located along natural gas pipelines in the area of the case studies. It was further determined that neither the size of a pipeline (diameter) nor the product carried by a pipeline has any significant impact on sales price. Petroleum pipelines were looked at in a limited study with the same results. Laura Turner from the Federal Energy Regulatory Committee also stated that property values are not typically impacted by the presence of pipelines.

The report concluded that there was no discernable impact on demand for properties located along natural gas pipelines in the locations studied. Also, the existence of a pipeline did not impede development of the surrounding properties in any of the locations that were researched.

The study also revealed that the existence of a pipeline has no significant impact on development decisions such as lot size or type of improvement constructed. The presence of a pipeline did not impact any specific property type more or less severely than other property types in the areas studied. The study concluded that it was very likely that the results and conclusions of their study were transferable to other market situations involving natural gas pipelines in other regions of the country.

Other Community-Related Aspects of Pipeline Applications

There is also the situation of the adjacent neighbor. A property owner who has a pipeline transversing their property is going to receive compensation either via an easement agreement (or in a rare case a purchase agreement is possible) or from eminent domain action. The neighbor, who shares the risk of damage from a pipeline incident, will receive nothing, as there is nothing to be purchased from this person. Also, his or her voice will not be heard at a bargaining table, and is limited to commenting (or formally intervening) on the project. If there is a reduction in value due to being adjacent to a pipeline route, this owner will be uncompensated. This appears unfair to the neighbor who is truly lacking control or benefit in this matter.

Finally, what benefits the County will receive from the proposal should be addressed, at least to aid County decision-makers in formulating an attitude toward the proposal.

Presumably, a pipeline will be built to satisfy local needs, or to act as a passthrough to satisfy national needs or the need of the Pacific Northwest. Without adequate demand, the benefits of a new or expanded pipeline are likely to be outweighed by the cost; the cost to the corporation, to the community, to the environment, and to the individual landowners who lose rights over portions of their land. Positive community impacts should be strongly encouraged of pipeline corporations, especially for projects that are not aimed at satisfying the needs of Whatcom County.

Conclusion

Encourage the full cost of a pipeline to be taken into account, including every aspect that a pipeline affects the value of land, the landowners, and the community. Pipeline companies need to be strongly encouraged to support the local community as a way of mitigating or, at a minimum, compensating for the negative effects that it may have on the county. This could be done via helping with restoration projects that improve the overall condition of the county or supporting informational sessions related to easement purchases. These are some ideas, other ideas may be appropriate as well.

Recommended Approaches

- Require pipeline proponents when siting new lines to conduct “open house” and “townhall” style public meetings as part of a County land use development permit process. Different meeting formats offer different positive features County citizens.
- Require that a pipeline proponent show how the proposal provides local or regional benefit.
- Require pipeline proponents to provide notification of the project to abutting landowners.

H. EMINENT DOMAIN

The issue of eminent domain has been seen as one that is significant to the committee and is seen by some as being a weapon in the utility company's arsenal as a way that they can insure that their projects can move forward at the landowners expense. Opinions are likely to differ on the issue of eminent domain, but it appears to be generally agreed that landowners tend to dislike having their property or a portion thereof taken away without their assent. However, the eminent domain process is used with low frequency as a last resort. A local pipeline representative estimated that eminent domain is a tool that is used less than seven percent of the time by his company.

One thing the committee aims to do is to look at the issue of eminent domain, analyze the situation, and determine whether there is anything that can be done by the county to make the situation equitable to all involved. This will look at the background surrounding eminent domain, come to a conclusion as to where the county should position itself on this issue, and make policy suggestions.

What is eminent domain?

"Eminent domain", or sometimes called "condemnation" is the legal process by which a public entity (or some private corporations, such as railroads, and utility companies) are given the legal power to acquire a landowner's private property for a specific public use. This power to take private property for public use is an ancient concept going back to the Roman Empire where a form of eminent domain was used to create roads and aqueducts. Under the U.S. Constitution and Washington statutes, private property may be taken for public use by eminent domain so long as just compensation is paid. The Washington statutes applicable are RCW 8.20, 8.25, 80.88.020, and RCW 80.28.220 for statutes regarding the authority and purposes of eminent domain for pipeline companies.

Who has the authority to take property by eminent domain?

In general, the authority to take property by eminent domain is held by numerous entities. The federal government, the state, counties, cities, school districts, and some corporations have the power to eminent domain. Utility corporations controlling oil and gas pipelines, electrical power companies, telecommunication companies, and water power companies are examples of corporations with eminent domain power.

A utility company in an interstate project needs to obtain a certificate of public convenience and necessity, meaning that the project has been approved. This certificate is granted by FERC for natural gas lines, or the Department of Transportation for petroleum lines. In a project under federal jurisdiction, the holder of a certificate of public convenience and necessity is empowered with the right to acquire property by eminent domain, if agreements with the landowners cannot be made. The pipeline company would have to seek to exercise their right to eminent domain in the District court of the United States in the district in which the property is located, or in State courts. The procedure in District court shall conform as much as possible to that of the State courts. 15 U.S.C. 717h. For FERC pipeline proposals, eminent domain cases are followed according to state statutes.

How is an eminent domain action done under Washington State law?

The entity seeking to appropriate the private property, the “condemnor”, files suit in Superior court in the county where the property is located, and seeks a determination of the amount of compensation to be paid to the landowner in a court of law. Notice of the lawsuit must be made to everyone named as owner, encumbrancer, tenant, or interested party at least ten days before the hearing to give fair notice of the adjudication.

At the trial, there must be competent proof that the contemplated use for which the property is to be appropriated is really a public use, or is for a private use for a private way of necessity, and that the property sought to be appropriated is required and necessary for the purposes of the enterprise, or is for a private use for a private way of necessity, and that the public interest requires the prosecution of such enterprise. Once the court or judge has made a positive determination, then the issue of compensation shall be explored.

At the trial to determine the amount of compensation to be paid to the private property owner, those with encumbrances, tenants, and interested parties, are allowed to present witnesses. Upon the verdict of the jury or in the event of a trial without a jury, the court’s determination, judgment will be entered for the amount of the damages awarded to such owner or owners respectively, and to all tenants, encumbrancers and others interested, for the taking or injuriously affecting such land, real estate, premises or other property.

At the conclusion of the trial, a decree of appropriation will be filed with the office of the auditor in the county where the property is located. This decree of appropriation shall be recorded like a deed of real estate and with like effect. The compensation to be provided is paid into the court along with the costs of the proceedings, and to be paid out under the direction of the court or judge. On such payment to the court, the corporation shall be released and discharged from all further liability, unless upon appellate review it is determined those interested parties shall recover a greater amount of damages than determined at superior court. There exists the opportunity for appeal for 30 days from the date of the entry of judgement so long as the appealing party has not accepted compensation.

Issues that need to be resolved in an eminent domain action

There are three main issues that must be resolved in an eminent domain case, although it may appear that there are only two. Also, there exists an issue such as whether or not all parties have received notice, which is similar to other notice requirements in civil cases. Here are the three issues that pertain directly with eminent domain.

1. Is this an entity that has eminent domain power?

This is not a strong issue, because it is highly likely that an entity that has eminent domain power knows that it has it, and one that does not, is aware of that fact as well. For a somewhat absurd example, a private restaurant owner is not going to be successful in an eminent domain action to acquire property, because it is not within one of those

groups that have been given the statutory authority to acquire property by eminent domain.

2. *Is this property to be acquired for a public purpose or another purpose allowed under eminent domain?*

Every eminent domain action requires a showing of proof that the purpose of acquiring the land is for a public use, or a private use of private way of necessity. This could be adding to utility infrastructure, adding to transportation infrastructure. An example of private use of a private way of necessity is the landowner who splits a tract of land into sections and sells it off, leaving one of the parcels without any way to be accessed by a nearby road. This parcel might be granted an easement of necessity over an adjacent neighbor's property to travel across to reach the landlocked property. Once the proof of a requisite purpose is made, then the court shifts to make a determination of compensation. If it was determined that there was no adequate reason for the suit as allowed under eminent domain, then the suit would fail to go forward.

3. *What is the just compensation to be paid?*

Just compensation is to be the fair market value of the portion of land that was taken with consideration to the highest and best use to which the property can be devoted, assuming that neither seller nor buyer is under an obligation to sell or buy. This land may be taken in fee, or alternatively, some of the rights to the land may be taken. The latter is the case when a pipeline company uses eminent domain to obtain the right to place a line on a property, retains the right to restrict building of structures, and retains the underground pipeline easement to the portion of the property. This issue is a factual one and can be determined by a jury if either side desires. There are opportunities for attorney's fees to the condemned (RCW 8.25.070) as well as fixed amount (up to \$750) for appraisal fees. RCW 8.25.020.

Conclusion

Local government is not involved currently in the eminent domain process conducted by corporations. Whether the County should try to get more actively involved through more requirements on the corporations in the permitting process, is a policy question. While ideally it would be desirable for buyers and sellers of property to willingly come to agreements without the use of the eminent domain power, this unfortunately is not always possible. Trying to ferret out priorities between individual property rights and benefits to a community are difficult and are often case-specific.

Eminent domain is a well-recognized practice in the U.S and state governments. Eminent domain has a role in our society to the landowner (i.e. insuring receiving just compensation), the corporation or condemning entity (i.e. preventing a few landowners from asking exorbitant prices, thereby blocking projects), and the community (i.e. allowing a mechanism for projects of public benefit to move forward). This being said, eminent domain is a tool that should be used rarely and only if the involved parties refuse to be reasonable, as opposed to being used as a threat held over the landowners' figurative head, as a common perception holds. Further, clear information regarding the

rights and responsibilities of all parties involved is necessary to ensure that landowners know what to expect when confronted with an eminent domain threat.

Recommended Approaches

- **Require early in the permitting process when new pipelines are proposed, that funding be provided by a pipeline proponent toward a third-party held informational session about eminent domain and right-of-way issues so that landowners and interested parties understand these issues and process. This would help alleviate some of the fears of eminent domain that exist.**

I. FRANCHISES AGREEMENTS ON ROADS

Introduction

A franchise agreement is a negotiated document made between the governing body and a utility company. The agreement between these two groups sets out terms under what conditions the utility company is allowed to place their wire lines or pipelines under public roads or on county property. A franchise agreement may be crucial to the ability of a project to be implemented, without one; a project (such as one involving a pipeline) might not be feasible. With respect to counties, the County Council may authorize and grant franchises to persons or private or municipal corporations to use the right of way of county roads for the construction and maintenance of waterworks, gas pipes, telephone, telegraph, and electric light lines, sewers and other such facilities. Franchises can also include railway roads, tramroads, and cattleguards.

A franchise must go through a hearing process, which is initiated with an application made to the county legislative authority. The application will fix a time and place for the hearing, and a public notice shall be given at the expense of the applicant, by posting notices in three public places in the county seat of the county at least fifteen days before the day set for the hearing. Also, notice of the hearing shall be published in the official newspaper of the county at least five days before the hearing. If, after the hearing, the board deems the project to be for the public interest to grant the franchise in whole or in part, it may enter a resolution to that effect and require the applicant to place their utility and appurtenances in such location on or along county roads as the board finds will cause the least interference with other uses of the road.

The state of Washington has several limitations on what must or must not be included in franchise agreements, these will be addressed below. These issues regarding franchises over county roads and bridges are specifically addressed by RCW 36.55.

Of particular note is the limitation upon grants.

- 1) Any person constructing or operating any utility on or along a county road shall be liable for all expense incurred in restoring the county road to a suitable condition for travel.
- 2) No franchise shall be granted for a period longer than 50 years.
- 3) No exclusive franchise shall be granted.
- 4) The facilities of the holder of any such franchise shall be removed at their expense, to some other location in the event that the County right of way is to be constructed, altered, or improved, and such removal is necessary for the construction, alteration, or improvement.

The county auditor shall keep and maintain a correct record of all franchises existing or granted with information describing the holder of the franchise, the purpose, the portion of county road over or along which granted, the date of granting, term for which granted, date of expiration, and any other information with reference to any special provisions of such franchises.

The process of granting and obtaining a franchise agreement has been discussed, so the focus will shift to Whatcom County's existing franchise agreements. At the conclusion of this document will be an easy to understand summary of Cascade's franchise agreement.

Summary of Northwest/Williams Franchise Agreement

There are at least two franchise agreements that the County made with Pacific Northwest Pipeline, now a William's subsidiary. The provisions of both of the documents are identical with the exception that the franchises are granted over different specific county roads. These agreements govern under what conditions the pipeline company is to operate such as, obtaining permits, laying pipe only in accordance to the plan, providing notice to the County Engineer, restoring the situation to as good condition as before, and other provisions of a like nature. Furthermore, these are not exclusive franchises (or are any such agreements that the county makes). It is binding on successors and assigns, and must give 60 days notice of intention to sell or assign the franchise. This provision is more liberal than the Arco franchise executed in 1970, where the right to sell or assign the franchise must be consented to by the County Council.

The franchise agreements that were made with Trans Mountain and Atlantic Richfield are materially similar, although some minor discrepancies do exist. No franchise agreement through Whatcom County currently requires any pipeline company to pay a fee (either yearly or one-time). They do all require that the road be restored to as good a condition as it was prior to construction and installation of a pipeline.

Cascade's Franchise Agreement

Provisions in Cascade's agreement make clear that the County maintains ultimate control regarding placement. The County, through the Public Works department, requires an application process, which must be approved by the Director of Public Works before a permit can be obtained. As distribution lines are laced throughout the County, there is no precise locations specified in the agreement. The County also retains the right to proscribe how and where gas distribution lines are to be installed. Also, the County can require the removal or replacement of lines if it is in the public interest. There are much more details of Cascade's franchise agreement at Appendix A.

Table 5: Expiration of County's Franchise Agreements

Name of Pipeline	Date of Expiration	When Entered Into	Term of Franchise
Pacific Northwest (now Northwest/Williams) (2 Agreements)	March 2006 & August 2006	March 1956 & August 1956	50 years
Trans Mountain Oil	November 2006	November 1956	50 years
Atlantic Richfield (ARCO) pipeline	August 2010	August 1970	40 years
Cascade Natural Gas	May 2021	May 1996	25 years

The conditions of the franchise agreements remain in effect into the time of expiration or agreement of both the parties. At expiration, terms may be renegotiated.

Discussion/Conclusion

The topic of franchise agreements came up among UPAC members as a possible technique that could be used to have greater control over the actions and behavior of pipeline companies. Possible suggestions were to require meetings for projects in a format proposed by the county as a condition in the agreement, to require yearly or periodic fees for use of the franchise, inconvenience fees for detours/days a road is under construction, and using the franchise power as a community tool to ensure fair dealings.

The earliest that an existing franchise agreement is set to expire, however, is 2006. However, the franchise agreements that do exist (with the exception of Cascade's franchise agreement) have a detailed specificity and illustrate exactly where the road crossings are allowed. This appears to allow room for new franchise agreements to cover new terrain in the case of a proposed pipeline route. With an expansion of an old pipeline, on the other hand, following a route in close parallel, it is unclear whether a new franchise agreement would need to be executed.

This topic of using franchise agreements is one where it seems as if improvements can be made. First, this is a topic that is squarely within the power of the county. The downside is that the previously agreed-to franchises do not expire for a significant amount of time (between 5 to 20 years). Second, improvements in the agreements have been made over the years (shorter term lengths, implementing contract provisions more beneficial to the county, etc.), but even further advantageous use of franchise agreements could be implemented. Whatcom County should consider using franchise agreements to get pipeline companies to comply with the County's desire for more frequent pipeline inspections and insuring that meetings are held in appropriate formats. There may be other conditions as well that would be appropriate to be in a franchise agreement, governing the operation of the pipeline. A copy of a model franchise agreement from the consortium of cities and counties regarding pipelines has been added in an appendix to this section. This should be used as a starting point for negotiating a franchise agreement with a pipeline operator.

Recommended Approaches

- As it is recognized that a franchise agreement can be a beneficial tool in addressing pipeline concerns, the County will carefully scrutinize all proposed franchise agreements, review and evaluate model franchise agreements for provisions to be incorporated into negotiation discussions regarding proposed provisions in future franchise agreements.

APPENDIX A

Summary of Whatcom County's Franchise Agreement with Cascade Natural Gas

1. **Franchise Granted.** A non-exclusive franchise for Cascade has been granted for a period of 25 years, featuring non-exclusive rights and privileges to construct, operate, maintain, and repair Natural Gas Distribution Lines along county roads. The rights apply to all roads and county property. This agreement was signed in May of 1996, and will expire May 2021.
2. Cascade shall have the right to enter county roads, rights-of-way and other county property for the purpose of constructing, operating, and maintaining Natural Gas Distribution lines and facilities. All construction and installation along or under county roads shall be subject to the approval of and pass inspection of the Director of Public Works and will conform with all County and State regulations. The County may prescribe how and where gas distribution lines be installed and may require the removal and replacement of such lines, if in the public interest, at Cascade's expense.
3. **Maintenance and Restoration.** For the disturbance of a road, paved area or public improvement, Cascade shall restore it to the substantially same condition as existed before the disturbance. Cascade shall maintain all above ground improvements it places on County right-of-way. If Cascade fails to comply and property is damaged, then Cascade shall be responsible for all damage caused.
4. **Construction Application.** Before construction of Natural Gas Distribution lines, Cascade shall file with Director of Public Works its application for permit to do such work, together with plans and specifications showing the location of all lines and facilities sought to be constructed. Lines and facilities shall be laid in exact conformity with such plans and specifications, with deviations allowed only writing by the Director of Public Works. The plans shall specify how the installation is to take place. No construction shall be commenced until securing a written permit from the Director of Public Works.
5. **Construction on Roadways/County Property.** In work that requires breaking the soil of county roads or other county property, Cascade, at its own expense, shall complete the work and make good the county road or county property and leave it in as good condition as before work was commenced. The Director of Public Works may order work considered necessary to return county property to a safe condition. On demand, Cascade shall pay all costs of such work.
6. **Construction – Other Lines and Facilities.** All construction or installation of gas lines or distribution service shall be done in a manner so as to not interfere with other utilities' lines, drains, drainage ditches, irrigation ditches, nor grading or

improvement of county roads, right-of-ways or county property. Utilities installed prior in time shall have preference as to positioning and location.

7. Construction – Public Safety and Inconvenience. Safeguards shall be taken by Cascade to insure as little interference as possible, and so that damage and injury do not arise. Covering holes at night, and placing warning lights and barricades are examples of what is required. Cascade is liable for any injury or damage sustained by its carelessness or neglect.
8. County Rights Reserved. Whatcom County does not waive any rights that it now has with respect to county roads, right-of-ways or other county property. The franchise shall be subject to the power of eminent domain, and in any proceeding, the franchise itself has no value.
9. Relocation of Lines and Facilities. Cascade, upon written notice from the Director of Public Works or the Director of Highways, shall at its expense, change the location of or adjust the elevation of transmission lines as to not interfere with County work. All such work shall pass the inspection of the Director of Public Works.
10. County Road Work Permitted. The County will give 48 hours notice if it intends to engage in blasting, grading, excavating contiguous to a distribution line in order to allow Cascade to protect its lines and facilities.
11. Indemnification. Cascade shall indemnify, defend, and save harmless Whatcom County and duly elected or appointed officials or members or employees from any loss arising out of any act or omission on the part of Cascade which may occur by the construction, operation and maintenance of Cascade's distribution lines and facilities. Cascade shall fully satisfy a judgment against the County within 90 days. Failure to do so shall terminate the franchise agreement and Whatcom County shall have a lien on the distribution lines and facilities.
12. Non-Exclusive Franchise. This franchise agreement is non-exclusive. It shall not prohibit the County from granting other franchises.
13. Successors and Assignees. All the provisions of the franchise agreement are also binding on the successors and assignees of Cascade. This franchise may not be sold, transferred, or assigned without the consent of the Whatcom County Council.
14. Enforcement/Remedies. If Cascade willfully violates or fails to comply with any provision through willful or unreasonable neglect, then Cascade shall forfeit all rights, and this franchise may be revoked or annulled by the Whatcom County Council.

15. **Insurance.** Cascade shall maintain during the term of the agreement, an insurance policy in the amount of three million dollars for property damage coverage, and one million dollars for public liability coverage. The County reserves the right to review the dollar amounts of the policies and adjust the amount of coverage deemed appropriate on an annual basis.
16. **License, Tax and Other Charges.** Cascade is not exempt from any future uniform rent, license, tax charge that may be required. Failure to timely remit any sums properly due shall be cause for forfeiture of rights under this agreement.

APPENDIX B RECOMMENDED APPROACHES

This section summarizes the recommendations previously made, in a format so that the recommendations can be easily viewed together and as a whole.

Safety

- Require pipeline operators to provide accurate “as-built” pipeline maps as a condition of approval for any county development permit (shoreline, conditional use or major development). In addition to scaled plan maps which shall be accurate to the parcel level, pipeline information (pipe size, allowable pressure, fuel type, average or approximate right of way width, etc) shall also be provided.
- The County should implement an educational program/pamphlet that explains the basics of pipeline safety including how to access the one-call system. This system is to be developed in cooperation with the pipeline industry.
- Continue to encourage pipelines to follow adjacent to established corridors where possible. If deviations are proposed, the applicant shall provide a justification for each deviation.
- The County should seek intervenor participation on all pipeline proposal that are not within the County’s regulatory authority, so as to preserve the County’s legal rights and to retain a voice in the proposal. The County will review a pipeline proponent’s application materials and file comments according to the appropriate procedure within the timelines provided. Staff shall engage in continual and ongoing communication with the regulatory authority regarding the project as the need or occasion arises.
- If not preempted by federal or state authority, have pipelines allowed only by a conditional use permit, except possibly in industrial zones, with an objective analysis of the pipeline to determine its suitability in relation to the County’s siting criteria.
- Notify and seek comment from pipeline operators concerning land use development applications. Take comments received under advisement.
- Encourage siting of critical facilities and high occupancy facilities within the regulations of WAC 480-93-020, and 480-93-030, and as are hereafter amended.
- Require evidence of compliance by the applicant with all right-of-way easement provisions as a condition of all discretionary and non-discretionary land use approvals.
- Put a flag on county databases for permit applications. Through the permitting process flag or control excavation activity in areas adjacent or within 50’ of the pipeline. Place a higher level of scrutiny on construction in such areas.

- A pipeline vicinity (within 660' of a pipeline) disclosure shall be recorded with/on property deeds in the County Auditor's Office and shall be treated in the same manner as critical areas notes. A statement identifying that a significant natural gas or hazardous liquid pipeline is within the vicinity and the auditor's file number for it shall be on the final plat or short plat map under surveyor's notes prior to final approval by the county. (See WCC 21.04.170, 21.06.070).
- Require use of the "one-call" system on all County land use development permits where excavation is required. The County may impose a county fine for failure to properly use the one-call system.
- Whatcom County's GIS department is to provide updated copies of all major pipeline routes to Whatcom County's Division of Emergency Management. Require as built of all new pipeline projects, extensions and reports to be submitted to the County for update to gas mapping layers. Provide updates to Whatcom County's Division of Emergency Management.
- A performance bond, assignment of savings, or other like security shall be required for installation and mitigation projects in the amount necessary to insure full performance of all required and approved construction. Upon completion of the project, the performance bond shall be released.

Adjacent Uses

- Designated agricultural and forestry lands are preferred locations for pipelines.
- Pipelines are discouraged in urban growth areas, small towns, crossroads commercial, and other areas of intense rural development as such areas are likely to have future high population density development which would render such pipeline siting inappropriate.

Environment

- No pipeline facilities shall be constructed or located in critical areas without fully mitigating the project impact. If impacts can not be adequately mitigated, alternative routes should be selected.
- Monitor and participate to ensure that pipelines are installed in accordance with all applicable critical area regulations.
- Hazardous liquid pipelines should not be sited within a 10-year rate of travel of a known and established wellhead protection area as defined in the Whatcom County critical areas ordinance.

- Establish siting criteria that restricts the location of pipelines in high-risk landslide zones where evidence of instability could be ascertained by recent events, or verifiable historical events.
- With installation or removal of pipe, require disturbed fisheries conservation areas to be restored to as good a condition as before the disturbance. Disturbances in wildlife conservation areas should be mitigated to the extent possible. The removal of an abandoned pipeline should only be approved if there is a good cause to remove the section of pipe as opposed to leaving it in place.
- With new applications, pipeline proponents shall notify all fire districts, water districts, and municipalities in which the proposed siting crosses those locations.

Supply and Demand of Natural Gas / Hazardous Liquids

- The County should encourage energy conservation and energy efficiency in all proposed residential, commercial, and industrial projects.

Community Impacts

- Require pipeline proponents when siting new lines to conduct “open house” and “townhall” style public meetings as part of a County land use development permit process. Different meeting formats offer different positive features County citizens.
- Require that a pipeline proponent show how the proposal provides local or regional benefit.
- Require pipeline proponents to provide notification of the project to abutting landowners.

Eminent Domain

- Require early in the permitting process when new pipelines are proposed, that funding be provided by a pipeline proponent toward a third-party held informational session about eminent domain and right-of-way issues so that landowners and interested parties understand these issues and process. This would help alleviate some of the fears of eminent domain that exist.

Franchise Agreements

- As it is recognized that a franchise agreement can be a beneficial tool in addressing pipeline concerns, the County will carefully scrutinize all proposed franchise agreements, review and evaluate model franchise agreements for provisions to be incorporated into negotiation discussions regarding proposed provisions in future franchise agreements.

- **APPENDIX C: Glossary**

“Aquifer” means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water to wells or springs (Chapter 173 – 160 WAC).

“Cathodic protection” means an erosion control technique implemented through the use of an electrical current. It is protection added by applying an electric current to the pipe to counteract the electrical currents created by corrosion where the metal surface contacts the ground.

“Class locations” means an onshore area that extends 220 yards on either side of the centerline of any continuous 1-mile length of pipeline.

- (1) A Class 1 location is:
 - (i) An offshore area; or
 - (ii) Any class location unit that has 10 or fewer buildings intended for human occupancy.
 - (2) A Class 2 location is any class location unit that has more than 10 but fewer than 46 buildings intended for human occupancy.
 - (3) A Class 3 location is:
 - (i) Any class location unit that has 46 or more buildings intended for human occupancy; or
 - (ii) An area where the pipeline lies within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. (The days and weeks need not be consecutive.)
 - (4) A Class 4 location is any class location unit where buildings with four or more stories above ground are prevalent.
- (as defined at 49 CFR 192.5)

“Combustible gas indicator” (CGI) means a device capable of detecting and measuring gas concentrations of the gas being transported.

“Critical areas” mean the definition in Whatcom County’s Critical Areas Ordinance 16.16.800(17). This includes the following areas:

- a. Geologically hazardous areas;
- b. Alluvial fan hazard areas;
- c. Frequently Flooded Areas;
- d. Critical aquifer recharge areas;
- e. Wetlands;
- f. Fish and Wildlife habitat conservation areas.

“Critical facilities” mean the definition in the Whatcom County’s Critical Areas Ordinance 16.16.800(19). (Ord. 97-056).

These include:

- a. Essential Facilities.
 - i. Fire and police stations;
 - ii. Tanks or other structures containing, housing or supporting water or other fire-suppression materials or equipment required for the protection of essential or hazardous facilities, or special occupancy structures;
 - iii. Emergency vehicle shelters and garages;
 - iv. Structures and equipment in emergency-preparedness centers;
 - v. Stand-by power generating equipment for essential facilities;
 - vi. Structures and equipment in government communication centers and other facilities required for emergency response.
- b. Hazardous Facilities. Structures supporting or containing sufficient quantities of toxic or explosive substances dangerous to the safety of the general public if released.
- c. Special Occupancy Structures.
 - i. Covered structures where primary occupancy is public assembly;
 - ii. Buildings for schools, colleges, adult education or day-care centers;
 - iii. Hospitals and other medical facilities;
 - iv. Jails and other detention facilities.

“Distribution line” means a pipeline other than a gathering or transmission line.

“Easement” is used interchangeably with right-of-way.

“EFSEC” is a common abbreviation to refer to Washington’s Energy Facility Siting Evaluation Council.

“FERC” is a common abbreviation to refer to the Federal Energy Regulatory Commission.

“Fish and wildlife habitat conservation area” include listed species habitats, habitats and species of local importance, shellfish habitat conservation areas; kelp and eelgrass beds, pacific herring spawning areas, surf smelt and pacific sand lance spawning areas, ponds and wetlands, lakes and marine water bodies, rivers and streams, and natural area preserves.

“Franchise agreement” means a negotiated document made between the governing body and a utility company setting conditions how a utility company is allowed to place their facilities under public roads or on county property.

“Gas” means natural gas, flammable gas, or toxic or corrosive gas.

“Gas pipeline” means all parts of a pipeline facility through which gas moves in transportation, including, but not limited to, line pipe, valves, and other appurtenance connected to line pipe, pumping units, fabricated assemblies associated with pumping units, fabricated assemblies associated with pumping units, metering and delivery stations and fabricated assemblies therein, and breakout tanks. “Gas pipeline” does not include process or transfer pipelines.

“Gas pipeline company” means a person or entity constructing, owning, or operating a gas pipeline for transporting gas. A “gas pipeline company” does not include: (a) Distribution systems owned and operated under franchise for the sale, delivery, or distribution of natural gas at retail; or (b) excavation contractors or other contractors that contract with a gas pipeline company.

“Gathering line” means a pipeline that transports gas from a current production facility to a transmission line or main.

“Geologically hazardous areas” means areas that because of their susceptibility to erosion, sliding, earthquake, or other geological events, may not be suited to seating commercial, residential, or industrial development consistent with public health or safety concerns. They include areas that are susceptible to one or more of the following types of hazards:

- a. Landslide hazards;
- b. Seismic hazards;
- c. Mine hazards;
- d. Alluvial Fan hazards.

“Hazardous liquid” means: (a) Petroleum, petroleum products, or anhydrous ammonia as those terms are defined in 49 C.F.R. Part 195.

“Hazmat” means hazardous materials, and is typically meant to refer to a hazardous materials level or hazardous materials plan.

“High consequence area” means the area within which both the extent of property damage and the chance of serious or fatal injury where a pipeline rupture combined with ignition would be expected to be significant.

“One call locator service” means an organization of owners or operators of buried facilities which provides a telephone notification service for the purpose of receiving and distributing to its members advance notifications from persons regarding planned excavations.

“Mitigation” means actions taken to alleviate, reduce severity or moderate consequence of the effect.

“Pipeline” or “pipeline system,” means all parts of a pipeline facility through which a hazardous liquid or gas moves in transportation, including, but not limited to, line pipe,

valves, and other appurtenances connected to line pipe, pumping units, fabricated assemblies associated with pumping units, metering and delivery stations and fabricated assemblies therein, and breakout tanks. "Pipeline" or "pipeline system" does not include process or transfer pipelines.

"Pipeline company" means a person or entity constructing, owning, or operating a pipeline for transporting natural gas and hazardous liquids.

"Right-of-way" means the strip of land in which a legal right of passage is granted over another person's property, which is acquired for pipeline construction, operation, maintenance, and abandonment. A pipeline operator acquires an easement for the construction, operation, protection, surveillance and abandonment of the pipeline. The landowner retains the right to use the easement as long as it does not interfere with activities associated with the pipeline or its integrity. For this reason, a typical easement agreement with a pipeline company requires the landowner to obtain the consent of the pipeline operator to disturb the ground or erect a structure.

"Setback" means the minimum distance established between buildings and pipelines to prevent third party damage to pipelines and provide enough space for vehicle movement during construction, operations, maintenance and abandonment, or in the event of an emergency.

"Service line" means a distribution line that transports natural gas from a common source of supply to a customer meter or the connection to a customer's piping, whichever is farther downstream, or to the connection to a customer's piping if there is not a customer meter. The "customer meter" is the meter that measures the transfer of gas from an operator to a customer.

"Third-party damage" means excavation damage caused by equipment operated by an outside party other than the pipeline operator or contractor working for the operator.

"Transfer pipeline" means a buried or aboveground pipeline used to carry oil between a tank vessel or transmission pipeline and the first valve inside secondary containment at the facility provided that any discharge on the facility side of that first valve will not directly impact waters of the state. A transfer pipeline includes valves, and other appurtenances connected to the pipeline, pumping units, and fabricated assemblies associated with pumping units. A transfer pipeline does not process pipelines, pipelines carrying ballast or bilge water, transmission pipelines, or tank vessel or storage tanks.

"Transmission pipeline" means a natural gas or hazardous liquid pipeline that transports within a storage field, or transports from an interstate pipeline or storage facility to a distribution main or a large volume user, or operates at a hoop stress of twenty percent or more of the specified minimum yield strength.

"Utility corridor" means an area where a previously existing pipeline or similar utility line is situated. This corridor includes the right-of-way of an existing line, and an area of

a specified length surrounding these right-of-way lines in which siting a new pipeline could be considered appropriate.

“WUTC” is an acronym for Washington’s Utilities and Transportation Commission. It is also referred to as UTC.

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NOTE: Many other publications, papers, letters, and conference notes relating to utilities and pipelines have been used to produce this chapter. Apologies are extended to authors of those works not cited.


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- ☒ Operation Lifesaver

Pipeline Safety

- ☒ Program Description
- ☒ Laws & Rules
- ☒ Pipeline Companies
- ☒ Pipeline Newsletter
- ☒ Citizens Committee
- ☒ Call Before You Dig
- ☒ Pipeline Maps

Motor Carrier Safety

Pipeline Safety Program Description

Program Fact Sheet

Program History

The UTC's pipeline safety program began inspecting natural gas systems operating within the state of Washington in 1955. Intrastate hazardous liquid pipelines were added to UTC's authority in 1996. In 2000, the Legislature approved the Pipeline Safety Act (HB 2420) directing the program to seek federal approval to include inspections of all interstate pipelines. In 2001, the Legislature adopted the Pipeline Safety Funding Bill (SB 5182)

In 2003, after working closely with the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA) for two years, the UTC pipeline safety program became the lead inspector for all interstate pipeline inspections and incidents within the state of Washington. The UTC can make recommendations to PHMSA but does not have enforcement authority over interstate pipelines.

The program is supported through a combination of federal grants and pipeline fees. (WAC 480-93-240 Annual Pipeline Fee Methodology)

Washington State Pipelines

There are 28 pipeline companies in Washington operating over 24,000 miles of pipelines. Nineteen of the pipelines carry natural gas and nine carry hazardous liquids such as gasoline and jet fuel. There are eight interstate pipelines in Washington - Five carry liquids and three carry natural gas. Interstate lines typically are large diameter lines operating at very high pressure.

The UTC also regulates a liquified natural gas facility, an underground natural gas storage site, and propane storage sites, as well as natural gas master meters. Master meters are small natural gas distribution systems operated by schools, hospitals or by residential complexes such as apartment buildings and mobile home parks.

Program Organization

A pipeline safety director manages the pipeline safety program. The Chief Pipeline Safety Engineer directs all compliance activities by the program's seven pipeline inspectors. The Operations Manager oversees administrative support functions, budget work and program policies development and management and Damage Prevention Manager oversees rule and legislative changes and the program's extensive damage prevention efforts. (Pipeline Safety Organizational Chart)

There is a diversity among the inspectors from formal degreed engineers to inspectors with extensive work experience with pipeline companies. All inspectors are federally certified, having completed training in all federal and state pipeline safety regulations as well as advanced investigator training.

Mission Statement

The mission of the Washington Utilities and Transportation Commission (UTC) Pipeline Safety Program is to ensure public health, safety and environmental quality by:

- Conducting quality inspections of hazardous liquid and natural gas pipeline companies
- Improving safety laws and regulations
- Educating local communities on pipeline safety issues
- Providing technical assistance to pipeline operators, local governments and communities, and
- Enforcing laws and regulations in a fair & equitable manner

How to contact us

The UTC's offices are at 1300 South Evergreen Park Drive just off of Highway 101 in Olympia. You can reach the pipeline program by calling 360-664-1254 or us our staff contact list.

Stakeholder Communications

PHMSA Pipeline Safety Program

Washington Significant Incidents and Mileage Overview

The report below provides details and incident history for the pipeline systems in the state of Washington.

The incidents reported below are limited to Significant Incidents ⁽⁴⁾ over the period 2001 to 2010 only. Each year and selected column totals provide links to focused reports showing the causes of the corresponding incidents.

The data sources for this report are the PHMSA Flagged Incident Files ⁽¹⁾ ⁽²⁾ ⁽³⁾ and several pipeline mileage data sources as described below.

- Hazardous Liquid - National Pipeline Mapping System ⁽⁴⁾
- Gas Transmission - National Pipeline Mapping System ⁽⁴⁾
- Gas Gathering - Calendar Year 2009 Annual Reports ⁽⁵⁾
- Gas Distribution - Calendar Year 2009 Annual Reports ⁽⁶⁾

All mileages are for the year 2009 and are approximate as some data sources may not contain a complete record of state pipeline mileage for the year 2009.

See State Significant Incident Detail Listing for more information about each Significant Incident in Washington

Where appropriate, the table columns can be sorted by clicking the corresponding column header.

Washington Pipeline Safety Regulatory Fact Sheet

More Pipeline Incidents and Mileage Reports are available.



Washington Pipeline Mileage	Washington Significant Incidents	Washington Serious Incidents	Washington Mileage by Commodity	Washington
All Pipeline Systems	Hazardous Liquid	Gas Transmission	Gas Gathering	Gas Distribution
All Gas Transmission Systems	Onshore Only	Offshore Only		
Note: Significant incidents include all serious incidents.				
Washington Gas Transmission: 2001-2010				
Year	Number	Fatalities	Injuries	Property Damage ^(D) ^(E)
2001	0	0	0	\$0
2002	1	0	0	\$219,743
2003	3	0	0	\$461,955
2004	0	0	0	\$0
2005	0	0	0	\$0
2006	1	0	0	\$165,751
2007	0	0	0	\$0
2008	0	0	0	\$0
2009	2	0	0	\$455,968
2010	1	0	0	\$300,100
Totals	8	0	0	\$1,603,520
3 Year Average (2008-2010)	1	0	0	\$252,023
5 Year Average (2006-2010)	1	0	0	\$184,364
10 Year Average (2001-2010)	1	0	0	\$160,352
Export Table				

Notes

- Significant Incidents are those incidents reported by pipeline operators when any of the following conditions are met: 1) Fatality or injury requiring in-patient hospitalization. 2) \$50,000 or more in total costs, measured in 1984 dollars. 3) Highly volatile liquid releases of 5 barrels or more or other liquid releases of 50 barrels or more. 4) Liquid releases resulting in an unintentional fire or explosion. **Serious incidents**, a subset of Significant Incidents, are incidents which involve a fatality or injury requiring in-patient hospitalization.
- The miles of gas distribution service lines (the connection between the distribution line and the end user) are not included in the Gas distribution mileage. The total number of such services is provided.
- Gas Distribution Incidents where fire/explosion was the primary cause of failure, such as a house fire that subsequently resulted in - but was not caused by - a distribution line failure are excluded from 2004 onward. This exclusion has not been applied in years prior to 2004 due to difficulty in identifying these types of events with the older report formats.
- The costs for incidents prior to 2010 are presented in 2010 dollars. Cost of Gas lost is indexed via the Energy Information Administration, Natural Gas City Gate Prices. All other costs are adjusted via the Bureau of Economic Analysis, Government Printing Office Inflation values.
- For years 2002 and later, property damage is estimated as the sum of all public and private costs reported in the 30-day incident report. For years prior to 2002, accident report forms did not include a breakdown of public and private costs so property damage for these years is the reported total property damage field in the report.
- Net Barrels Lost applies only to Liquid Incidents and is the difference between Gross Barrels Spilled and Barrels Recovered.

Sources

- PHMSA Hazardous Liquid Flagged Incidents File - March 1, 2011. Note: Incidents occurring up to 30 days days prior the Incident File source date may not appear in these reports due to the 30-day reporting period allowed by PHMSA regulation.
- PHMSA Gas Transmission Flagged Incidents File - March 1, 2011. Note: Incidents occurring up to 30 days days prior the Incident File source date may not appear in these reports due to the 30-day reporting period allowed by PHMSA regulation.
- PHMSA Gas Distribution Flagged Incidents File - March 1, 2011 . Note: Incidents occurring up to 30 days days prior the Incident File source date may not appear in these reports due to the 30-day reporting period allowed by PHMSA regulation.
- Pipeline transmission mileage reported as "in service" to National Pipeline Mapping System - October 14, 2010
- Calendar year 2009 Gas Transmission Annual Report from pipeline operators. - October 14, 2010
- Calendar year 2009 Gas Distribution Annual Report from pipeline operators. - October 14, 2010

See Pipeline Incidents and Mileage Reports for more pipeline safety reports.

Stakeholder Communications

PHMSA Pipeline Safety Program

Washington Significant Incidents and Mileage Overview

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- Gas Gathering - Calendar Year 2009 Annual Reports ⁽⁵⁾
- Gas Distribution - Calendar Year 2009 Annual Reports ⁽⁶⁾

All mileages are for the year 2009 and are approximate as some data sources may not contain a complete record of state pipeline mileage for the year 2009.

See State Significant Incident Detail Listing for more information about each Significant Incident In Washington

Where appropriate, the table columns can be sorted by clicking the corresponding column header.

Washington Pipeline Safety Regulatory Fact Sheet

More Pipeline Incidents and Mileage Reports are available 

Washington Pipeline Mileage	Washington Significant Incidents	Washington Serious Incidents	Washington Mileage by Commodity	Washington
All Pipeline Systems	Hazardous Liquid	Gas Transmission	Gas Gathering	Gas Distribution
All Gas Transmission Systems	Onshore Only	Offshore Only		
Note: Significant incidents include all serious incidents.				
Washington Gas Transmission: 2001-2010				
Year	Number	Fatalities	Injuries	Property Damage ^(D) ^(E)
2001	0	0	0	\$0
2002	0	0	0	\$0
2003	0	0	0	\$0
2004	0	0	0	\$0
2005	0	0	0	\$0
2006	0	0	0	\$0
2007	0	0	0	\$0
2008	0	0	0	\$0
2009	0	0	0	\$0
2010	0	0	0	\$0
Totals	0	0	0	\$0
3 Year Average (2008-2010)	0	0	0	\$0
5 Year Average (2006-2010)	0	0	0	\$0
10 Year Average (2001-2010)	0	0	0	\$0
Export Table				

Notes

1. Significant Incidents are those Incidents reported by pipeline operators when any of the following conditions are met: 1) Fatality or injury requiring in-patient hospitalization. 2) \$50,000 or more in total costs, measured in 1984 dollars. 3) Highly volatile liquid releases of 5 barrels or more or other liquid releases of 50 barrels or more. 4) Liquid releases resulting in an unintentional fire or explosion. **Serious incidents**, a subset of Significant Incidents, are incidents which involve a fatality or injury requiring in-patient hospitalization.
2. The miles of gas distribution service lines (the connection between the distribution line and the end user) are not included in the Gas distribution mileage. The total number of such services is provided.
3. Gas Distribution Incidents where fire/explosion was the primary cause of failure, such as a house fire that subsequently resulted in - but was not caused by - a distribution line failure are excluded from 2004 onward. This exclusion has not been applied in years prior to 2004 due to difficulty in identifying these types of events with the older report formats.
4. The costs for incidents prior to 2010 are presented in 2010 dollars. Cost of Gas lost is indexed via the Energy Information Administration, Natural Gas City Gate Prices. All other costs are adjusted via the Bureau of Economic Analysis, Government Printing Office inflation values.
5. For years 2002 and later, property damage is estimated as the sum of all public and private costs reported in the 30-day incident report. For years prior to 2002, accident report forms did not include a breakdown of public and private costs so property damage for these years is the reported total property damage field in the report.
6. Net Barrels Lost applies only to Liquid Incidents and is the difference between Gross Barrels Spilled and Barrels Recovered.

Sources

1. PHMSA Hazardous Liquid Flagged Incidents File - March 1, 2011. Note: Incidents occurring up to 30 days prior the Incident File source date may not appear in these reports due to the 30-day reporting period allowed by PHMSA regulation.
2. PHMSA Gas Transmission Flagged Incidents File - March 1, 2011. Note: Incidents occurring up to 30 days prior the Incident File source date may not appear in these reports due to the 30-day reporting period allowed by PHMSA regulation.
3. PHMSA Gas Distribution Flagged Incidents File - March 1, 2011. Note: Incidents occurring up to 30 days prior the Incident File source date may not appear in these reports due to the 30-day reporting period allowed by PHMSA regulation.
4. Pipeline transmission mileage reported as "in service" to National Pipeline Mapping System - October 14, 2010
5. Calendar year 2009 Gas Transmission Annual Report from pipeline operators. - October 14, 2010
6. Calendar year 2009 Gas Distribution Annual Report from pipeline operators. - October 14, 2010

See Pipeline Incidents and Mileage Reports for more pipeline safety reports.



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Citizens Committee on Pipeline Safety



Washington State Citizens Committee on Pipeline Safety

In 2000, the Governor and the Washington State Legislature established, in state law, the Citizens Committee on Pipeline Safety (CCOPS).

RCW 81.88.140 - "The Citizens Committee on Pipeline Safety is established to advise the state agencies and other appropriate federal and local government agencies and officials on matters relating to hazardous liquid and gas pipeline safety, routing, construction, operation, and maintenance."

The Washington State Citizens Committee on Pipeline Safety is a Governor-appointed committee that meets regularly to discuss, identify, review and highlight pipeline safety issues on a local and national level. The committee consists of nine voting members representing the public, including local government, and elected officials. Four non-voting members represent owners and operators of hazardous liquid and gas pipelines. The members serve three year staggered terms. The Committee is staffed by the Washington Utilities and Transportation Commission pipeline safety division.

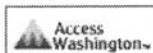
- [About the Committee](#)
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- [By-laws-"Best Practice Sheet"](#)
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This page may be also be accessed via the URL address: www.wutc.wa.gov/pipeline/ccops

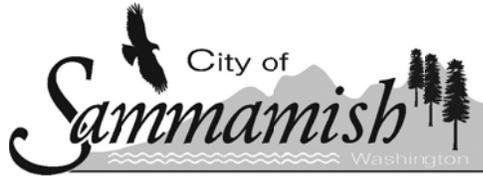
Mailing address for the Committee is PO Box 47250 Olympia, WA 98504-7250

If you have any questions, or if you have any issues that you want to pass on to the committee, please contact Marina Woodard at (360) 664-1150 or email at mwoodard@utc.wa.gov.

360-664-1160 | PO Box 47250, Olympia, WA 98504-7250



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Memorandum

DATE: April 12, 2011

TO: Ben Yazici, City Manager

FROM: Lyman Howard, Finance Director/Assistant City Manager

RE: Uncollectible Accounts Receivable

The city has a number of unpaid accounts receivable invoices that are all more than one year old and a significant amount of staff time has been devoted to collections over the past three years. All reasonable efforts have been made to collect the unpaid accounts receivable, from sending reminder letters to turning the accounts over to a collection agency. The customers whose accounts are delinquent have been given the opportunity to discuss their accounts with city staff and request adjustments. Reasonable adjustments were made to some accounts and payment plans were set up for some accounts at the customer's request. It is unlikely that the remaining accounts will be paid, however payments may still be accepted after the accounts have been written off.

Background:

Prior to 2010 developers paid some of their development fees up front and some fees, particularly for public works review time and inspections, were billed to the developers after the work had been performed. Approximately 80% of the developers paid the invoices they received on time with the other 20% paying late or not at all. Beginning in 2010 the City Council approved a fee schedule that required an up-front deposit for all development review time, eliminating the problem of developers who paid late or not at all for development services. The remaining unpaid invoices are all for development work completed and invoiced prior to 2010.

Financial Impact:

Original amount of unpaid accounts:	\$376,614.18
Collected or adjusted to date:	-\$214,681.31
Accounts under review or on payment plan:	-\$48,623.32
Uncollectible write-off request	\$113,309.55

**CITY OF SAMMAMISH
WASHINGTON
RESOLUTION NO. R2011-**

**A RESOLUTION OF THE CITY OF SAMMAMISH,
WASHINGTON, AUTHORIZING THE WRITE-OFF OF
BAD DEBTS AND GRANTING LIMITED AUTHORITY TO
THE CITY MANAGER TO WRITE OFF FUTURE BAD
DEBTS**

WHEREAS, the City has approximately 30 accounts with unpaid accounts receivable invoices that have been outstanding for more than one year; and

WHEREAS, the City has taken reasonable steps to collect these unpaid invoices ranging from a series of reminder letters to sending the unpaid accounts to a collection agency; and

WHEREAS, the customers have been notified by letter of the opportunity to meet with City staff to discuss their accounts; and

WHEREAS, accounts have been adjusted and/or payment plans have been set up based on reasonable customer requests; and

WHEREAS, the economic downturn, foreclosures, and bankruptcies have made some accounts uncollectible; and

WHEREAS, the City Council must approve bad debt write offs or set a policy to delegate approval of bad debt write offs;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SAMMAMISH, WASHINGTON, DOES RESOLVE AS FOLLOWS:

Section 1. Authorize the write off of current bad debts. The City Council hereby authorizes write-off of the bad debts over one year old currently recorded in the City's accounts receivable system.

Section 2. Delegation of authority. The City Council hereby delegates the authority to write off bad debts of \$10,000 or less per account to the City Manager after all reasonable steps have been taken to collect the amount due.

Section 3. Effective Date. This resolution shall take effect immediately upon signing.

**PASSED BY THE CITY COUNCIL AT A REGULAR MEETING THEREOF
ON THE _____ DAY OF APRIL.**

DRAFT

CITY OF SAMMAMISH

Mayor Donald J. Gerend

ATTEST/AUTHENTICATED:

Melonie Anderson, City Clerk

Approved as to form:

Bruce L. Disend, City Attorney

Filed with the City Clerk: April 6, 2011
Passed by the City Council:
Resolution No.: R2011-



Memorandum

Date: April 6, 2011

To: Ben Yazici, City Manager

From: Kurt Aldworth, Building Official

Re: Title 23A-Civil Code Compliance

Attached you will find the proposed new Title 23A – Civil Code Compliance for discussion at the April 12, 2011 City Council study session. As you know, Sammamish inherited the current Title 23 – “Code Enforcement” in 1999 upon incorporation, and staff has been applying it for nearly 12 years.

Experience with the code has helped staff identify a number of areas where Title 23 did not adequately reflect the city’s approach to achieving compliance. Working with the City Attorney’s office, staff has developed the replacement Title 23A for your and the Council’s consideration. Our project team was formed in late 2010 and soon identified a variety of changes and opportunities for this effort, including:

- Increasing flexibility and tailoring our approach to compliance based on the severity and urgency of the situation
- Incorporating into the code an incremental approach for compliance
- Reducing compliance timeframes, especially for tough-to-resolve cases
- Reducing overall workload through voluntary compliance which eliminates the need to open new cases.
- Improving clarity and reducing complexity

Staff will provide an overview of the new 23A with a PowerPoint presentation illustrated with code compliance examples. We look forward to answering questions from the City Council, and hearing their comments and suggestions.

Please let myself or Kamuron Gurol know if you have any questions.

**TITLE 23A
CIVIL CODE COMPLIANCE**

Chapters:

- 23A.10 Purpose & Scope**
- 23A.20 Response Categories**
- 23A.30 Declaration of Public Nuisance**
- 23A.40 Right of Entry**
- 23A.50 Voluntary Compliance Agreements**
- 23A.60 Notice and Orders**
- 23A.70 Stop Work Orders**
- 23A.80 Infractions**
- 23A.90 Service of Written Notice**
- 23A.100 Civil Penalties**
- 23A.110 Appeal to Hearing Examiner**
- 23A.120 Abatement by the City**
- 23A.130 Unfit Dwellings, Buildings and Structures**
- 23A.140 General Provisions**
- 23A.150 Definitions**

23A.10 Purpose & Scope

23A.10.010 Purpose. The purpose of this title is to establish an effective and efficient system to ensure compliance with the City's adopted building, land development, land use, and related codes. These regulations establish procedures and mechanisms to resolve violations, establish penalties for violations, provide an opportunity for a prompt hearing, decision and appeal as to alleged code violations, provide for abatement when necessary, and provide a mechanism to recover the City's costs.

23A.10.020 Scope. This Chapter shall be applied for the purposes of enforcing Sammamish Municipal Code (SMC) Titles 13, 14, 14A, 15, 16, 21A, 25 and other codes, ordinances, resolutions, or public rules that promote or protect the public health, safety, or welfare and the environment. The provisions of this title are not exclusive and may be used in addition to other applicable provisions of the SMC or other applicable law or regulation.

23A.20 Response Categories

23.20.010 Categories of Response. Responses to complaints or evidence of a civil code violation shall be prioritized based on significance and severity. The categories set forth in this subsection are not jurisdictional and failure to meet them in any particular case shall not affect the City's authority to enforce City code provisions with regard to that case. The following categories serve as guidelines for administering this title:

1 (1) High risk situations need an urgent response. These include an imminent
2 likelihood of/or actual bodily harm or detrimental public health exposure, damage
3 to public resources or facilities, damage to real or personal property, or significant
4 environmental damage or contamination.

5
6 (2) Moderate risk situations need a prompt response. These include a risk of
7 bodily harm, damage to public resources or facilities, damage to real or personal
8 property, environmental damage or contamination.

9
10 (3) Low risk situations need response as time permits. These are non-emergent,
11 do not fit within the high risk or moderate risk categories and have only minor
12 public impacts.

13
14 23.20.020 Incremental Approach. The Director should follow an incremental
15 approach to securing compliance with City codes. This means starting by contacting the
16 person responsible, explaining the violation and requesting voluntary correction. As
17 needed, the Director should secure compliance by proceeding incrementally to higher
18 penalty levels by using the techniques and options in this title. The Director may also
19 determine no violation exists and take no further action, or for Low Risk, “de minimus”
20 violations, decide not to take further action.

21 22 23 **23A.30 Declaration of Public Nuisance**

24
25 23A.30.010 All code violations are determined to be detrimental to the public health,
26 safety, welfare and environment, and are declared to be public nuisances. All conditions
27 determined to be code violations shall be subject to and enforced pursuant to the
28 provisions of this title, except where specifically excluded by law or regulation.

29 30 31 **23A.40 Right of entry**

32
33 23A.40.010 The Director is authorized to enter upon any property or premises at any
34 reasonable time to determine whether a civil violation has occurred or is occurring, or to
35 enforce any provision of the Sammamish Municipal Code or any City regulation,
36 violation of which is a civil violation under this Title. The Director may make
37 examinations, surveys, and studies as may be necessary in the performance of his or her
38 duties. These may include the taking of photographs, digital images videotapes, video
39 images, audio recordings, samples, or other physical evidence. If the premises is
40 occupied, the Director shall first present credentials and request entry. If an owner,
41 occupant, or agent refuses entry, the City may apply to a court of competent jurisdiction
42 for a search warrant authorizing access.

23A.50 Voluntary Compliance Agreements

23A.50.010 Timing

A Voluntary Compliance Agreement (VCA) is a preferred mechanism to resolve most code compliance cases, and may be entered into at any time before an administrative appeal is decided.

23A.50.020 Contents

A VCA is a written contract between the person responsible for the violation and the City, where such person agrees to abate the violation within a specified time and according to specified conditions. The VCA shall be completed on a form approved by the Director and the City Attorney and shall, at minimum, include the following:

1. The name and address of the person responsible;
2. The street address or other description sufficient for identification of the building, structure, premises, or land upon which the violation has occurred or is occurring;
3. A description of the violation(s) and a reference to the code(s) which has been violated;
4. The necessary corrective action to be taken, and the date by which the correction must be completed;
5. An agreement by the person responsible that the City may inspect the premises as may be necessary to determine compliance with the VCA;
6. The amount of the civil penalty that will be imposed pursuant to this title if the person responsible does not meet his or her obligations under the VCA;
7. A statement that the person responsible waives the right to an administrative or judicial hearing for appeal purposes; and
8. An agreement by the person responsible that if the City determines that such person does not meet his or her obligations specified in the VCA, the City may impose any remedy authorized by this title, including, but not limited to:
 - a. Assessment of civil penalties as established by resolution or otherwise identified in the VCA;
 - b. Abatement of the violation;

- c. Assessment of all costs and expenses incurred by the City to pursue code enforcement and to abate the violation, including legal and incidental expenses; and
- d. Suspension, revocation, or limitation of a permit.

23A.050.030 Waiver of Appeal

In consideration of the City's agreement to enter into a VCA, the person responsible shall completely surrender and have no right to an administrative or judicial hearing, under this title or otherwise, regarding the matter of the violation and/or the required corrective action. The VCA is a final, binding agreement, it is not a settlement agreement, and its contents are not subject to appeal.

23A.050.040 Amendment

The Director may grant an extension of the time limit for compliance, or a modification of the required corrective action may be granted, if the person responsible has shown due diligence and/or substantial progress in correcting the violation but unforeseen circumstances render full and timely compliance under the original conditions unattainable. Such request shall be made in writing by the person responsible and clearly establish the need for such an extension.

23A.60 Notice and Orders

23A.60.010 Authority

Whenever the Director has reason to determine that a civil code violation occurred or is occurring, or that the civil code violations cited in an Infraction have not been corrected, or that the terms of a VCA have not been met, or the person responsible has decided not to enter into a VCA, the Director is authorized to issue a Notice and Order to any person responsible for the code violation. Subsequent violations shall be treated as new violations for purposes of this section.

23A.60.020 Contents

A Notice and Order shall be completed in a form approved by the Director and the City Attorney, and shall be served consistent with SMC Chapter 23A.090 of this title and shall, at minimum, include the following:

1. The tax parcel number(s), address, when available, or description sufficient for identification of the building, structure, premises or land upon which or within the violation has occurred or is occurring;
2. A statement of each ordinance, regulation, code provision or permit requirement violated;

- 1
- 2 3. The name of the City official issuing the Notice and Order;
- 3
- 4 4. The required corrective action that is necessary to achieve
- 5 compliance and a date by which the correction must be completed;
- 6
- 7 5. An explanation of the appeal process and the specific information
- 8 required to file an appeal;
- 9
- 10 6. A statement that if the violation is not corrected and the Notice and
- 11 Order is not appealed, the determination is final and a monetary
- 12 penalty shall be assessed according to this title; and
- 13
- 14 7. A statement advising that, if any of the work is not commenced or
- 15 completed within the time specified for compliance, the City may
- 16 proceed to abate the violation, cause work to be done, and assess the
- 17 costs and expenses of abatement incurred by the City against the
- 18 person responsible, and that the City may take any other legal action.
- 19

20 **23A.60.030 Supplementation, Revocation or Modification**

21

22 A. Whenever there is new information or a change in circumstances, a

23 Director may add to, rescind in whole or in part or otherwise modify a Notice and Order

24 by issuing a Supplemental Notice and Order. The Supplemental Notice and Order shall

25 be governed by the same procedures applicable to all Notice and Orders contained in this

26 title.

27 B. The Director may revoke or modify a Notice and Order issued under this

28 title if the original Notice and Order was issued in error or if a party to an order was

29 incorrectly named. The revocation or modification shall identify the reason and

30 underlying facts for revocation and may be recorded with the King County Recorder's

31 Office, or its successor agency, if the underlying Notice and Order was recorded.

32 **23A.60.040 Recording**

33

34

35 A. Whenever a Notice and Order is served on a person responsible for the

36 code violation, the City may record a copy of the Notice and Order with the King County

37 Recorder's Office, or its successor agency.

38

39 B. When all violations specified in the Notice and Order have been corrected

40 or abated, the Director shall record a Release of Notice and Order with the King County

41 Recorder's Office, or its successor agency, if the underlying Notice and Order was

42 recorded. The release shall include a legal description of the property where the violation

43 occurred and shall state, if applicable, that any unpaid civil penalties for which liens have

44 been recorded are still outstanding and continue as liens on the property.

1 **23A.60.050 Time Limits**

2
3 A. Persons receiving a Notice and Order shall rectify the code violations
4 identified within the time period specified by the Director in the Notice and Order issued
5 pursuant to this title.

6
7 B. Unless an appeal is filed with the Director for a hearing before the Hearing
8 Examiner in accordance with this title and SMC Chapter 20.10, the Notice and Order
9 shall become the final administrative order of the Director, and the civil penalties
10 assessed shall be immediately due and subject to collection.

11
12 **23A.70 Stop Work Orders**

13
14 A. Authorization. Whenever a violation of this title threatens the health or
15 safety of the public or materially impairs the Director's ability to secure compliance with
16 the Sammamish Municipal Code, the Director may issue a Stop Work Order specifying
17 the violation and prohibiting any work or other activity at the site. A Stop Work Order
18 shall be served consistent with SMC Chapter 23A.90 of this title. Issuance of a Notice
19 and Order is not a condition precedent to the issuance of a Stop Work Order.

20
21 B. Effect. Work or activity may not resume unless specifically authorized in
22 advance by the Director. Any violation of a Stop Work Order is hereby declared to be a
23 nuisance and the Director is authorized to enjoin or abate such nuisance by any legal or
24 equitable means available. The costs, specifically including reasonable attorney and
25 expert witness fees, for the injunction or abatement shall be recovered by the City from
26 the person responsible for the code violation in the manner provided by law. Failure to
27 comply with the terms of a Stop Work Order subjects the person responsible for the code
28 violation to civil penalties and costs as set forth in this title.

29
30 C. Appeal. A Stop Work Order may be appealed according to the procedures
31 prescribed by this title and Chapter 20.10 SMC. Failure to appeal the Stop Work Order
32 within the applicable time limits renders the Stop Work Order a final determination that
33 the civil code violation occurred and that work was properly ordered to cease.

34
35 **23A.80 Infractions**

36
37 Whenever the Director has reason to determine that a civil code violation
38 occurred or is occurring, the Director is authorized to issue an Infraction in accordance
39 with Chapter 7.80 RCW, which is incorporated herein by this reference, upon the person
40 responsible for the condition. Issuance of an Infraction constitutes a civil infraction. The
41 district court shall have jurisdiction over all Infractions issued under this title.

42
43 **23A.90 Service of Written Notice**

44
45 A. Service of a Notice and Order, Stop Work Order, Infraction or other
46 official written notice of violation issued by the Director shall be made by one or more of
47 the following methods:

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1. By personal service to the person responsible for the code violation or by leaving a copy of the written notice at such person’s place of residence with a person of suitable age and discretion who resides there.
2. By posting the written notice in a conspicuous place on the property where the violation occurred and concurrently mailing notice as provided for in this subsection.
3. By mailing two copies of the written notice, postage prepaid, one by ordinary first class mail and the other by certified mail, to the person responsible for the code violation at his, her or its last known address, at the address of the violation, or at the address of the place of business of the person responsible for the code violation. The taxpayer’s address as shown on the tax records of the county shall be deemed to be the proper address for the purpose of mailing such notice to the landowner of the property where the violation occurred. Service by mail shall be presumed effective upon the third business day following the day upon which the official written notice of violation was placed in the mail.
4. For Notice and Orders only, when the address of the person responsible for the code violation cannot reasonably be determined, service may be made by publication once in the City’s official newspaper.

B. The failure of the Director to make or attempt service of written notice shall not invalidate any proceedings as to any other person duly served.

23A.100 Civil Penalties

23A.100.010 Assessment schedule

Code Enforcement Penalties:

- Infraction \$500
- Stop Work Order \$500

Noncompliance:

- 1-15 days \$100 per day
- 16-31 days \$250 per day
- 31+ days \$500 per day (up to \$50,000 maximum)

Environmental Damage/Critical Areas Violations:

Up to \$25,000 plus the cost of restoration

1
2 A. Civil fines and civil penalties for civil code violations shall be imposed for
3 remedial purposes and shall be assessed for each type of violation identified in a Notice
4 and Order, VCA, Stop Work Order or Infraction pursuant to this chapter.

5
6 B. The penalties assessed pursuant to this chapter for failure to comply with
7 the terms of a VCA are based on the number of days of noncompliance, dating back to
8 the date of the initial violation.

9
10 C. Penalties based on violation of a Stop Work Order shall be assessed,
11 according to this chapter, for each day the Director determines that work or activity was
12 done in violation of the Stop Work Order.

13
14 D. Infractions shall be subject to a one-time civil penalty as set forth in this
15 chapter.

16
17 E. Payment of a monetary penalty does not relieve the person responsible to
18 whom the notice was issued of the duty to correct the violation.

19
20 F. In addition to the other penalties provided for in this chapter, any person
21 responsible for a violation of SMC Chapter 21A.50 may be jointly and severally liable
22 for site restoration for the redress of ecological, recreation, and economic values lost or
23 damaged and shall pay a civil penalty up to \$25,000 plus restoration, based upon the
24 severity of the violation as documented in the city's file.

25 For the purposes of this subsection, a violation of the critical areas ordinance
26 means: the violation of any provision of SMC Chapter 21A.50; or the failure to obtain a
27 permit required for work in a critical area; or the failure to comply with the conditions of
28 any permit, approval, terms and conditions of any critical area tract or setback area,
29 easement or other covenant, plat restriction or binding assurance or any Notice and
30 Order, Stop Work Order, mitigation plan, contract or other agreement.

31
32 G. The civil penalties in this chapter are in addition to, and not in lieu of, any
33 other penalties, sanctions, restitution or fines provided for in any other provisions of law.

34 35 **23A.100.020 Waivers**

36
37 A. Civil fines and civil penalties, in whole or in part, may be waived or
38 reimbursed to the payer by the Director, with the concurrence of the Finance Director,
39 under the following circumstances:

- 40
- 41 1. The Notice and Order, Stop Work Order or Infraction was issued in
42 error;
 - 43 2. The civil fines or civil penalties were assessed in error;
 - 44 3. Notice failed to reach the person responsible due to unusual
45 circumstances;
 - 46
 - 47

- 1
- 2 4. The code violations have been corrected under a VCA;
- 3
- 4 5. The code violations which formed the basis for the civil penalties
- 5 have been corrected, and the Director finds that compelling reasons
- 6 justify waiver of all or part of the outstanding civil penalties; or
- 7
- 8 6. Other extraordinary information warranting waiver has been
- 9 presented to the Director since the Notice and Order, Stop Work
- 10 Order or Infraction was issued.
- 11

12 B. The Director shall document the circumstances under which a decision
13 was made to waive penalties.

14 **23A.110 Appeal to Hearing Examiner**

15
16
17 A. Any person found in violation pursuant to this title may file an appeal
18 within ten calendar days after receiving or otherwise being served with a written notice of
19 a violation. When the last day of the period so computed is a Saturday, Sunday, or a
20 federal or City holiday, the period shall run until 4:30 p.m. on the next business day. The
21 request shall be in writing clearly explaining the basis for the appeal and shall include the
22 applicable appeal fee as established in a fee schedule adopted by the Sammamish City
23 Council.

24
25 B. Upon receipt of the appeal, the City shall schedule an appeal hearing
26 before the Hearing Examiner. The hearing shall be conducted in accordance with the
27 procedures set forth in SMC Chapter 20.10 and the rules of procedure of the Hearing
28 Examiner.

29
30 C. At the conclusion of the appeal hearing, the Hearing Examiner shall issue
31 an order to the person responsible for the violation which includes the following
32 information:

- 33
- 34 1. The decision regarding the alleged violation including findings of fact and
- 35 conclusions based thereon in support of the decision;
- 36
- 37 2. The required corrective action;
- 38
- 39 3. The date by which the correction must be completed;
- 40
- 41 4. The civil penalties assessed based on the provisions of this title and the fee
- 42 resolution; and
- 43
- 44 5. The date after which the City may proceed with abatement of the unlawful
- 45 condition if the required correction is not completed.
- 46

1 D. Judicial Review. The decision of the Hearing Examiner shall be final
2 unless appealed. To appeal the decision of the Hearing Examiner, a person with standing
3 to appeal must file a land use petition, as provided in RCW 36.70C (Land Use Petition
4 Act), within 21 calendar days of issuance of the Hearing Examiner's decision. The cost
5 for transcription of all records ordered certified by the superior court for such review
6 shall be borne by the appellant and is non-refundable.
7

8 E. Effect of Decision. If judicial review is not obtained, the decision of the
9 Hearing Examiner shall constitute the final decision of the City, and the failure to comply
10 with the decision of the Hearing Examiner shall constitute a misdemeanor punishable by
11 a fine of not more than \$1,000 or up to 90 days imprisonment, or both. In addition to
12 criminal punishment pursuant to this subsection, the City may pursue collection and
13 abatement as provided in this title.
14

15 **23A.120 Abatement by the City**

16

17 A. Upon prior approval by the City Manager, the City may abate a condition
18 which was caused by or continues to be a civil violation or civil infraction when:
19

- 20 1. The terms of the VCA pursuant to this Title have not been met; or
- 21 2. A Notice and Order or Stop Work Order has been issued, the
22 period for filing an appeal with the Hearing Examiner has expired,
23 and the required correction has not been completed; or
- 24 3. A Notice and Order or Stop Work Order has been issued, a timely
25 appeal was filed, the appellant failed to appear at the scheduled
26 hearing or a hearing was held as provided in this Title and the
27 required correction has not been completed by the date specified
28 by an order of the Hearing Examiner; or
- 29 4. The condition is subject to summary abatement as provided for in
30 this Chapter or other provisions of City or State law.
31
32
33
34

35 B. Summary Abatement. When a code violation causes a condition, the
36 continued existence of which constitutes an immediate and emergent threat to the public
37 health, safety, or welfare or to the environment, the City may summarily and without
38 prior notice to the person responsible to abate the condition. Notice of such abatement,
39 including the reason for it, shall be given to the person responsible for the violation as
40 soon as reasonably possible after the abatement.
41

42 C. Authorized Action by the City. Using any lawful means, the City may
43 enter upon the subject property and may remove or correct the condition which is subject
44 to abatement. The City may seek judicial process as it deems necessary to effect the
45 removal or correction of such condition.
46

1 D. No Cause of Action against City. No cause of action shall lie against the
2 City or its agents, officers, or employees for actions reasonably taken, or not taken, to
3 prevent or cure any immediate threats.
4

5 E. Recovery of Expenses. All expenses incurred by the City in correcting the
6 violation shall be billed to the person responsible for the violation and shall become due
7 and payable to the City within 10 calendar days. Such costs may include, but are not
8 limited to, the following:
9

10 1. "Legal expenses," which shall include, but are not limited to:

- 11
- 12 a. Personnel costs, both direct and indirect, including attorney's fees and
13 all costs incurred by the City Attorney's office or its designee;
 - 14 b. Actual and incidental expenses and costs incurred by the City in
15 preparing notices, contracts, court pleadings, and all other necessary
16 documents; and
 - 17 c. All costs associated with retention and use of expert witnesses or
18 consultants;

19 2. "Abatement expenses," which shall include, but are not limited to:

- 20
- 21 a. Costs incurred by the City for preparation of notices, contracts, and
22 related documents;
 - 23 b. All costs associated with inspection of the abated property and
24 monitoring of said property consistent with orders of compliance
25 issued by the City's Hearing Examiner or a court of competent
26 jurisdiction;
 - 27 c. All costs incurred by the City for hauling, storage, disposal, or removal
28 of vegetation, trash, debris, dangerous structures or structures unfit for
29 occupancy, potential vermin habitat or fire hazards, junk vehicles,
30 obstructions to public rights-of-way, and setback obstructions; and
 - 31 d. All costs incurred by law enforcement or related enforcement
32 agencies.
 - 33 e. All costs incurred by the City during abatement of nuisance and code
34 violations may include interest in an amount as prescribed by law.
 - 35 f. The City shall have a lien for any monetary penalty imposed, the cost
36 of any abatement proceedings under this chapter, and all other related
37 costs including attorney and expert witness fees, against the real
38 property on which the monetary penalty was imposed or any of the
39
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1 work of abatement was performed. The lien shall be subordinate to all
2 previously existing special assessment liens imposed on the same
3 property and shall be superior to all other liens, except for State and
4 County taxes, with which it shall be on parity.
5

6 **23A.130 Unfit Dwellings, Buildings and Structures**

7

8 As required by state law, RCW 35.80 provides for the legal mechanism to place a lien on private
9 property with unfit dwellings, buildings and structures and is required to be incorporated as part
10 of this title.

11
12 23A.130.010 Additional Enforcement Mechanism. In addition to, and in combination
13 with, the enforcement methods set forth in this Title 23A and elsewhere in the
14 Sammamish Municipal Code, violations of the Sammamish Municipal Code may be
15 enforced under the provisions set forth in SMC 23A.130.010 through 23A.130.120.
16

17 23A.130.020 Chapter 35.80 RCW Adopted. Chapter 35.80 RCW, “Unfit Dwellings,
18 Buildings and Structures,” as it currently exists or is hereinafter amended, is hereby
19 adopted.
20

21 23A.130.030 Improvement Officer and Appeals Commission Designated. The Director
22 is designated as the City’s “Improvement Officer,” and shall have the full scope of
23 authority granted to that official under Chapter 35.80 RCW. The City of Sammamish
24 Hearing Examiner is designated as the City’s “Appeals Commission,” and shall have the
25 full scope of authority granted to that commission under Chapter 35.80 RCW.
26

27 23A.130.040 Improvement Officer Authority – Issuance of Complaint. If, after a
28 preliminary investigation of any dwelling, building, structure or premises, the
29 Improvement Officer finds that it is unfit for human habitation or other use, the
30 Improvement Officer may issue a complaint conforming to the provisions of RCW
31 35.80.030, stating in what respects such dwelling, building, structure or premises is unfit
32 for human habitation or other use. In determining whether a dwelling, building, structure
33 or premises should be repaired or demolished, the Improvement Officer shall be guided
34 by the Sammamish Municipal Code 16.25 and such other codes adopted pursuant to the
35 Sammamish Municipal Code as the Improvement Officer deems applicable.
36

37 23A.130.050 Service of Complaint. A complaint issued under this chapter shall be
38 served on the parties and posted on the subject property pursuant to RCW 35.80.030, and
39 shall also be filed with the King County Auditor. All complaints or other documents
40 posted on the subject property shall remain in place until the complaint has been
41 resolved. For purposes of service, such complaints or other documents are deemed
42 effective on the day of posting.
43

44 23A.130.060 Complaint Hearing. Not less than 10 days nor more than 30 days after
45 serving a complaint, the Improvement Officer shall hold a hearing conforming to the
46 provisions of RCW 35.80.030, at which all parties in interest shall be given the right to

1 appear in person, to bring witnesses, and to give testimony regarding the complaint. At
2 any time prior to or at the time of the hearing, any party may file an answer to the
3 complaint. The procedural rules adopted by the City's Hearing Examiner, codified in
4 Chapter 20.10 SMC, shall govern the procedure of such hearing.

5
6 23A.130.070 Determination, Findings of Fact and Order. Within ten days of the
7 complaint hearing, the Improvement Officer shall issue a Determination, Findings of Fact
8 and Order stating the Improvement Officer's determination as to whether the subject
9 dwelling, building, structure or premises is unfit for human habitation or other use; the
10 findings of fact supporting the determination; and an order specifying the actions
11 necessary to address any unfitness, and a deadline for completing the actions. The
12 Determination, Findings of Fact and Order shall be served and posted as set forth in SMC
13 23A.130.050, and if no appeal is filed within the deadline specified in SMC
14 23A.130.080, a copy of the Determination, Findings of Fact, and Order shall be filed with
15 the King County Auditor.

16
17 23A.130.080 Appeal to Appeals Commission. Within 10 days of service of a
18 Determination, Findings of Fact and Order, any party may file an appeal to the Appeals
19 Commission. Such an appeal shall be governed by the City of Sammamish Hearing
20 Examiner's procedural rules, except that the Appeals Commission shall conduct a hearing
21 on the appeal and issue a ruling within 60 days from the date the appeal is filed; and if the
22 Appeals Commission issues any oral findings of fact, the ruling shall contain a transcript
23 of such findings in addition to any findings issued at the time of the ruling. The ruling
24 shall be served and posted as set forth in SMC 23A.130.050, and if no appeal is filed
25 within the deadline specified in SMC 23A.130.090, a copy of the ruling shall be filed
26 with the King County Auditor.

27
28 23A.130.090 Appeal to Superior Court. Any person affected by a Determination,
29 Findings of Fact and Order issued by the Improvement Officer, who has brought an
30 appeal before the Appeals Commission pursuant to SMC 23A.130.080 may, within 30
31 days after the Appeals Commission's ruling has been served and posted pursuant to SMC
32 23A.130.050, petition the King County Superior Court for an injunction restraining the
33 Improvement Officer from carrying out the provisions of the Determination, Findings of
34 Fact and Order. In all such proceedings, the Court is authorized to affirm, reverse or
35 modify the order, and such trial shall be heard de novo.

36
37 23A.130.100 Remediation/Penalties. If a party, following exhaustion of the party's
38 rights to appeal, falls to comply with the Determination, Findings of Fact and Order, the
39 Improvement Officer may direct or cause the subject dwelling, building, structure or
40 premises to be repaired, altered, improved, vacated, and closed, removed, or demolished
41 pursuant to Chapter 35.80 RCW.

42
43 23A.130.110 Tax Lien. The cost of any action taken by the Improvement Officer under
44 SMC 23A.130.100 shall be assessed against the subject property pursuant to Chapter
45 35.80 RCW. Upon certification by the City of Sammamish Finance Director that the
46 assessment amount is due and owing, the King County Treasurer shall enter the amount

1 of such assessment upon the tax rolls against the subject property pursuant to the
2 provisions of RCW 35.80.030.

3
4 23A.130.120 Salvage. Materials from any dwelling, building, structure or premises
5 removed or demolished by the Improvement Officer shall, if possible, be salvaged and
6 sold as if the materials were surplus property of the City of Sammamish, and the funds
7 received from the sale shall be credited against the cost of the removal or demolitions;
8 and if there be any balance remaining, it shall be paid to the parties entitled thereto, as
9 determined by the Improvement Officer, after deducting the costs incident thereto.

10 11 **23A.140 General Provisions**

12
13 A. The Director shall have the authority to administer this title and is
14 authorized to adopt procedures, rules or guidelines for that purpose. The Director may
15 seek assistance from City departments, other public agencies or private contractors to
16 resolve code violations.

17
18 B. No provision or any term used in this title is intended to impose any duty
19 upon the City, nor any of its officers, employees or agents, which would subject them to
20 damages in a civil action.

21
22 C. The provisions of this title detailing administration of code compliance
23 procedures are not to be construed as creating a substantive basis for appeal or a defense
24 of any kind to an alleged violation.

25
26 D. The provisions of this title authorizing the enforcement of non-codified
27 ordinances are intended to assure compliance with conditions of approval on plats,
28 conditional use or special use permits, zone reclassifications and other similar permits or
29 approvals which may have been granted by ordinances which have not been codified, and
30 to enforce new regulatory ordinances which are not yet codified.

31
32 E. The Director may modify or revoke any action under this title taken by the
33 City if the City action was incomplete or issued in error, or in response to new
34 information or a change in circumstances.

35
36 F. In the event of a conflict between a provision of this title and any other
37 provision of the SMC or City ordinance, the more restrictive provision shall apply as
38 determined by the Director.

39 40 **23A.150 Definitions**

41
42 Except where specifically defined in this section, all words used in this title shall carry
43 their customary meanings. The word “shall” is always mandatory, and the word “may” denotes
44 a use of discretion in making a decision. The following words and phrases used in this Title
45 shall have the following meanings:
46

1 “Abate” means to take whatever steps are deemed necessary in the interest of the general
2 health, safety, and welfare of the City by the Director to return a property to the condition
3 in which it existed before a civil code violation occurred or to assure that the property
4 complies with applicable code requirements. Abatement may include, but is not limited
5 to, rehabilitation, demolition, removal, replacement or repair.
6

7 “Appeal hearing” means a hearing requested in response to a Notice and Order, Stop
8 Work Order, Infraction or other official written notice of violation issued by the Director
9 to contest the finding that a violation occurred or to contest that the person cited for a
10 violation is responsible for the violation.
11

12 “Civil Code Violation” or “Code Violation” means and includes one or more of the
13 following:
14

- 15 1. Any act or omission contrary to any ordinance, resolution, regulation or
16 public rule of the City that regulates or protects public health, the
17 environment or the use and development of land or water, whether or not the
18 ordinance, resolution or regulation is codified; and
19
- 20 2. Any act or omission contrary to the conditions of any permit, Notice and
21 Order or Stop Work or other order issued pursuant to any such an ordinance,
22 resolution, regulation or public rule.
23

24 “Development” means the erection, alteration, enlargement, demolition, maintenance or
25 use of any structure or the alteration or use of land above, at, or below ground or water
26 level, and all acts authorized by a City permit or regulation.
27

28 “Director” means the Director of the Community Development Department, or his or her
29 designee.
30

31 “Found in Violation” means that:
32

- 33 1. A Notice and Order, Stop Work Order or Infraction has been issued and not
34 timely appealed; or
35
- 36 2. The Hearing Examiner has determined that the violation has occurred and
37 the Hearing Examiner’s determination has not been stayed or reversed on
38 appeal.
39

40 “Hearing Examiner” means the City of Sammamish Hearing Examiner, as provided in
41 SMC Chapters 23A.110 and 20.10.
42

43 “Infraction” or “Civil Infraction” means any code violation designated as an infraction or
44 civil infraction by the Director pursuant to Chapter 7.80 RCW, incorporated herein by
45 reference.
46

1 “Nuisance” (also referred to herein as “violation” or “nuisance violation”) means:
2

- 3 1. A violation of any City of Sammamish development, land use, or public
4 health ordinance;
- 5
6 2. Doing an act, omitting to perform any act or duty, or permitting or allowing
7 any act or omission that annoys, injures, or endangers the comfort, repose,
8 health, or safety of others, is unreasonably offensive to the senses, or that
9 obstructs or interferes with the free use of property so as to interfere with or
10 disrupt the free use of that property by any lawful owner or occupant;
11
- 12 3. Potential Vermin Habitat or Fire Hazard; or
13
- 14 4. Junk Vehicles: A junk vehicle includes apparent inoperable, immobile,
15 disassembled, or extensively damaged vehicles. In addition, any wrecked
16 inoperable, abandoned, or disassembled trailer, house trailer, boat, tractor,
17 automobile, other vehicle, or any parts thereof.
18

19 “Permit” means any form of certificate, approval, registration, license or any other
20 written permission issued by the City of Sammamish. All conditions of approval, and all
21 easements and use limitations shown on the face of an approved final plat which are
22 intended to serve or protect the general public are deemed conditions applicable to all
23 subsequent plat property owners and their tenants and agents as permit requirements
24 enforceable under this title.
25

26 “Person responsible” means the owner, occupier, tenant, manager, agent or other person
27 who caused or is causing the civil code violation under this title or other public law.
28

29 “Public Nuisance” means a nuisance that affects equally the rights of an entire
30 community or neighborhood, although the extent of the damage may be unequal.
31

32 “Resolution” means any resolution adopted by the Sammamish City Council.
33

34 “Stop Work Order” means a written order specifying code violations and prohibiting any
35 work or other activity at a particular site.
36

37 “Voluntary Compliance Agreement” or “VCA” means a written contract between the
38 person responsible for the violation and the City, under which such person agrees to abate
39 the violation within a specified time and according to specified conditions.



Memorandum

Date: April 12, 2011
To: Ben Yazici, City Manager
From: Public Works
Re: **Stormwater Code Changes**

The City of Sammamish is a National Pollutant Discharge Elimination System (NPDES) Phase II permittee. Sammamish has been issued a permit that allows for the discharge of stormwater into waters of the state from the Washington State Department of Ecology. The NPDES Phase II permit has Minimum Requirements for the control of stormwater that each municipality needs to adopt. The City of Sammamish is adopting the 2009 King County Surface Water Design Manual (KCSWDM) to meet the Minimum Requirements in the NPDES permit.

The KCSWDM is the implementing regulation that comes out of King County Code (KCC) Title 9, Surface Water Management. The City adopted KCC Title 9 at the time of incorporation. The language in Sammamish Municipal Code SMC Title 15 adopts KCC Title 9 by reference. Staff is recommending that instead of referencing Title 9, the City should bring the language into the SMC. Title 9 is not available in the SMC, so staff is proposing to use Title 13. The draft that is attached is essentially what you would find in KCC Title 9, but with sections removed that are not applicable to Sammamish.

The proposed code was presented to the Planning Commission, who then made recommendations to the Council about the stormwater code changes.

To aid in the understanding of how the Planning Commission came to their decision, staff is including documents that were prepared for the Planning Commission.

The following documents are attached to this memo:

1. Draft ordinance creating Title 13
2. Draft of the proposed Title 13
3. Draft of the Surface Water Design Manual Addendum
 - a. Addresses Sammamish specific requirements
 - b. Location of the future bifurcation language
4. Planning Commission recommendation
5. Planning Commission Minority Report
6. January 11th Memo to Planning Commission on Bifurcation
7. Scenarios for sites under an acre using bifurcated manual
8. Scenarios for sites over an acre using a bifurcated manual
9. October 2004 King County document highlighting manual changes from 1998 to 2005.
 - a. Please note that Sammamish is adopting the 2009 KCSWDM

DRAFT
CITY OF SAMMAMISH
WASHINGTON
ORDINANCE NO. O2011 -

**AN ORDINANCE OF THE CITY OF SAMMAMISH, WASHINGTON, REPEALING
CHAPTER 5 OF TITLE 15 OF THE SAMMAMISH MUNICIPAL CODE AND
ADOPTING A NEW TITLE 13 OF THE SAMMAMISH MUNICIPAL CODE
IDENTIFIED AS SURFACE WATER MANAGEMENT**

WHEREAS, the City incorporated in August of 1999;

WHEREAS, the City Council adopted the City’s Comprehensive Plan on September 16, 2003, and the City has enacted zoning consistent with the comprehensive plan; and

WHEREAS, the City Council adopted the Sammamish Municipal Code on October 7, 2003 and subsequent revisions have been made since that time; and

WHEREAS, the City of Sammamish is subject to the National Pollutant Discharge Elimination System (NPDES) Phase 2 permitting requirements, which requires in part that the City adopt an updated Surface Water Design Manual; and

WHEREAS, the Surface Water Design Manual is adopted by reference to King County Code Title 9, which does not reflect the policies of the City of Sammamish; and

WHEREAS, the adoption of a new Title 13 of the Sammamish Municipal Code will ensure that the Surface Water Design Manual policies of the City of Sammamish are implemented; and

WHEREAS, the City Council has identified an opportunity to provide increased flexibility for property owners of lots less than one acre, through the adoption of a “bifurcated” Surface Water Design Manual; and

WHEREAS, a State Environmental Policy Act (SEPA) Determination of Non Significance for the proposed Surface Water Design Manual regulations was issued on April XX, 2011; and

WHEREAS, in accordance with RCW 36.70A, a request for expedited review was received by the State of Washington Department of Commerce on March 2, 2011 and was granted expedited review on March 31, 2011; and

WHEREAS, the public process for the proposed amendments has provided for public participation opportunities at public meetings and hearings before the Planning Commission and City Council between January and April of 2011; and

WHEREAS, the Planning Commission held public meetings and public hearings in November of 2010 and forwarded recommended Surface Water Design Manual regulations to the City Council on February 3, 2011; and

WHEREAS, the City Council considered the proposed Surface Water Design Manual regulations at a City Council public hearing on April XX, 2011, which was continued on April XX, 2011; and

WHEREAS, the City Council considered the Planning Commission's recommendation, public comment, and other available information.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SAMMAMISH, WASHINGTON, DO ORDAIN AS FOLLOWS:

Section 1. Adoption of the Surface Water Design Manual regulations. The Surface Water Design Manual as set forth in Attachment "A" to this ordinance is hereby adopted.

Section 2. Adoption of the Surface Water Design Manual addendum. The addendum to the Surface Water Design Manual as set forth in Attachment "B" to this ordinance is hereby adopted.

Section 3. Codification of the Surface Water Design Manual regulations. The City Council authorizes the Community Development Director and City Clerk to codify the regulatory provisions of the Surface Water Design Manual ordinance into Title 13 of the Sammamish Municipal Code for ease of use and reference.

Section 4. Interpretation. The City Council authorizes the City Manager or designee to administratively interpret these provisions as necessary to implement the intent of the Council.

Section 5. Severability. Should any section, paragraph, sentence, clause or phrase of this Ordinance, or its application to any person or circumstance, be declared unconstitutional or otherwise invalid for any reason, or should any portion of this Ordinance be pre-empted by state or federal law or regulation, such decision or pre-emption shall not affect the validity of the remaining portions of this Ordinance or its application to other persons or circumstances.

Section 6. Effective Date. This ordinance shall be published in the official newspaper of the City, and shall take effect and be in full force five (5) days after the date of publication.

ADOPTED BY THE CITY COUNCIL AT A REGULAR MEETING THEREOF ON THE XX DAY OF APRIL 2011.

CITY OF SAMMAMISH

Mayor Donald J. Gerend

ATTEST/AUTHENTICATED:

Melonie Anderson, City Clerk

Approved as to form:

Bruce L. Disend, City Attorney

Filed with the City Clerk: April 6, 2011

Public Hearing:

First Reading:

Public Hearing:

Second Reading:

Passed by the City Council:

Date of Publication:

Effective Date:

Title 13
Surface Water Management

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15

Chapters:

- 13.05 Authority, Purpose, General Provisions, and Administration**
- 13.10 Definitions**
- 13.15 Surface Water Development Charge**
- 13.20 Surface Water Runoff Regulations**
- 13.25 Surface Water Management Program**
- 13.30 Water Quality**
- 13.35 Fertilizers**

1
2 Chapter 13.05
3 Authority, Purpose, General Provisions, and Administration
4

5 Sections:

- 6 13.05.010 Authority
7 13.05.020 General Provisions
8 13.05.040 Administration
9

10
11 **13.05.010 Authority.**

12 Pursuant to RCW 35.21.180, 35A.11.020, and 35A.21.160, the City adopts Title 13, Surface Water
13 Management.
14

15 **13.05.020 General Provisions.**

16 This Title is hereby enacted to be consistent with and implement the comprehensive plan in accordance
17 with RCW 36.70A.
18

19 **13.05.030 Administration.**

20 Applicable departments within the City are authorized to adopt, pursuant to Chapter 2.55 SMC, such
21 administrative rules and regulations as are necessary and appropriate to implement this Title 13 and to
22 prepare and require the use of such forms as are necessary to its administration.
23
24

Chapter 13.10
Definitions

Sections:

13.10.010 Scope of Chapter

13.10.XXX

13.10.010 Scope of Chapter.

This chapter contains definitions of technical and procedural terms used throughout Title 13 – Surface Water Management.

13.10. "Adjustment" means a department-approved variation in the application of the requirements of this SMC 13.20 and the Surface Water Design Manual to a particular project in accordance with SMC 13.20. "Adjustment" replaces "variance," which was used in prior editions of the Surface Water Design Manual.

13.10 "AKART" means "all known, available and reasonable methods of prevention, control and treatment." "AKART" represents the most current methodology that can be reasonably required for preventing, controlling or abating the pollutants associated with a discharge. "AKART" applies to both point and nonpoint sources of pollution.

13.10. "Applicant" means a property owner or a public agency or public or private utility that owns a right-of-way or other easement or has been adjudicated the right to such an easement under RCW 8.12.090, or any person or entity designated or named in writing by the property or easement owner to be the applicant, in an application for a development proposal, permit or approval.

13.10 "Basin" means a geographic area that contains and drains to a stream or river named and noted on common maps, such as the Cedar river, Sammamish river, Green river, Snoqualmie river, Skykomish river or White river, or a geographic area that drains to a nonflowing water body named and noted on common maps, such as Lake Washington or Puget Sound.

13.10 "Basin plan" means a plan and all implementing regulations and procedures including, but not limited to, capital projects, public education activities and land use management regulations adopted by ordinance for managing surface and storm water within the basin.

- 1 13.10 "Best management practices" or "BMPs" mean the best available and reasonable physical,
2 structural, managerial or behavioral activities, that, when used singly or in combination, eliminate or
3 reduce the contamination of both surface and ground waters.
4
- 5 13.10 "City" means City of Sammamish.
6
- 7 13.10 "Closed depression" means an area greater than five thousand square feet at overflow elevation
8 that is low-lying and that has no or such a limited surface water outlet that the area acts as a
9 stormwater retention facility.
10
- 11 13.10 "Clean Water Act" means 33 U.S.C. 1251 et. seq., as amended.
12
- 13 13.10 "Construct or modify" means to install a new drainage pipe or ditch or make improvements to
14 an existing drainage pipe or ditch, for purposes other than maintenance, that either serves to
15 concentrate previously unconcentrated surface and storm water runoff or serves to increase, decrease
16 or redirect the conveyance of surface and storm water runoff. "Construct or modify" does not include
17 installation or maintenance of a driveway culvert installed as part of a single-family residential building
18 permit.
19
- 20 13.10 "Conveyance system" means the drainage facilities and features, both natural and constructed,
21 that collect, contain and provide for the flow of surface and storm water from the highest points on the
22 land down to a receiving water. The natural elements of the conveyance system include swales and
23 small drainage courses, streams, rivers, lakes and wetlands. The constructed elements of the
24 conveyance system include gutters, ditches, pipes, channels and most flow control and water quality
25 treatment facilities.
26
- 27 13.10 "Department" means the Department of Public Works or its successor.
28
- 29 13.10 "Development" means any activity that requires a permit or approval, including, but not limited
30 to, a building permit, grading permit, shoreline substantial development permit, conditional use permit,
31 special use permit, zoning variance or reclassification, subdivision, short subdivision, urban planned
32 development, binding site plan, site development permit or right-of-way use permit. "Development"
33 does not include a Class I, II, III or IV-S forest practice conducted in accordance with chapter 76.09 RCW
34 and Title 222 WAC or a class IV-G nonconversion forest practice, as defined in SMC chapter 21A.15,
35 conducted in accordance with chapter 76.09 RCW and Title 222 WAC and a county-approved forest
36 management plan.
37
- 38 13.10 "Developed parcel" means any parcel altered from the natural state by the construction,
39 creation or addition of impervious surfaces.
40
- 41 13.10 "Director" means the director of the City of Sammamish Department of Public Works, other
42 department directors specified in enforcement procedures established in accordance with the
43 Sammamish Municipal Code, or any designee of those directors.
44
- 45 13.10 "Division" means the Department of Public Works, engineering division or its successor agency.
46

1 13.10 "Discharge" means throw, drain, release, dump, spill, empty, emit, or pour forth any matter or
2 to cause or allow matter to flow, run or seep from land or be thrown, drained, released, dumped,
3 spilled, emptied, emitted or poured into water.
4

5 13.10 "Drainage" means the collection, conveyance, containment or discharge, or any combination
6 thereof, of surface and storm water runoff.
7

8 13.10 "Drainage facility" means a constructed or engineered feature that collects, conveys, stores or
9 treats surface and storm water runoff. "Drainage facility" includes, but is not limited to, a constructed or
10 engineered stream, pipelines, channels, ditches, swamps, lakes, wetlands, closed depressions,
11 infiltration facilities, flow control facilities, erosion/sedimentation control facilities and other drainage
12 structures and appurtenances, both natural and constructed.
13

14 13.10 "Drainage review" means an evaluation by City staff of a proposed project's compliance with the
15 drainage requirements in the Surface Water Design Manual. The types of drainage review include: Small
16 project drainage review, targeted drainage review, full drainage review and large project drainage
17 review.
18

19 13.10 "Effective impervious area" means the portion of actual impervious area that is connected, or
20 has the effect of being connected as defined in the Surface Water Design Manual, directly to the storm
21 water drainage system via surface flow or discrete conveyances such as pipes, gutters or ditches.
22

23 13.10 "Erosion and sediment control" means any temporary or permanent measures taken to reduce
24 erosion, control siltation and sedimentation and ensure that sediment-laden water does not leave the
25 site or enter into wetlands or aquatic areas.
26

27 13.10 "Farm management plan" means a comprehensive site-specific plan developed by the farm
28 owner in cooperation with the King Conservation District taking into consideration the land owners
29 objectives while protecting water quality and related natural resources.
30

31 13.10 "Financial guarantee" means a form of financial security posted to do one or more of the
32 following: ensure timely and proper completion of improvements; ensure compliance with the
33 Sammamish Municipal Code; or provide secured warranty of materials, workmanship of improvements
34 and design. "Financial guarantees" include assignments of funds, cash deposit, surety bonds or other
35 forms of financial security acceptable to the director. "Performance guarantee," "maintenance
36 guarantee" and "defect guarantee" are considered sub categories of financial guarantee.
37

38 13.10 "Flood hazard reduction plan" means a plan and all implementing programs, regulations and
39 procedures including, but not limited to, capital projects, public education activities and enforcement
40 programs for reduction of flood hazards and prepared in accordance with RCW 86.12.200.
41

42 13.10 "Flow control best management practice" means a method or design for dispersing, infiltrating
43 or otherwise reducing or preventing development-related increases in surface and storm water runoff
44 at, or near, the sources of those increases. "Flow control best management practice" includes the
45 methods and designs specified in the Surface Water Design Manual.
46

47 13.10 "Flow control facility" means a drainage facility designed to mitigate the impacts of increased
48 surface and storm water runoff generated by site development in accordance with the drainage

1 requirements in this chapter. A flow control facility is designed either to hold water for a considerable
2 length of time and then release it by any combination of evaporation, plant transpiration or infiltration
3 into the ground or to hold runoff for a short period of time and then release it to the conveyance
4 system.

5 13.10 "Forest practices" means any activity conducted on or directly pertaining to forest land and
6 relating to growing, harvesting, or processing timber, as defined in chapter 222-16 WAC.

7
8 13.10 "Full drainage review" means the evaluation required by SMC 13.20 for any proposed project,
9 unless the project is subject to small project drainage review, targeted drainage review or large project
10 drainage review, that:

11 1. Would result in two thousand square feet or more of new impervious surface;
12 2. Would result in thirty-five thousand square feet or more of new pervious surface: or
13 3. Is a redevelopment project on one or more parcels where the total of new and replaced
14 impervious surface is five thousand square feet or more and when the valuation of proposed
15 improvements exceeds fifty percent of the assessed value of the existing site improvements, including
16 interior improvements and excluding required mitigation and frontage improvements.

17
18 13.10 "Ground water" means all waters that exist beneath the land surface or beneath the bed of any
19 stream, lake or reservoir or other body of surface water, whatever may be the geological formation or
20 structure in which such water stands or flows, percolates or otherwise moves.

21
22 13.10 "High-use site" means a commercial, industrial or road intersection site that generates a higher
23 than average number of vehicle turnovers or has other characteristics that generate the potential for
24 chronic oil accumulation. "High use site" includes:

25 1. A commercial or industrial site subject to:
26 a. an expected daily traffic count greater than one hundred vehicles per one thousand square
27 feet of gross building area;
28 b. petroleum storage or transfer in excess of one thousand gallons per year, not including
29 routine fuel oil storage or transfer; or
30 c. use, storage or maintenance of a fleet of twenty-five or more diesel vehicles each weighing
31 over ten tons; or
32 2. A road intersection with average daily traffic counts of twenty-five thousand vehicles or more
33 on the main roadway and fifteen thousand or more vehicles on any intersecting roadway, excluding
34 pedestrian or bicycle use improvement projects.

35
36 13.10 "Hydraulically connected" means connected through surface flow or water features such as
37 wetlands or lakes.

38
39 13.10 "Impervious surface" means a hard surface area which either prevents or retards the entry of
40 water into the soil mantle as it entered under natural conditions prior to development, and/or a hard
41 surface area which causes water to run off the surface in greater quantities or at an increased rate of
42 flow from the flow present under natural conditions prior to development. Common impervious
43 surfaces include, but are not limited to, roofs, walkways, patios, driveways, parking lots, storage areas,
44 areas which are paved, graveled or made of packed or oiled earthen materials or other surfaces which
45 similarly impede the natural infiltration of surface and storm water. Open, uncovered flow control
46 facilities shall not be considered as impervious surfaces for the purpose of this chapter.

47

1 13.10 "Improvement" means a permanent, human-made, physical change to land or real property
2 including, but not limited to, buildings, streets, driveways, sidewalks, crosswalks, parking lots, water
3 mains, sanitary and storm sewers, drainage facilities and landscaping.
4

5 13.10 "Land disturbing activity" means an activity that results in a change in the existing soil cover,
6 both vegetative and nonvegetative, or to the existing soil topography. "Land disturbing activity"
7 includes, but is not limited to, demolition, construction, clearing, grading, filling, excavation and
8 compaction. "Land disturbing activity" does not include tilling conducted as part of agricultural
9 practices, landscape maintenance or gardening.
10

11 13.10 "Land use code" means restrictions on the type of development for a specific parcel of land as
12 identified by records maintained by the City of Sammamish as modified or supplemented by information
13 resulting from investigation by the division. Land use codes are preliminary indicators of the extent of
14 impervious surface and are used in the initial analysis to assign an appropriate rate category for a
15 specific parcel.
16

17 13.10 "Lake management plan" means a plan describing the lake management recommendations and
18 requirements adopted by public rule for managing water quality within individual lake basins. Adopted
19 lake management plans are available from the department.
20

21 13.10 "Large project drainage review" means the evaluation required by SMC 13.20 for any proposed
22 project that:

- 23 1. Has an urban plan development land use designation in the Sammamish Comprehensive Plan
24 land use map;
- 25 2. Would, at full buildout of the project site, result in fifty acres or more of new impervious
26 surface within a drainage subbasin or a number of subbasins hydraulically connected across subbasin
27 boundaries; or
- 28 3. Has a project site of fifty acres or more within a critical aquifer recharge area, as defined in
29 SMC Title 21A.
30

31 13.10 "Licensed civil engineer" means a person registered with the State of Washington as a
32 professional engineer in civil engineering.
33

34 13.10 "Maintenance" means those usual activities taken to prevent a decline, lapse or cessation in the
35 use of currently serviceable structures, facilities, equipment or systems, if there is no expansion of the
36 structure, facilities, equipment or system and there are no significant hydrologic impacts.
37 "Maintenance" includes the repair or replacement of nonfunctional facilities or the replacement of
38 existing structures with different types of structures, if the repair or replacement is required by one or
39 more environmental permits or to meet current engineering standards and the functioning
40 characteristics of the original facility or structure are not changed.
41

42 13.10 "Master drainage plan" means a comprehensive drainage control plan intended to prevent
43 significant adverse impacts to the natural and constructed drainage system, both on- and off-site.
44

45 13.10 "National Pollutant Discharge Elimination System" or "NPDES" means the national program for
46 controlling pollutants from point source discharges directly into waters of the United States under the
47 Clean Water Act.
48

1 13.10 "National Pollutant Discharge Elimination System permit" means an authorization, license or
2 equivalent control document issued by the Environmental Protection Agency or the Washington state
3 Department of Ecology to implement the requirements of the NPDES program.
4

5 13.10 "Native vegetated surface" means a surface in which the soil conditions, ground cover and
6 species of vegetation are like those of the original native condition for the site, as more specifically set
7 forth in the Surface Water Design Manual.
8

9 13.10 "Natural discharge location" means the location where runoff leaves the project site under
10 existing site conditions as defined in the Surface Water Design Manual.
11

12 13.10 "Natural surface water drainage system" means such landscape features as rivers, streams, lakes
13 and wetlands. This system circulates water in a complex hydrological cycle.
14

15 13.10 "New impervious surface" means the creation of a hard or compacted surface such as roofs,
16 pavement, gravel or dirt or the addition of a more compacted surface such as the paving of existing dirt
17 or gravel.
18

19 13.10 "New pervious surface" means the conversion of a native vegetated surface or other native
20 surface to a nonnative pervious surface, including, but not limited to, pasture land, grassland, cultivated
21 land, lawn, landscaping or bare soil or any alteration of existing nonnative pervious surface that results
22 in increased surface and storm water runoff as defined in the Surface Water Design Manual.
23

24 13.10 "Open space" means any parcel, property or portion thereof classified for current use taxation
25 under K.C.C. chapter 20.36 and chapter 84.34 RCW, or for which the development rights have been sold
26 to King County under K.C.C. chapter 26.04. This definition includes lands which have been classified as
27 open space, agricultural or timber lands under criteria contained in K.C.C. chapter 20.36 and chapter
28 84.34 RCW.
29

30 13.10 "Parcel" means the smallest separately segregated unit or plot of land having an identified
31 owner, boundaries and surface area which is documented for property tax purposes and given a tax lot
32 number by the King County assessor.
33

34 13.10 "Person" means an individual and his or her agent or assign, municipality, political subdivision,
35 government agency, partnership, corporation, business or any other entity.
36

37 13.10 "Pollution-generating impervious surface" means an impervious surface considered to be a
38 significant source of pollutants in surface and storm water runoff. "Pollution-generating impervious
39 surface includes those surfaces subject to vehicular use or storage of erodible or leachable materials,
40 wastes or chemicals and that receive direct rainfall or the run-on or blow-in of rainfall. A covered
41 parking area would be included if runoff from uphill could regularly run through it or if rainfall could
42 regularly blow in and wet the pavement surface. Metal roofs are also considered pollution-generating
43 impervious surface unless they are treated to prevent leaching.
44

45 13.10 "Pollution-generating pervious surface" means a nonimpervious surface considered to be a
46 significant source of pollutants in surface and storm water runoff. "Pollution-generating pervious
47 surfaces" include surfaces subject to the use of pesticides and fertilizers, to the use or storage of
48 erodible or leachable materials, wastes or chemicals or to the loss of soil. "Pollution-generating pervious

1 surface" includes, but is not limited to, the lawn and landscaped areas of a residential or commercial
2 site, golf course, park sports field and City-standard grassed modular grid pavement.

3
4 13.10 "Project" means any proposed action to alter or develop a site that may also require drainage
5 review.

6
7 13.10 "Project site" means the portion of a site and any offsite areas subject to proposed project
8 activities, alterations and improvements including those required by this chapter.

9
10 13.10 "Rate category" means the classification in this chapter given to a parcel in the service area
11 based upon the type of land use on the parcel and the percentage of impervious surface area contained
12 on the parcel.

13
14 13.10 "Redevelopment project" means a project that proposes to add, replace or modify impervious
15 surface for purposes other than a residential subdivision or maintenance on a site that:

- 16 1. Is already substantially developed in a manner that is consistent with its current zoning or
17 with a legal nonconforming use; or
18 2. Has an existing impervious surface coverage of thirty-five percent or more.

19
20 13.10 "Replaced impervious surface" means an existing impervious surface proposed to be removed
21 and reestablished as impervious surface, excluding impervious surface removed for the sole purpose of
22 installing utilities or performing maintenance. For purposes of this definition, "removed" includes the
23 removal of buildings down to bare soil or the removal of Portland cement concrete slabs or pavement or
24 asphaltic concrete pavement.

25
26 13.10 "Residence" means a building or structure or portion thereof, designed for and used to provide
27 a place of abode for human beings. The term residence includes the term "residential" or "residential
28 unit" as referring to the type of or intended use of a building or structure.

29
30 13.10 "Residential parcel" means any parcel which contains no more than three residences or three
31 residential units which are within a single structure and is used primarily for residential purposes.

32
33 13.10 "Runoff" means that portion of water originating from rainfall and other precipitation that flows
34 over the surface or just below the surface from where it fell and is found in drainage facilities, rivers,
35 streams, springs, seeps, ponds, lakes, wetlands and shallow groundwater as well as on ground surfaces.
36 For the purpose of this definition, groundwater means all waters that exist beneath the land surface or
37 beneath the bed of any stream, lake or reservoir, or other body surface water, whatever may be the
38 geological formation or structure in which such water stands or flows, percolates or otherwise moves.

39
40 13.10 "Salmon conservation plan" means a plan and all implementing regulations and procedures
41 including, but not limited to, land use management adopted by ordinance, capital projects, public
42 education activities and enforcement programs for conservation and recovery of salmon within a water
43 resource inventory area designated by the state under WAC 173-500-040.

44
45 13.10 "Shared facility" means a drainage facility designed to meet one or more of the requirements of
46 SMC 13.20 for two or more separate projects contained within a basin. Shared facilities usually include
47 shared financial commitments for those drainage facilities.

- 1 13.10 "Service area" means the incorporated City of Sammamish.
2
- 3 13.10 "Site" means a single parcel, or two or more contiguous parcels that are under common
4 ownership or documented legal control, used as a single parcel for a proposed project for purposes of
5 applying for authority from the City of Sammamish to carry out a proposed project. For projects located
6 primarily within dedicated rights-of-way, "site" includes the entire width of right-of-way subject to
7 improvements proposed by the project.
8
- 9 13.10 "Small project drainage review" means the drainage review for a proposed single-family
10 residential project or agricultural project that:
11 1. Would result in:
12 a. ten thousand square feet or less of total impervious surface added on or after January 8,
13 2001; or
14 b. four percent or less of total impervious surface on a site as specified in the Surface Water
15 Design Manual; and
16 2. Meets the small project drainage requirements specified in the Surface Water Design Manual,
17 including flow control best management practices, erosion and sediment control measures and drainage
18 plan submittal requirement; and
19 3. Limits new pervious surface as specified in the Surface Water Design Manual.
20
- 21 13.10 "Source control BMP" means a BMP intended to prevent contaminants from entering surface
22 and storm water or ground water including the modification of processes to eliminate the production or
23 use of contaminants. "Source control BMPs" can be either structural or nonstructural. Structural source
24 control BMPs involve the construction of a physical structure on site, or other type of physical
25 modification to a site. An example of a structural source control BMP is building a covered storage area.
26 A nonstructural source control BMP involves the modification or addition of managerial or behavioral
27 practices. An example of a nonstructural source control BMP is using less toxic alternatives to current
28 products or sweeping parking lots.
29
- 30 13.10 "State Waste Discharge Permit" means an authorization, license, or equivalent control
31 document issued by the Washington state Department of Ecology in accordance with chapter 173-216
32 WAC.
33
- 34 13.10 "Stormwater compliance plan" means a plan or study and all regulations and procedures that
35 have been adopted by the City to implement the plan or study, including, but not limited to, capital
36 projects, public education activities and enforcement programs for managing stormwater quantity and
37 quality discharged from the City's municipal separate storm sewer system in compliance with the
38 National Pollutant Discharge Elimination System permit program under the Clean Water Act.
39
- 40 13.10 "Storm water plan" means a City of Sammamish ordinance specifying the storm water control
41 facilities that will be funded by a bond issue.
42
- 43 13.10 "Stormwater Pollution Prevention Manual" means the manual adopted in accordance with SMC
44 2.55, and supporting documentation referenced or incorporated in the manual, describing best
45 management practices and procedures for existing facilities and existing and new activities not covered
46 by the Surface Water Design Manual.
47
- 48 13.10 "Subbasin" means a geographic area that:

1. Drains to a stream or water body named and noted on common maps; and
2. Is contained within the basin of the stream or water body.

13.10 "Surface and storm water" means water originating from rainfall and other precipitation that is found on ground surfaces and in drainage facilities, rivers, streams, springs, seeps, ponds, lakes, wetlands as well as and shallow ground water.

13.10 "Surface and storm water management services" means the services provided by the surface water management program, including but not limited to basin planning, facilities maintenance, regulation, financial administration, public involvement, drainage investigation and enforcement, aquatic resource restoration, surface and storm water quality and environmental monitoring, natural surface water drainage system planning, intergovernmental relations and facility design and construction.

13.10 "Surface and storm water management system" means constructed drainage facilities and any natural surface water drainage features that do any combination of collection, storing, controlling, treating or conveying surface and storm water.

13.10 "Surface Water Design Manual" means the manual, and supporting documentation referenced or incorporated in the manual, describing surface and storm water design and analysis requirements, procedures and guidance that has been formally adopted by rule under the procedures in SMC chapter 2.55. The Surface Water Design Manual is available from the Department of Public Works, or their successor agencies.

13.10 "Surface water management fee protocols" or "SWM fee protocols" means the surface water management fee standards and procedures that have been formally adopted by rule under the procedures specified in SMC chapter 2.55. The SWM fee protocols are available from the Department of Public Works or its successor agency.

13.10 "Treatment BMP" means a BMP intended to remove contaminants once they are already contained in storm water. Examples of treatment BMPs include oil/water separators, biofiltration swales and wetponds.

13.10 "Targeted drainage review" means an abbreviated evaluation required by SMC 13.20 for certain types of proposed projects that are not subject to full or large project drainage review. Targeted drainage review may be required for some projects in small project drainage review.

13.10 "Undeveloped parcel" means any parcel which has not been altered from its natural state by the construction, creation or addition of impervious surface.

13.10 "Water quality treatment facility" means a drainage facility designed to reduce pollutants once they are already contained in surface and storm water runoff. Water quality treatment facilities are the structural component of best management practices. When used singly or in combination, water quality treatment facilities reduce the potential for contamination of either surface or ground waters, or both.

Chapter 13.15
Surface Water Development Charge

Section:

13.15.010 Surface water system development charge authorized

13.15.010 Surface water system development charge authorized.

A. City Authorized to Collect Charge. The City is authorized to collect a surface water system development charge as follows:

Development	Fee
New residential dwelling unit or commercial building with up to 2,500 square feet of impervious coverage	\$570.00
Each additional 250 square feet of impervious coverage over 2,500 square feet	\$57.00
Other structures or additions of up to 250 square feet of impervious coverage requiring a building permit	\$57.00, plus \$57.00 for each additional 250 square feet

All impervious surface areas shall be rounded to the nearest 250-square-foot increment. The fee shall not apply to rockeries or retaining walls.

B. Charges Shall Be Liens. All charges made under this section shall constitute a lien upon the property from which such charges are due, superior to all other liens and encumbrances whatsoever, except for general taxes and local special assessments. Enforcement of such lien shall be in the manner provided by law. All properties assessed a surface water system development charge shall have a notation on their plats stating that the property may be subject to a lien for the final costs of any necessary off-site surface water drainage improvements.

Chapter 13.20
Surface Water Runoff Regulations

Sections:

- 13.20. Purpose.
- 13.20. Drainage review - when required - type.
- 13.20. Drainage review - requirements.
- 13.20. Critical drainage and/or erosion areas.
- 13.20. Engineering plans for the purposes of drainage review.
- 13.20. Construction timing and final approval.
- 13.20. Liability insurance required.
- 13.20. Financial guarantees authorized.
- 13.20. Drainage facilities accepted by Sammamish for maintenance.
- 13.20. Drainage facilities not accepted by Sammamish for maintenance.
- 13.20. Hazards.
- 13.20. Administration.
- 13.20. Enforcement.
- 13.20. Implementation, review and revision.
- 13.20. Agency rules.
- 13.20. Severability.

13.20. Purpose

The purpose of this chapter is to promote the public health, safety and welfare by providing for the comprehensive management of surface and storm waters and erosion control, especially that which preserves and utilizes the many values of the City's natural drainage system including open space, fish and wildlife habitat, recreation, and education. By conducting programs to reduce flooding, erosion, and sedimentation; prevent and mitigate habitat loss; enhance groundwater recharge; and prevent water quality degradation through the implementation of comprehensive and thorough permit review, construction inspection, enforcement, and maintenance, the effectiveness of the requirements contained in this chapter will be promoted.

13.20. Drainage review - when required - type.

A. Drainage review is required when any proposed project is subject to a City of Sammamish development permit or approval and:

1. Would result in two thousand square feet or more of new impervious surface, replaced impervious surface or new plus replaced impervious surface; or,
2. Would involve seven thousand square feet or more of land disturbing activity; or,
3. Would construct or modify a drainage pipe or ditch that is twelve inches or more in size or depth or receives surface and storm water runoff from a drainage pipe or ditch that is twelve inches or more in size or depth; or,
4. Contains or is adjacent to a flood hazard area as defined in SMC Title 15 or 21A; or,
5. Is located within a critical drainage area; or,
6. Is a redevelopment project proposing one hundred thousand dollars or more of improvements to an existing high-use site; or,
7. Is a redevelopment project on a site in which the total of new plus replaced impervious surface is five thousand square feet or more and whose valuation of proposed improvements, including

1 interior improvements and excluding required mitigation and frontage improvements, exceeds fifty
2 percent of the assessed value of the existing site improvements.

3
4 B. The drainage review for any proposed project shall be scaled to the scope of the project's size,
5 type of development and potential for impacts to the regional surface water system to facilitate
6 preparation and review of project applications. If drainage review for a proposed project is required
7 under subsection A. of this section, the City shall determine which of the following drainage reviews
8 apply as specified in the Surface Water Design Manual:

- 9 1. Small project drainage review;
- 10 2. Targeted drainage review;
- 11 3. Full drainage review; or
- 12 4. Large project drainage review.

13
14 **13.20. Drainage review - requirements.**

15 A. A proposed project required to have drainage review by this chapter must meet each of the
16 following core requirements which are described in detail in the Surface Water Design Manual. Projects
17 subject only to small project drainage review that meet the small project drainage requirements
18 specified in the Surface Water Design Manual, including flow control best management practices,
19 erosion and sediment control measures and drainage plan submittal requirements are deemed to
20 comply with the following core requirements:

- 21 1. Core requirement 1: Discharge at the natural location. All surface and storm water
22 runoff from a project shall be discharged at the natural location so as not to be diverted onto, or away
23 from, downstream properties. The manner in which runoff is discharged from the project site shall not
24 create a significant adverse impact to downhill properties or drainage systems as specified in the
25 discharge requirements of the Surface Water Design Manual;
- 26 2. Core requirement 2: Offsite analysis. The initial application submittal for proposed
27 projects shall include an offsite analysis report that assesses potential offsite drainage and water quality
28 impacts associated with development of the proposed site and proposes appropriate mitigations to
29 those impacts. This initial submittal shall include, at minimum, a Level One downstream analysis as
30 described in the Surface Water Design Manual. If impacts are identified, the proposed projects shall
31 meet any applicable problem-specific requirements as specified in the Surface Water Design Manual;
- 32 3. Core Requirement 3: Flow control. Proposed projects that would result in two thousand
33 square feet or more of new impervious surface or thirty-five thousand square feet or more of new
34 pervious surface, or that are redevelopment projects that would result in a total of five thousand square
35 feet or more of new and replaced impervious surface, shall provide flow control facilities or flow control
36 BMPs, or both, to control surface and storm water runoff generated by new impervious surface, new
37 pervious surface, replaced impervious surface and any existing impervious surface added on or after
38 January 8, 2001, as specified in the Surface Water Design Manual. Flow control facilities shall meet the
39 area-specific flow control facility requirements and the flow control facility implementation
40 requirements applicable to the project site as specified in the Surface Water Design Manual. Flow
41 control BMPs shall also be applied as specified in the Surface Water Design Manual. Projects subject to
42 area-specific flow control facility requirements shall meet one of the flow control facility performance
43 criteria listed in a. and b. of this subsection A.3., as directed by the Surface Water Design Manual. The
44 Inglewood, Thompson and Pine Lake Creek basins, and areas draining to the Beaver Lake basin require
45 Level Three flow control. The remainder of the City requires Level Two flow control unless downstream
46 problems as determined by the City of Sammamish, dictate the higher level of protection of Level Three
47 flow control.

1 a. Level Two shall meet Level One criteria and also match the predeveloped site's
2 discharge durations for the predeveloped peak discharge rates between the fifty
3 percent of the two-year peak flow through the fifty-year peak flow; or

4 b. Level Three shall meet Level Two criteria and also match the predeveloped site's
5 peak discharge rate for the one hundred-year return period;

6 4. Core requirement 4: Conveyance system. All engineered conveyance system elements
7 for proposed projects shall be analyzed, designed and constructed to provide the minimum level of
8 protection against overtopping, flooding, erosion and structural failure as specified by the conveyance
9 requirements for new and existing systems and conveyance implementation requirements described in
10 the Surface Water Design Manual;

11 5. Core requirement 5: Erosion and sediment control. All proposed projects that will clear,
12 grade or otherwise disturb the site shall provide erosion and sediment control that prevents, to the
13 maximum extent practicable, the transport of sediment from the site to drainage facilities, water
14 resources and adjacent properties. Erosion and sediment controls shall be applied in accordance with
15 SMC Title 16 as specified by the temporary erosion and sediment control measures and performance
16 criteria and implementation requirements in the City of Sammamish Surface Water Design Manual;

17 6. Core requirement 6: Maintenance and operation. Maintenance of all drainage facilities
18 in compliance with Sammamish maintenance standards is the responsibility of the applicant or property
19 owner as described in the Surface Water Design Manual, except those facilities for which Sammamish
20 assumes maintenance and operation as described in this chapter and the Surface Water Design Manual;

21 7. Core requirement 7: Financial guarantees and liability. All drainage facilities constructed
22 or modified for projects, except downspout infiltration and dispersion systems for single family
23 residential lots, must comply with the liability requirements of this chapter and the financial guarantee
24 requirements of SMC Title 27A;

25 8. Core requirement 8: Water quality. Proposed projects that would result in five thousand
26 square feet or more of new pollution generating impervious surface or thirty-five thousand square feet
27 or more of new pollution-generating pervious surface, or that are redevelopment projects that would
28 result in a total of five thousand square feet or more of new and replaced pollution-generating
29 impervious surface, shall provide water quality treatment facilities to treat polluted surface and storm
30 water runoff generated by new or replaced pollution-generating impervious surface, new pollution-
31 generating pervious surface and any existing pollution-generating impervious surface added on or after
32 January 8, 2001, as specified in the Surface Water Design Manual. However, pervious surfaces are
33 specifically excluded if there is a good faith agreement with the King Conservation District to implement
34 a farm management plan for agricultural uses, and pervious areas for other uses are specifically
35 excluded if the City of Sammamish approves a landscape management plan that controls pesticides and
36 fertilizers leaving the site. Water quality treatment facilities shall meet the area-specific water quality
37 treatment requirements and the water quality implementation requirements applicable to the project
38 site as specified in the Surface Water Design Manual. The facilities specified by these requirements are
39 designed to reduce pollutant loads according to the applicable annual average performance goals listed
40 in a. through d. of this subsection A.8. for ninety-five percent of the annual average runoff volume:

41 a. for basic water quality: remove eighty percent of the total suspended solids;

42 b. for enhanced basic water quality: remove fifty percent of the total zinc;

43 c. for sensitive lake protection: remove fifty percent of the total phosphorus; and

44 d. for sphagnum bog protection: remove fifty percent of the total phosphorus and
45 forty percent of the total nitrate plus nitrite. The discharge shall maintain a pH of less
46 than 6.5 and an alkalinity of less than ten milligrams per liter.

1 B. A proposed project required by this chapter to have drainage review shall meet any of the
2 following special requirements which apply to the site and which are described in detail in the Surface
3 Water Design Manual. The City shall verify if a proposed project is subject to and must meet any of the
4 following special requirements.

5 1. Special Requirement 1: Other adopted area-specific requirements. If a proposed project
6 is in a designated critical drainage area, or is in an area included in an adopted master drainage plan,
7 basin plan, salmon conservation plan, stormwater compliance plan, flood hazard reduction plan, lake
8 management plan or shared facility plan, then the proposed project shall meet the applicable drainage
9 requirements of the critical drainage area, master drainage plan, basin plan, salmon conservation plan,
10 stormwater compliance plan, flood hazard reduction plan, lake management plan or shared facility plan;

11 2. Special Requirement 2: Floodplain/floodway delineation. If a proposed project contains
12 or is adjacent to a stream, lake, wetland or closed depression, or if other City regulations require study
13 of flood hazards relating to the proposed project, the one hundred year floodplain boundaries and
14 floodway shall be determined and delineated on the site improvement plans and profiles and any final
15 maps prepared for the proposed project. The flood hazard study shall be prepared for as specified in the
16 Surface Water Design Manual;

17 3. Special Requirement 3: Flood protection facilities. If a proposed project contains or is
18 adjacent to a stream that has an existing flood protection facility, such as a levee, revetment or berm, or
19 proposes to either construct a new or modify an existing flood protection facility, then the flood
20 protection facilities shall be analyzed and designed as specified in the Surface Water Design Manual to
21 conform with the Federal Emergency Management Agency regulations as found in 44 C.F.R.;

22 4. Special Requirement 4: Source Control. If a proposed project requires a commercial
23 building or commercial site development permit, then water quality source controls shall be applied to
24 prevent rainfall and runoff from coming into contact with pollutants to the maximum extent practicable.
25 Water quality source controls shall be applied in accordance with this chapter, the stormwater pollution
26 prevention manual and the Surface Water Design Manual. All structural source controls shall be
27 identified on the site improvement plans and profiles or final maps prepared for the proposed project;
28 and

29 5. Special Requirement 5: Oil control. If a proposed project is a high-use site or is a
30 redevelopment project proposing one hundred thousand dollars or more of improvements to an existing
31 high-use site, then oil control shall be applied to all runoff from the high-use portion of the site as
32 specified in the Surface Water Design Manual.

33
34 C.

35 1. An adjustment to the requirements contained in this section or other requirements in
36 the Surface Water Design Manual may be proposed. The resulting development shall be subject to all of
37 the remaining terms and conditions of this chapter and the adjustment shall:

- 38 a. produce a compensating or comparable result in the public interest; and
- 39 b. meet this chapter's objectives of safety, function, appearance, environmental
40 protection and maintainability based upon sound engineering judgment.

41 2. If complying with subsection C.1.a. of this section will deny all reasonable use of a
42 property, the best practicable alternative shall be obtained as determined by the director according to
43 the adjustment process defined in the Surface Water Design Manual.

44 3. Requests for adjustments that may conflict with any other City requirement shall
45 require review and concurrence by the applicable City department.

46 4. A request for an adjustment is a Type 1 land use decision as provided for in SMC Title 20
47 and shall be processed in accordance with the procedures specified in the Surface Water Design Manual.

1 5. The City may require monitoring of experimental designs and technology or untested
2 applications proposed by the applicant in order to determine compliance with subsection C.1. of this
3 section and the approved plans and conditions.

4 6. An adjustment decision may be appealed by following the appeal procedures as
5 specified in the Surface Water Design Manual.
6

7 **13.20. Critical drainage and/or critical erosion areas.**

8 Development in areas where the department has determined that the existing flooding, drainage and/or
9 erosion conditions present an imminent likelihood of harm to the welfare and safety of the surrounding
10 community shall meet special drainage requirements set by the director until such time as the
11 community hazard is alleviated. Such conditions may include the limitation of the volume of discharge
12 from the subject property to predevelopment levels, preservation of wetlands or other natural drainage
13 features or other controls necessary to protect against community hazard. Where alternate facility
14 designs or methods will produce a compensating or comparable result in the public interest and which
15 will meet this section's objectives of safety, function, appearance, environmental protection and
16 maintainability, based upon sound engineering judgment, an adjustment to the special drainage
17 requirements promulgated under this section may be proposed, provided that the resulting
18 development shall be subject to all of the remaining terms and conditions of this chapter. Where
19 application of this section will deny all reasonable use of a property and a facility or design that
20 produces a compensating or comparable result cannot be obtained, then a best practicable alternative
21 may be approved by the director according to the adjustment process defined in the Surface Water
22 Design Manual. These standards are in addition to the applicable standards of SMC 21A.50.
23

24 **13.20. Engineering plans for the purposes of drainage review.**

25 A. These requirements are in addition to the submittal requirements established by SMC 20.05.

26 1. All engineering plans shall be submitted to the City for review in accordance with the
27 Surface Water Design Manual except those drainage plans developed by, or under the review of, the
28 City of Sammamish Department of Public Works for either surface and storm water capital
29 improvement, repair, maintenance or restoration projects or other linear government agency projects,
30 such as roadways, railways, pipelines, utility lines and trails.

31 2. If engineering plans are returned for any reason, they shall be returned to the applicant.

32 3. All master drainage plans, if required, shall be submitted to the City for review in
33 accordance with the specifications in the Surface Water Design Manual. The master drainage plan
34 process should commence at the same time as the state Environmental Policy Act (SEPA) process.

35 4. Drainage plans not subject to review by the City under subsection A.1. of this section
36 shall be reviewed by the Department of Public Works in accordance with this chapter. Project
37 applicability and compliance with this chapter shall be documented in writing and available for review.
38

39 B. The expiration time frames as specified in the Surface Water Design Manual shall apply to all
40 permit and approval applications.
41

42 C. All plans shall be processed in accordance with the review procedures specified in the Surface
43 Water Design Manual.
44

45 D. Submittal procedures, definitions and specifications for the required contents of engineering
46 plans are presented in the Surface Water Design Manual.
47

48 **13.20. Construction timing and final approval.**

1 A. No work related to permanent or temporary storm drainage control for a permitted
2 development may proceed without the approval of the director.

3
4 B. Erosion and sediment control measures associated with both the interim and permanent
5 drainage systems shall be:

6 1. Constructed in accordance with the approved plan prior to any grading or land clearing
7 other than that associated with an approved erosion and sediment control plan; and

8 2. Satisfactorily sequenced and maintained until all improvements, restoration, and
9 landscaping associated with the permit and approvals for the project are completed and the potential
10 for onsite erosion has passed.

11
12 C. The applicant shall have constructed and have in operation those portions of the drainage
13 facilities necessary to accommodate the control of surface and storm water runoff discharging from the
14 site before the construction of any other improvements or buildings on the site, or in accordance with
15 SMC Title 19A.

16
17 **13.20. Liability insurance required.**

18 The applicant required to construct the drainage facility pursuant to this chapter shall maintain a
19 combined single limit per occurrence liability policy in the amount established annually by the City,
20 which shall name City as an additional insured and protect the City from liability relating to the
21 construction or maintenance of the facility until construction approval or acceptance for maintenance,
22 whichever is last. Proof of this required liability policy shall be provided to the director prior to
23 commencing construction of any drainage facility. If this liability insurance is not kept in effect as
24 required, the City may initiate enforcement action pursuant to SMC Title 23.

25
26 **13.20. Financial guarantees authorized.**

27 The City is authorized to require all applicants issued permits or approvals under the provisions of the
28 title to post financial guarantees consistent with the provisions of Title 27A.

29
30
31 **13.20. Drainage facilities accepted by Sammamish for maintenance.**

32 A. The City is responsible for the maintenance, including performance and operation, of drainage
33 facilities which have formally been accepted for maintenance by the director.

34
35 B. The City may assume maintenance of privately maintained drainage facilities only if the
36 following conditions have been met:

37 1. All necessary easements or dedications entitling the City to properly maintain the
38 drainage facility have been conveyed to the City;

39 2. The director has determined that the facility is in the dedicated public road right-of-way
40 or that maintenance of the facility will contribute to protecting or improving the health, safety and
41 welfare of the community based upon review of the existence of or potential for:

- 42 a. flooding,
43 b. downstream erosion,
44 c. property damage due to improper function of the facility,
45 d. safety hazard associated with the facility,
46 e. degradation of water quality or in-stream resources, or
47 f. degradation to the general welfare of the community; and

1 3. The director has declared in writing acceptance of maintenance responsibility by the
2 City. Copies of this document will be kept on file in the Department of Public Works.

3
4 C. The director may terminate the department's assumption of maintenance responsibilities in
5 writing after determining that continued maintenance will not significantly contribute to protecting or
6 improving the health, safety and welfare of the community based upon review of the existence of or
7 potential for:

- 8 1. Flooding,
- 9 2. Downstream erosion,
- 10 3. Property damage due to improper function of the facility,
- 11 4. Safety hazard associated with the facility,
- 12 5. Degradation of water quality or in-stream resources, or
- 13 6. Degradation to the general welfare of the community.

14 Copies of this document will be kept on file in the Department of Public Works.

15
16 D. A drainage facility which does not meet the criteria of this section shall remain the responsibility
17 of the applicant required to construct the facility and persons holding title to the property for which the
18 facility was required.

19
20 **13.20. Drainage facilities not accepted by Sammamish for maintenance.**

21 A. The person or persons holding title to the property and the applicant required to construct a
22 drainage facility shall remain responsible for the facility's continual performance, operation and
23 maintenance in accordance with the standards and requirements of the department and remain
24 responsible for any liability as a result of these duties. This responsibility includes maintenance of a
25 drainage facility which is:

- 26 1. Under a maintenance guarantee or defect guarantee;
- 27 2. A private road conveyance system;
- 28 3. Released from all required financial guarantees prior to July 7, 1980;
- 29 4. Located within and serving only one single family residential lot;
- 30 5. Located within and serving a multifamily or commercial site unless the facility is part of
31 an approved shared facility plan;
- 32 6. Located within or associated with an short subdivision or subdivision which handles
33 runoff from an area of which less than two-thirds is designated for detached or townhouse dwelling
34 units located on individual lots unless the facility is part of an approved shared facility plan;
- 35 7. Previously terminated for assumption of maintenance responsibilities by the
36 department in accordance with this chapter; or
- 37 8. Not otherwise accepted by the City for maintenance.

38
39 B. Prior to the issuance of any of the permits for any multifamily or commercial project required to
40 have a flow control or water quality treatment facility, the applicant shall record a declaration of
41 covenant as specified in the Surface Water Design Manual. The restrictions set forth in such covenant
42 shall include, but not be limited to, provisions for notice to the persons holding title to the property of a
43 City determination that maintenance and/or repairs are necessary to the facility and a reasonable time
44 limit in which such work is to be completed.

45 1. In the event that the titleholders do not effect such maintenance and/or repairs, the
46 City may perform such work upon due notice. The titleholders are required to reimburse the City for any
47 such work. The restrictions set forth in such covenant shall be included in any instrument of conveyance

1 of the subject property and shall be recorded with the records and licensing services division of King
2 County.

3 2. The City may enforce the restrictions set forth in the declaration of covenant provided in
4 the Surface Water Design Manual.

5
6 C. Prior to the issuance of any of the permits and/or approvals for the project or the release of
7 financial guarantees posted to guarantee satisfactory completion, the person or persons holding title to
8 the subject property for which a drainage facility was required shall pay a fee established by the director
9 as set forth in the City resolution to reasonably compensate the City for costs relating to inspection of
10 the facility to ensure that it has been constructed according to plan and applicable specifications and
11 standards.

12
13 D. The duties specified in this section with regard to payment of inspection fees and
14 reimbursement of maintenance costs shall be enforced against the person or persons holding title to the
15 property for which the drainage facility was required.

16
17 E. Where not specifically defined in this section, the responsibility for performance, operation and
18 maintenance of drainage facilities and conveyance systems, both natural and constructed, shall be
19 determined on a case-by-case basis.

20
21 **13.20. Hazards.**

22 Whenever the director determines that any existing construction site, erosion and sedimentation
23 problem and/or drainage facility poses a hazard to life and limb, endangers any property, and/or
24 adversely affects the condition or capacity of other drainage facilities, the safety and operation of City
25 right-of-way, utilities, and/or other property owned or maintained by the City, the applicant/person to
26 whom the permit was issued pursuant to this chapter, the owner of the property within which the
27 drainage facility is located, the applicant/person responsible for maintenance of the facility, and/or
28 other person or agent in control of said property, upon receipt of notice in writing from the director
29 shall within the period specified therein repair or otherwise address the cause of the hazardous
30 situation in conformance with the requirements of this chapter.

31 Should the director have reasonable cause to believe that the situation is so adverse as to preclude
32 written notice, the director may take the measures necessary to eliminate the hazardous situation;
33 provided that the director shall first make a reasonable effort to locate the owner before acting. In such
34 instances the applicant of whom a drainage plan was required pursuant to this chapter, the owner of
35 the property and/or the person responsible for the maintenance of the facility shall be obligated for the
36 payment of all costs incurred. If costs are incurred and a financial guarantee pursuant to this chapter or
37 other City requirement has been posted, the director shall have the authority to collect against the
38 financial guarantee to cover costs incurred.

39
40 **13.20. Administration.**

41 A. Administration.

42 1. The director is authorized to promulgate and adopt administrative rules under the
43 procedures specified in SMC 2.55, for the purpose of implementing and enforcing the provisions of this
44 chapter. Adopted administrative rules are available to the public from the Department of Public Works.
45 This includes, but is not limited to, the Surface Water Design Manual.

46 2. The director is authorized to develop procedures for applying adopted rules and
47 regulations during the review of permit applications for the development of land. These procedures may
48 also be contained in the Surface Water Design Manual.

1
2 B. Inspections. The director is authorized to make such inspections and take such actions as may be
3 required to enforce the provisions of this chapter.
4

5 C. Right of entry. Whenever necessary to make an inspection to enforce any of the provisions of
6 this chapter, monitor for proper function of drainage facilities or whenever the director has reasonable
7 cause to believe that violations of this chapter are present or operating on a subject property or portion
8 thereof, the director may enter such premises at all reasonable times to inspect the same or perform
9 any duty imposed upon the director by this chapter; provided that, if such premises or portion thereof is
10 occupied, the director shall first make a reasonable effort to locate the owner or other person having
11 charge or control of the premises or portion thereof and demand entry.
12

13 D. Access. Proper ingress and egress shall be provided to the director to inspect, monitor or
14 perform any duty imposed upon the director by this chapter. The director shall notify the responsible
15 party in writing of failure to comply with this access requirement. Failing to obtain a response within
16 seven days from the receipt of notification the director may order the work required completed or
17 otherwise address the cause of improper access. The obligation for the payment of all costs that may be
18 incurred or expended by the City in causing such work to be done shall thereby be imposed on the
19 person holding title to the subject property.
20

21 **13.20. Enforcement.**

22 The City is authorized to enforce the provisions of this chapter, the ordinances and resolutions codified
23 in it, and any rules and regulations promulgated thereunder pursuant to the enforcement and penalty
24 provisions of SMC Title 23.
25

26 **13.20. Implementation, review and revision.**

27 The department may administer a training program for users of the Surface Water Design Manual. The
28 department may also conduct an on-going research program to evaluate the effectiveness of the
29 requirements in meeting the purpose of this chapter. This research program may examine, but not be
30 limited to, hydrologic and hydraulic analysis methods, stream geomorphologic analysis methods, water
31 quality, best management practices and erosion and sediment control measures.
32

33 **13.20. Severability.**

34 If any provision of this chapter or its application to any person or property is held invalid, the remainder
35 of the chapter or the application of the provision to other persons or property shall not be affected.
36
37
38

Chapter 13.25
Surface Water Management Program

Sections:

- 13.25. Authority.
- 13.25. Purpose.
- 13.25. Applicability.
- 13.25. Policy.
- 13.25. Rate structure.
- 13.25. Rate adjustments and appeals.
- 13.25. Billing procedure.
- 13.25. Delinquencies and foreclosures.
- 13.25. Surface water management fund.
- 13.25. Administrative standards and procedures.
- 13.25. Report of revenue and expenditure analysis.
- 13.25. Severability.

13.25. Authority.

- A. There is hereby created and established the surface water management program of Sammamish under which the provisions of this chapter shall be carried out.
- B. The program created in this section shall be administered by the department.
- C. Whenever necessary to examine the property characteristics of a particular parcel for the purposes of implementing this chapter, the director may enter any property or portion thereof at reasonable times in compliance with the following procedures:
 - 1. If the property or portion thereof is occupied, the director shall present identification credentials, state the reason for entry and request entry;
 - 2. If the property or portion thereof is unoccupied, the director shall first make a reasonable effort to locate the owner or other persons having charge or control of the property or portion thereof and request entry; and
 - 3. Unless entry is consented to by the owner or person in control of any property or portion thereof, the director, before entry, shall obtain a search warrant as authorized by the laws of the state of Washington.
- D. The director is authorized to enforce this chapter, the ordinances and resolutions codified in it and any rules and regulations promulgated thereunder pursuant to the enforcement and penalty provisions of SMCTitle 23.
- E. The program may provide services related to surface and storm water management, including but not limited to basin planning, facilities maintenance, regulation, financial administration, public involvement, drainage investigation and enforcement, aquatic resource restoration, surface and storm water quality and environmental monitoring, natural surface water drainage system planning, intergovernmental relations, and facility design and construction. The program may contract for services with interested municipalities or special districts including but not limited to sewer and water districts, school districts, or other governmental agencies.

1
2 **13.25. Purpose.**

3 The purpose is to promote public health, safety and welfare by establishing and operating a
4 comprehensive approach to surface and storm water problems which would reduce flooding, erosion
5 and sedimentation, prevent and mitigate habitat loss, enhance groundwater recharge and prevent
6 water quality degradation. This comprehensive approach includes the following elements: basin
7 planning, land use regulation, construction of facilities, maintenance, public education, and provision of
8 surface and storm water management services. The most cost effective and beneficial approach to
9 surface and storm water management is through preventative actions and protection of the natural
10 drainage system. In approaching surface and storm water problems the Surface Water Management
11 Program shall give priority to methods which provide protection or enhancement of the natural surface
12 water drainage system over means which primarily involve construction of new drainage facilities or
13 systems. The purpose of the rates and charges established herein is to provide a method for payment of
14 all or any part of the cost and expense of surface and storm water management services or to pay or
15 secure the payment of all or any portion of any issue of general obligation or revenue bonds issued for
16 such services. These rates and charges are necessary in order to promote the public health, safety and
17 welfare by minimizing uncontrolled surface and storm water, erosion, and water pollution; to preserve
18 and utilize the many values of the City's natural drainage system including water quality, open space,
19 fish and wildlife habitat, recreation, education, urban separation and drainage facilities; and to provide
20 for the comprehensive management and administration of surface and storm water.

21
22 **13.25. Applicability.**

23 A. Developed parcels within the service area shall be billed each year for surface and storm water
24 management services pursuant to RCW 36.89.080. Surface and storm water management services or
25 service charges, or both shall be imposed on developed parcels lying within cities and towns when the
26 services or charges, or both, have been provided for by interlocal agreements between the City and the
27 cities or towns. That portion of the rates or charges allocated to payment of debt service on revenue or
28 general obligation bonds issued to finance storm water control facilities in areas annexed or
29 incorporated subsequent to the issuance of the bonds shall be imposed as set forth in this chapter.

30
31 B. The service area shall be the corporate city limits of the City of Sammamish.

32
33 **13.25. Policy.**

34 A. It is the finding of the City that a number of the basins in the service area are shared with other
35 incorporated cities or unincorporated areas. In order to achieve a comprehensive approach to surface
36 and storm water management, the City should coordinate surface and storm water, management
37 services with neighboring jurisdictions. In addition, the program may contract for services with
38 interested municipalities or special districts including but not limited to sewer and water districts, school
39 districts, port districts or other governmental agencies.

40
41 B. It is the finding of the City that technical assistance and community education have been shown
42 to be a cost-effective means of improving the management of the impacts of surface and storm water
43 runoff. Technical assistance and community education regarding stewardship enables the City, its
44 residents and businesses to comply with federal, state and local mandates and enables the City to
45 protect its quality of life and its natural resources. The promotion of stewardship is an integral part of a
46 comprehensive surface and storm water management program.

1 C. It is the finding of the City that developed parcels contribute to an increase in surface and storm
2 water runoff to the surface and storm water management system. This increase in surface and storm
3 water runoff results in the need to establish rates and charges to finance the City's activities in surface
4 and storm water management. Developed parcels shall be subject to the rates and charges of the
5 surface water management program based on their contribution to increased runoff. The factors to be
6 used to determine the degree of increased surface and storm water runoff to the surface and storm
7 water management system from a particular parcel shall be the percentage of impervious surface
8 coverage on the parcel, the total acreage of the parcel and any mitigating factors as determined by the
9 City.

10
11 D. It is the finding of the City that undeveloped parcels do not contribute as much as developed
12 parcels to an increase in surface and storm water runoff into the surface and storm water management
13 system. Undeveloped properties shall be exempt from the rates and charges of the surface water
14 management program.

15
16 E. It is the finding of the City that maintained drainage facilities mitigate the increased runoff
17 contribution of developed parcels by providing on-site drainage control. Parcels served by flow control
18 facilities which were required for development of the parcel pursuant to SMC 13.20 and approved by
19 Sammamish or can be demonstrated as required in this chapter by the property owner to provide flow
20 control of surface and storm water to the standards in SMC 13.20 shall receive a discount as provided in
21 the rates and charges of the surface water management program, if the facility is maintained at the
22 parcel owner's expense to the standard established by the department.

23
24 F. It is the finding of the City that improvements to the quality of storm water runoff can decrease
25 the impact of that runoff on the environment. Parcels served by water quality treatment facilities that
26 were required for development of the parcel pursuant to SMC 13.20 and approved by the City or that
27 can be demonstrated as required in this chapter by the property owner to provide treatment of surface
28 and storm water to the standards in SMC 13.20 shall receive a discount as provided in the rates and
29 charges of the surface water management program, if the facility is maintained at the parcel owner's
30 expense to the standard established by the department.

31
32 G. It is a finding of the City that open space properties provide a benefit to the surface and storm
33 water management system by the retention of property in an undeveloped state. Open space properties
34 shall receive a discount from the rates and charges to encourage the retention of property as open
35 space.

36
37 H. It is a finding of the City that the majority of the parcels in the service area are residential. The
38 variance between residential parcels in impervious surface coverage is found to be minor and to reflect
39 only minor differences in increased runoff contributions. The administrative cost of calculating the
40 service charge individually for each residential parcel and maintaining accurate information would be
41 very high. A flat charge for residential parcels is less costly to administer than calculating a separate
42 charge for each parcel and is equitable because of the similarities in impervious surface coverage
43 between residential parcels. Therefore, residential parcels shall be charged a flat charge based upon an
44 average amount of impervious surface.

45
46 I. It is the finding of the City that lightly to very heavily developed nonresidential parcels which
47 have an impervious surface coverage of more than ten percent have a substantial impact on the surface
48 and storm water management system. The impact of these parcels on the surface and storm water

1 management system increases with the size of the parcels. Therefore, lightly to very heavily developed
2 properties shall be charged a rate determined by the percent of impervious surface coverage multiplied
3 by the parcel acreage.
4

5 J. It is the finding of the City that comprehensive management of surface and storm water runoff
6 must include anticipation of future growth and development in the design and improvement of the
7 surface and storm water management system. Service charge revenue needs shall be based upon the
8 present and future requirements of the surface and storm water management system, and these needs
9 shall be considered when determining the rates and charges of the program.
10

11 K. It is the finding of the City that basin plans are essential to establishing a comprehensive
12 approach to a capital improvement program, maintenance of facilities and regulation of new
13 developments. A plan should analyze the measures needed to control surface and storm water runoff
14 which results from existing and anticipated development within the basin. The measures investigated to
15 control runoff should include land use regulation such as setback requirements or community plan
16 revisions which revise land use densities as well as the use of drainage facilities. A plan also should
17 recommend the quantity and water quality runoff control measures required to further the purposes set
18 forth in this chapter, and community goals. The institutional requirements and regulations, including but
19 not limited to land use management, funding needs, and incentives for preserving the natural surface
20 water drainage system should be identified in the plan. The proposed ordinances and regulations
21 necessary to implement the plan shall be transmitted to the council simultaneously with the plan.
22

23 L. It is a finding of the City that the federal government has increased requirements concerning
24 surface water quantity and control. The federal Clean Water Act, implemented through municipal storm
25 water NPDES permits, mandates a wide variety of local programs to manage surface water and improve
26 water quality. Compliance will increasingly be measured by the effectiveness of the City's surface water
27 and water quality programs. The NPDES permit impacts operations in the Parks and Public Works
28 departments.
29

30 M. It is a finding of the City that Chinook salmon were listed as a threatened species in March 1999,
31 and bull trout were listed as a threatened species in November 1999, under the federal Endangered
32 Species Act. These listings focus the need for higher standards in managing surface water including new,
33 expanded and more intensive programs to control the quantity of runoff as well as its quality. Programs
34 responding to these imperatives have included the design, permitting and construction of facilities,
35 facility retrofitting and maintenance, habitat acquisition and restoration, monitoring, regulation
36 development and coordination with other agencies on transboundary issues.
37

38 N. It is the finding of the City that areas with development related surface and storm water
39 problems require comprehensive management of surface and storm water.
40

41 O. It is the finding of the City that additional surface and storm water runoff problems may be
42 caused by new land use development if not properly mitigated both through protection of natural
43 systems and through constructed improvements. The Surface Water Design Manual and SMC Titles 13,
44 16, 20 and 21A have been adopted by the City to mitigate the impact of land use development. Further
45 mitigation of these impacts is based on expertise which continues to evolve as new information on our
46 natural systems is obtained and new techniques are discovered. The surface water management
47 program, through reconnaissance studies, basin plans, and other special studies, will continuously
48 provide valuable information on the existing problems and areas of the natural drainage system that

1 need special protection. The City is researching and developing methods to protect the natural drainage
2 system through zoning, buffering and setbacks to alleviate existing problems. Setback and buffering
3 measures allow natural preservation of wetlands and stream corridors to occur, alleviate erosion and
4 water pollution and provide a safe environment for the small mammals and fish which inhabit sensitive
5 areas. Based upon the findings in this subsection, and as information and methods become available,
6 the executive, as appropriate shall draft and submit to the council, regulations and development
7 standards to allow protection of the surface and storm water management system including natural
8 drainage systems.
9

10 P. The program will maintain long term fiscal viability and fund solvency for all of its related funds.
11 All required capital and operating expenditures will be covered by service charges and other revenues
12 generated or garnered by the program. The program will pay all current operating expenses from
13 current revenues and will maintain an operating reserve to minimize service impacts due to revenue or
14 expenditure variances from plan during a fiscal year. This reserve will be calculated based on the historic
15 variability of revenue and expenditures. The program will adopt a strategic financial planning approach
16 which recognizes the dynamic nature of the program's fiscal operating environment. Long term
17 projections will be updated in the program's adopted strategic plan. One-time revenues will be
18 dedicated to one-time-only expenditures and will not be used to support ongoing requirements. The
19 program's approach to financial reporting and disclosure will be comprehensive, open and accessible.
20

21 Q. The program shall prepare an annual, multiyear capital improvement program which
22 encompasses all of the program's activities related to the acquisition, construction, replacement, or
23 renovation of capital facilities or equipment. All proposed new facilities will be subject to a consistent
24 and rigorous needs analysis. The program's capital facilities will be planned and financed to ensure that
25 the benefits of the facilities and the costs for them are balanced over time.
26

27 R. The program will manage its debt to ensure continued high credit quality, access to credit
28 markets, and financial flexibility. All of the program's debt management activities will be conducted to
29 maintain at least the current credit ratings assigned to the City's debt by the major credit rating agencies
30 and to maintain an adequate debt service coverage ratio. Long term debt will not be used to support
31 operating expenses. The program will develop and maintain a central system for all debt-related records
32 which will include all official statements, bid documents, ordinances indentures, leases, etc., for all of
33 the program's debt and will accurately account for all interested earnings in debt-related funds. These
34 records will be designed to ensure that the program is in compliance with all debt covenants and with
35 state and federal laws.
36
37
38

Chapter 13.30
Water Quality

Sections:

- 13.30. Purpose.
- 13.30. Discharges into waters.
- 13.30. Stormwater Pollution Prevention Manual.
- 13.30. Enforcement.
- 13.30. Hazards.
- 13.30. Criminal penalty.
- 13.30. Civil penalties for water quality.
- 13.30. Construction - intent.

13.30.010 Purpose.

The purpose of this chapter is to protect the City's surface and ground water quality by providing minimum requirements for reducing and controlling the discharge of contaminants. The City council recognizes that water quality degradation can result either directly from one discharge or through the collective impact of many small discharges. Therefore, this chapter prohibits the discharge of contaminants into surface and storm water and ground water, and outlines preventive measures to restrict contaminants from entering such waters. These measures include the implementation of best management practices (BMPs) by the residents of the City of Sammamish.

The City council finds this chapter is necessary to protect the health, safety and welfare of the residents of Sammamish and the integrity of the City's resources for the benefit of all by: minimizing or eliminating water quality degradation; preserving and enhancing the suitability of waters for recreation, fishing, and other beneficial uses; and preserving and enhancing the aesthetic quality and biotic integrity of the water. The City council recognizes that implementation of this chapter is required under the federal Clean Water Act, 33 U.S.C. 1251 et. seq. In meeting the intent of the Clean Water Act the City council also recognizes the importance of maintaining economic viability while providing necessary environmental protection and believes this chapter helps achieve both goals.

13.30.020 Discharges into waters.

A.

1. It is unlawful for any person to discharge any contaminants into surface and storm water, ground water or Puget Sound. Contaminants include, but are not limited, to the following:

- a. trash or debris;
- b. construction materials;
- c. petroleum products including but not limited to oil, gasoline, grease, fuel oil, heating oil;
- d. antifreeze and other automotive products;
- e. metals in either particulate or dissolved form;
- f. flammable or explosive materials;
- g. radioactive material;
- h. batteries;
- i. acids, alkalis, or bases;
- j. paints, stains, resins, lacquers or varnishes;
- k. degreasers and solvents;

- 1 l. drain cleaners;
- 2 m. pesticides, herbicides or fertilizers;
- 3 n. steam cleaning wastes;
- 4 o. soaps, detergents or ammonia;
- 5 p. swimming pool backwash;
- 6 q. chlorine, bromine and other disinfectants;
- 7 r. heated water;
- 8 s. domestic animal wastes;
- 9 t. sewage;
- 10 u. recreational vehicle waste;
- 11 v. animal carcasses;
- 12 w. food wastes;
- 13 x. bark and other fibrous materials;
- 14 y. collected lawn clippings, leaves or branches;
- 15 z. silt, sediment or gravel;
- 16 aa. dyes, except as stated in subsection C.1. of this section;
- 17 bb. chemicals not normally found in uncontaminated water;
- 18 cc. any hazardous material or waste not listed above.

19 2. Illicit connections. Any connection identified by the director that could convey anything
20 not composed entirely of surface and storm water directly to surface and storm water or ground water
21 is considered an illicit connection and is prohibited with the following exceptions:

- 22 a. connections conveying allowable discharges;
- 23 b. connections conveying discharges pursuant to an NPDES permit, other than an
24 NPDES storm water permit, or a State Waste Discharge Permit; and
- 25 c. connections conveying effluent from onsite sewage disposal systems to
26 subsurface soils.

27
28 B. BMPs shall be applied to any business or residential activity that might result in prohibited
29 discharges as specified in the Stormwater Pollution Prevention Manual or as determined necessary by
30 the director. Activities that might result in prohibited discharges include but are not limited to following:

- 31 1. Potable water line flushing;
- 32 2. Lawn watering with potable water;
- 33 3. Dust control with potable water;
- 34 3. Automobile and boat washing;
- 35 4. Pavement and building washing;
- 36 5. Swimming pool and hot tub maintenance;
- 37 6. Auto repair and maintenance;
- 38 7. Building repair and maintenance;
- 39 8. Landscape maintenance;
- 40 9. Hazardous waste handling;
- 41 10. Solid and food waste handling; and
- 42 11. Application of pesticides.

43
44 C. The following types of discharges shall not be considered prohibited discharges for the purpose
45 of this chapter unless the director determines that the type of discharge, whether singly or in
46 combination with other discharges, is causing significant contamination of surface and storm water or
47 ground water:

- 48 1. Spring water;

2. Diverted stream flows;
3. Uncontaminated water from crawl space pumps, foundation drains or footing drains;
4. Lawn watering with potable water or collected rainwater;
5. Pumped groundwater flows that are uncontaminated;
6. Materials placed as part of an approved habitat restoration or bank stabilization project;
7. Natural uncontaminated surface water or ground water;
8. Flows from riparian habitats and wetlands;
9. The following discharges from boats: engine exhaust; cooling waters; effluent from sinks; showers and laundry facilities; and treated sewage from Type I and Type II marine sanitation devices;
10. Collected rainwater that is uncontaminated;
11. Uncontaminated groundwater that seeps into or otherwise enters stormwater conveyance systems;
12. Air conditioning condensation;
13. Irrigation water from agricultural sources that is commingled with stormwater runoff;
- and
14. Other types of discharges as determined by the director.

D.

1. Dye testing is allowable but requires verbal notification to the City at least one day prior to the date of test. The City is exempt from this requirement.
2. A person does not violate subsection A. of this section if:
 - a. That person has properly designed, constructed, implemented and is maintaining BMPs and is carrying out AKART as required by this chapter, but contaminants continue to enter surface and storm water or ground water; or
 - b. That person can demonstrate that there are no additional contaminants being discharged from the site above the background conditions of the water entering the site.
3. A person who, under subsection D.2. of this section, is not in violation of subsection A. of this section is liable for any prohibited discharges through illicit connections, dumping, spills, improper maintenance of BMPs or other discharges that allow contaminants to enter surface and storm water or ground water.
4. Emergency response activities or other actions that must be undertaken immediately or within a time too short to allow full compliance with this chapter in order to avoid an imminent threat to public health or safety, shall be exempt from this section. The director by public rule may specify actions that qualify for this exception in City procedures. A person undertaking emergency response activities shall take steps to ensure that the discharges resulting from such activities are minimized. In addition, this person shall evaluate BMPs and the site plan, where applicable, to restrict recurrence.

13.30.030 Stormwater Pollution Prevention Manual.

A. Compliance with this chapter shall be achieved through the use of the best management practices described in the Stormwater Pollution Prevention Manual in effect on **XXXXXX (EFFECTIVE DATE OF ORDINANCE)**. In applying the Stormwater Pollution Prevention Manual, the director shall first require the implementation of source control BMPs. If these are not sufficient to prevent contaminants from entering surface and storm water or ground water, the director may require implementation of treatment BMPs as set forth in AKART. The City will provide, upon reasonable request, available

1 technical assistance materials and information, and information on outside financial assistance options
2 to persons required to comply with this chapter.

3
4 B. In applying the Stormwater Pollution Prevention Manual to prohibited discharges from normal
5 single family residential activities, the director shall use public education and warnings as primary
6 method of gaining compliance with this chapter and shall not use citations, notice and orders,
7 assessment of civil penalties and fines, or other compliance actions as authorized in SMC Title 23, unless
8 the director determines:

9 1. The discharge from a normal single family residential activity, whether singly or
10 combination with other discharges, is causing a significant contribution of contaminants to
11 surface and storm water or ground water; or

12 2. The discharge from a normal single family residential activity poses a hazard to the
13 public health, safety or welfare, endangers any property or adversely affects the safety and
14 operation of City right-of-way, utilities or other City-owned or maintained property.

15
16 C. Persons implementing BMPs through another federal, state or local program will not be
17 required to implement the BMPs prescribed in the City's Stormwater Pollution Prevention Manual,
18 unless the director determines the alternative BMPs are ineffective at reducing the discharge of
19 contaminants. If the other program requires the development of a stormwater pollution prevention plan
20 or other best management practices plan, the person shall make the plan available to the City upon
21 request. Persons who qualify for exemptions include, but are not limited to, persons:

22 1. Required to obtain a general or individual NPDES permit from the Washington state
23 Department of Ecology;

24 2. Implementing and maintaining, as scheduled, a King Conservation District-approved
25 farm management plan;

26 3. Implementing BMPs in compliance with the management program of the City's
27 municipal NPDES permit;

28 4. Engaged in forest practices, with the exception of forest practices occurring on lands
29 platted after January 1, 1960, or on lands being converted to another use or when regulatory
30 authority is otherwise provided to local government by RCW 76.09.240; or

31 5. Identified by the director as being exempt from this section.

32
33 **13.30.040 Enforcement.**

34 A. The director is authorized to carry out enforcement actions pursuant to the enforcement and
35 penalty provisions of SMC Title 23 and other enforcement provisions adopted by rule under the
36 procedures of SMC 2.55.

37
38 B. The director shall gain compliance with this chapter by requiring the implementation of BMPs
39 and, when necessary, AKART. The director shall initially rely on education and informational assistance
40 as much as possible to gain compliance with this chapter, unless the director determines a violation is a
41 result of a flagrant act that should be addressed through immediate penalties or poses a hazard as
42 defined in the Hazards section.

43
44 C. The director, in consultation with other departments of the City government, shall develop and
45 implement additional enforcement procedures. These procedures shall indicate how the City will
46 investigate and respond to reports or instances of noncompliance with this chapter and shall identify by
47 title the official(s) responsible for implementing the enforcement procedures.

1 D. The director is authorized to make such inspections and take such actions as may be required to
2 enforce the provisions of this chapter. Such inspections shall be made in accordance with SMC Title 23.

3 1. The director may observe best management practices or examine or sample surface and
4 storm water or ground water as often as may be necessary to determine compliance with this chapter.
5 Whenever an inspection of a property is made, the findings shall be recorded and a copy of the
6 inspection findings shall be furnished to the owner or the person in charge of the property after the
7 conclusion of the investigation and completion of the inspection findings.

8 2. When the director has made a determination under subsection 1. of this section that
9 any person is violating this chapter, the director may require the violator to sample and analyze any
10 discharge, surface and storm water, ground water, and/or sediment, in accordance with sampling and
11 analytical procedures or requirements determined by the director. If the violator is required to complete
12 this sampling and analysis, a copy of the analysis shall be provided to the City of Sammamish
13 Department of Public Works.

14
15 E. In addition to any other penalty or method of enforcement, the prosecuting attorney may bring
16 actions for injunctive or other relief to enforce this chapter.
17

18 **13.30.050 Hazards.**

19 Whenever the director determines that any violation of this chapter poses a hazard to public health,
20 safety, or welfare; endangers any property; or adversely affects the safety and operation of City right-of-
21 way, utilities, and/or other property owned or maintained by the City; the person holding title to the
22 subject property, and/or other person or agent in control of said property, upon receipt of notice in
23 writing from the director shall within the period specified therein address the cause of the hazardous
24 situation in conformance with the requirements of this chapter.

25 Notwithstanding any other provisions of this chapter, whenever it appears to the director that
26 conditions covered by this chapter exist requiring immediate action to protect the public health and/or
27 safety, the director is authorized to enter at all times in or upon any such property, public or private, for
28 the purpose of inspecting and investigating such emergency conditions. The director may without prior
29 notice order the immediate discontinuance of any activity leading to the emergency condition. Failure to
30 comply with such order shall constitute a misdemeanor as specified in SMC Title 23.
31

32 **13.30.060 Criminal Penalty.**

33 Any willful violation of an order issued pursuant to Section 13.30.040 or Section 13.30.050 of this
34 chapter for which a criminal penalty is not prescribed by state law is a misdemeanor
35

36 **13.30.070 Civil penalties for water quality.**

37 The enforcement provisions for water quality are intended to encourage compliance with this chapter.
38 To achieve this, violators will be required to take corrective action and comply with the requirements of
39 this chapter, and may be required to pay a civil penalty for the redress of ecological, recreational, and
40 economic values lost or damaged due to their unlawful action.

41 A. The provisions in this section are in addition to and not in lieu of any other penalty, sanction or
42 right of action provided by law.
43

44 B. Any person in violation of this chapter shall be subject to civil penalties assessed as follows:

45 1. An amount reasonably determined by the director to be equivalent to the economic
46 benefit the violator derives from the violation as measured by: the greater of the resulting increase in
47 market value of the property or business value received by the violator, or savings of construction or
48 retrofitting costs realized by the violator performing any act in violation of this chapter; and

1 2. An amount, not to exceed \$25,000, that is reasonably based upon the nature and
2 gravity of the violation and the cost to the City of enforcing this chapter against the violator.

3
4 C. Any person who, through an act of commission or omission, aids or abets in a violation shall be
5 considered to have committed the violation for the purposes of the civil penalty.

6
7 D. Each violator is jointly and severally liable for a violation of this chapter. The director may take
8 enforcement action, in whole or in part, against any violator. The decisions whether to take
9 enforcement action, what type of action to take, and which person to take action against, are all entirely
10 within the director's discretion. Factors to be used in taking such enforcement actions shall be:

- 11 1. Awareness of the violation;
- 12 2. Ability to correct the violation;
- 13 3. Cooperation with government agencies;
- 14 4. Degree of impact or potential threat to water or sediment quality, human health, or the
15 environment.

16 In the event more than one person is determined to have violated the provisions of this chapter, all
17 applicable civil penalties may be imposed against each person, and recoverable damages, costs, and
18 expenses may be allocated among the persons on any equitable basis. Factors that may be considered in
19 determining an equitable allocation include:

- 20 a. Awareness of the violation;
- 21 b. Ability to correct the violation;
- 22 c. Ability to pay damages, costs, and expenses;
- 23 d. Cooperation with government agencies;
- 24 e. Degree of impact or potential threat to water or sediment quality, human health, or the
25 environment.

26
27 E. The director or the director's designee may engage in mitigation discussions with the violator.
28 The director or the director's designee may reduce the penalties based upon one or more of the
29 following mitigating factors:

- 30 1. The person responded to City attempts to contact the person and cooperated with
31 efforts to correct the violation;
- 32 2. The person showed due diligence and/or substantial progress in correcting the violation;
- 33 or
- 34 3. An unknown person was the primary cause of the violation.

35 Payment of a monetary penalty pursuant to this chapter does not relieve the person of the duty to
36 correct the violation.

37
38 **13.30.080 Construction – Intent.**

39 This chapter is enacted as an exercise of the City's power to protect and preserve the public health,
40 safety and welfare. Its provision shall be exempted from the rule of strict construction and shall be
41 liberally construed to give full effect to the objectives and purposes for which it was enacted. This
42 chapter is not enacted to create or otherwise establish or designate any particular class or group of
43 persons who will or should be especially protected or benefited by the terms of this chapter.

44 The primary obligation of compliance with this chapter is placed upon the person holding title to the
45 property. Nothing contained in this chapter is intended to be or shall be construed to create or form a
46 basis for liability for the City, the department, its officers, employees or agents for any injury or damage
47 resulting from the failure of the person holding title to the property to comply with the provisions of this

1 | chapter, or by reason or in consequence of any act or omission in connection with the implementation
2 | or enforcement of this chapter by the City, department, its officers, employees or agents.
3 |
4 |

Chapter 13.35
Fertilizers

Sections:

- 13.35.010 Fertilizers containing phosphorous - application - prohibited - exceptions - Department of Public Works to adopt standards and procedures.
- 13.35.020 Fertilizers on impervious surfaces - application prohibited - containment and disposition if release.
- 13.35.030 Consumer education and outreach by department of Public Works

13.35.010 Fertilizers containing phosphorous - application - prohibited - exceptions - Department of Public Works to adopt standards and procedures.

A. Except as provided in subsection B. of this section, a person may not apply to turf a fertilizer containing the plant nutrient phosphorus.

B. Subsection A. of this section does not apply when:

1. Soil test results or other certification by a turf specialist performed within the three years previous to the application indicates that the level of available phosphorus in the soil is insufficient to support healthy turf growth, and the test results or certification, and the application rate, are consistent with best practice standards approved by the City Department of Public Works. In developing the best practice standards, the department shall seek input from the Washington State University turfgrass specialists;
3. The property owner or an agent of the property owner is first establishing turf via seed or sod procedures and only during the first calendar year;
4. The fertilizer containing the plant nutrient phosphorus is applied to a golf course consistent with golf course management practices intended to minimize potential for fertilizer runoff; or
5. Applying turf fertilizer for agricultural or horticultural uses.

C. The Department of Public Works shall adopt appropriate standards and procedures for the purposes of subsection B.2. of this section.

13.35.020 Fertilizers on impervious surfaces - application prohibited - containment and disposition if release.

A person may not apply a fertilizer to an impervious surface. Fertilizer released on an impervious surface must be immediately contained and either legally applied to turf or another legal site or returned to the original container or another appropriate container.

13.35.030 Consumer education and outreach by department of Public Works.

The Department of Public Works shall seek to identify opportunities for grant funding and partnerships to support a consumer education and outreach effort, making use of existing outreach materials produced by other entities to the extent possible. If the state Department of Agriculture produces consumer information on application restrictions of fertilizer containing the plant nutrient phosphorus or on the impacts of phosphorus on the waters of the region, and on recommended best practices for turf fertilizer and other residential landscaping uses, the Department of Public Works shall cooperate in the distribution of the information, including making recommendations for appropriate locations or

- 1 | parties to receive such information, as well as accommodating electronic links on its agency website for
- 2 | any electronic information produced.

**CITY OF SAMMAMISH
STORMWATER DESIGN MANUAL ADDENDUM
City Council DRAFT (March 8, 2011)**

PREFACE – How to Use this Document

General Introduction

This document was prepared for the City of Sammamish to meet the requirements of the NPDES Phase 2 permit to develop, implement, and enforce a program to reduce pollutants in stormwater runoff from new development, redevelopment and construction site activities. Per the NPDES permit, this program applies to all sites that disturb a land area 1 acre or greater (the NPDES regulatory threshold), including projects less than one acre that are part of a larger common plan of the development or sale. The program applies to private and public development, including roads.

The City of Sammamish has adopted the 2009 King County Surface Water Design Manual (2009 KCSWDM) in order to be in compliance with its Phase II Municipal Stormwater permit. This Addendum to the 2009 KCSWDM defines how the requirements of the KCSWDM are to be implemented within the City of Sammamish. The Addendum specifies all changes, additions, and deletions to the 2009 KCSWDM to make it appropriate for use within the City of Sammamish. The 2009 KCSWDM along with this Addendum define the drainage requirements for development and redevelopment projects within the City.

Ecology has allowed local jurisdictions to follow previous stormwater requirements for projects disturbing less than one acre. The City has elected to continue their previous practice of applying the requirements of the 1998 King County Surface Water Design Manual (1998 KCSWDM) to those projects disturbing less than the required threshold (1 acre).

Which Manual should be used

If your project will disturb less than acre and is not part of a larger common plan or sale, then use the 1998 KCSWDM in conjunction with the applicable sections of this addendum. If your project proposes to disturb more than 40,000 sq ft but less than an acre, then a pre-construction on-site inspection is required to review the proposed clearing limits, and a post construction survey is required to certify that less than an acre was disturbed.

Projects that propose to disturb over an acre shall use the 2009 KCSWDM in conjunction with this addendum.

Purpose of and Need for the Addendum

The City has been issued a Phase II Municipal Stormwater Permit (Permit) effective February 16, 2007. The Permit was issued under the National Pollutant Discharge Elimination System (NPDES), as administered by the Washington State Department of

Ecology (Ecology) within Washington State. The Permit specifies minimum requirements and technical thresholds for stormwater mitigation needed for construction sites, new developments, and redevelopments.

Ecology prepared the 2005 Stormwater Management Manual for Western Washington to provide technical guidance to control the quantity and quality of stormwater runoff from new developments and redevelopments. The measures included in the Ecology manual are considered necessary to comply with state water quality standards and protect beneficial uses. If a jurisdiction adopts the 2005 Ecology manual or equivalent manual as approved by Ecology, they will meet one of the requirements of their NPDES permit.

The City of Sammamish has previously relied upon the earlier versions of the KCSWDM to guide stormwater mitigation within the City. King County recently updated its manual to be consistent with the 2005 Ecology manual. Ecology has deemed the 2009 KCSWDM and associated requirements to be equivalent to the 2005 Ecology Manual. By adopting the 2009 KCSWDM and addressing the associated requirements, the City will be in compliance with the NPDES requirements that rely on the Ecology manual or approved equivalent.

The purpose of this Addendum is to tailor the KCSWDM to meet the unique conditions within the City, and be consistent with the City codes, organization and processes. No substantive changes have been made to the KCSWDM in order to maintain equivalency in requirements and the level of protection provided by the KCSWDM.

Relationship of the KCSWDM and the City of Sammamish Low Impact Development (LID) Code

The City of Sammamish recently adopted low impact development code amendments. The 2009 KCSWDM encourages LID through careful site planning to limit disturbance of native vegetation and it also requires consideration of specific LID techniques to reduce runoff from developed sites. The KCSWDM provides specific design guidance for implementation of the measures encouraged in the City's LID code. As a result, the 2009 KCSWDM and the City of Sammamish LID ordinance complement each other.

How to Use this Document

This Addendum shall be used in coordination with the 2009 KCSWDM for the following:

- To translate specific wording or reference from King County to the City.
- To cross-reference City ordinances and City maps in lieu of King County ordinances and maps.
- To provide a linkage or reference to other City requirements such as more restrictive requirements outlined in basin plans and the City's Critical Areas Ordinances.
- To provide exceptions and additions to the KCSWDM.

The 2009 KCSWDM shall be used in its entirety except as directed in this Addendum. Exceptions and additions to the 2009 KCSWDM are organized and referenced by chapter and section in the same manner as the 2009 KCSWDM. Some global changes are provided in this preface, which shall be applied throughout the entire 2009 KCSWDM. The user shall override the maps and references to other documents as indicated within this Addendum.

Addendum Organization

The information presented in this Addendum is organized as follows:

- **Preface – How to use this Document:** This preface provides instructions for using the City of Sammamish’s Addendum to the 2009 KCSWDM. It also defines terms in the KCSWDM that are used differently for the City of Sammamish; City departments that are equivalent to county departments referred to in the KCSWDM; and designations from the KCSWDM that do not apply to proposals in the City of Sammamish.
- **Chapter 1 – Drainage Review Requirements:** The City of Sammamish has made several minor changes to Chapter 1 of the 2009 KCSWDM. This Addendum provides replacement and supplemental text for specific sections of Chapter 1. Apart from these changes, the King County version of Chapter 1 applies for proposals in the City of Sammamish.
- **Chapter 2 – Drainage Plan Submittal:** The City of Sammamish has made minor changes to Chapter 2 of the 2009 KCSWDM. The King County version of Chapter 2 applies for proposals in the City of Sammamish, except that the applicant shall refer to the City of Sammamish documents for technical submittal requirements, project plan requirements, and as-built requirements.
- **Chapter 3 – Hydrologic Analysis and Design:** The City of Sammamish has made no changes to Chapter 3 of the 2009 KCSWDM. The King County version of Chapter 3 applies for proposals in the City of Sammamish. This Addendum to Chapter 3 provides guidance on the application of the various flow control standards specified in the 2009 KCSWDM.
- **Chapter 4 – Conveyance System Analysis and Design:** The City of Sammamish has made no changes to Chapter 4 of the 2009 KCSWDM. The King County version of Chapter 4 applies for proposals in the City of Sammamish.
- **Chapter 5 – Flow Control Design:** The City of Sammamish has made very minor changes to Chapter 5 of the 2009 KCSWDM. This addendum to Chapter 5 provides replacement text for the sections that are changed. Apart from these changes, the King County version of Chapter 5 applies for proposals in the City of Sammamish.

The City of Sammamish has adopted a Low Impact Development Ordinance that encourages the use of LID techniques within the City. LID applications can be used to reduce the size of flow control facilities following the credits specified in the 2009 KCSWDM.

- **Chapter 6 – Water Quality Design:** The City of Sammamish has made minor changes to Chapter 6 of the 2009 KCSWDM. This addendum to Chapter 6 provides replacement text for the sections that are changed. Apart from these changes, the King County version of Chapter 6 applies for proposals in the City of Sammamish.

The City of Sammamish requires higher levels of phosphorus removal for some lakes based on specific studies. The 2009 KCSWDM Addendum identifies the procedures to follow and the areas that are involved in higher levels of phosphorus removals.

- **Definitions:** The City of Sammamish has made changes to the definitions section of the 2009 KCSWDM. This Addendum to the Definitions section provides replacement text for the definitions that are changed. Apart from these changes, the King County version of the Definitions Section applies for proposals in the City of Sammamish.
- **Appendices:** Appendix B does not apply to the City of Sammamish. Appendices A, C, and D apply to proposals in the City of Sammamish.
- **References:** King County Reference sections 2, 3, 4B, 7C, 8M through 8Q, 9, and 10 do not apply to the City of Sammamish. King County Reference sections 7b, 8G, 8J, 8K, 8L have been replaced by a City of Sammamish reference. The King County version of Reference section 1, 4A, 4C, 5, 6, 7A and 8A through 8F, 8G, 8I apply to proposals in the City of Sammamish. New reference number 11 has been added.

City Equivalents for County Agencies

Unless the context requires otherwise, any reference to “County”, “King County”, or county department, shall refer to the City of Sammamish and any reference to county staff shall refer to the City Manager or designee, unless specifically referring to the Department of Community Development (DCD).

City Equivalents for County Ordinances

For proposals in the City of Sammamish, all reference in the KCSWDM to the following ordinances or municipal codes shall be replaced by reference as indicated in the following table.

King County Code (KCC)	Description	Sammamish Municipal Code (SMC)	Description
KCC 16.82	BUILDING AND CONSTRUCTION STANDARDS-Clearing and Grading	SMC 16.15	Clearing and Grading
KCC 21A.14	Development Standards Design Requirements	SMC 21A.25	Development Standards – Density and Dimensions
KCC 21A.24	Critical Areas	SMC 21A.50	Development Code – Environmentally Critical Areas
KCC 21A.06	Technical Terms and Land Use Definitions	SMC 21A.15.254	Definitions
KCC 20.14	Basin Plans	SMC 24.200	Interim Comprehensive Plan – Basin Plans
KCC 25	Shoreline Management	SMC 25	Shoreline Management
KCC 9*	Surface Water Management	SMC 13	Surface Water Management
		SMC 15.10	Flood Damage Prevention

*Title 9 still applies to the City of Sammamish per Ordinance 099-17, and is supplemented with SMC 15.

In general, references to the King County Critical Areas Ordinance (KCC 21A) are to be replaced by reference to the Sammamish Municipal Code (SMC 21A), particularly, chapter SMC 21A.50, Environmentally Critical Areas. Definitions for critical areas terminology may be found in SMC 21A.15. The following table provides additional detail on critical areas.

King County Code (KCC)	Description	Sammamish Municipal Code (SMC)	Description
Title 2	Administration	20	Administrative Procedures, Environmental Policy
21A.24.230	Flood hazard area	21A.50.230 15.10	Frequently flooded areas Flood Damage prevention
21A.24.311 – 21A.24.314	Critical Aquifer recharge area	21A.50.280 21A.15.253	Critical aquifer recharge areas – Development standards and permitted alterations Definition
21A.24.230	Erosion hazard area	21A.50.220 21A.50.225 21A.15.415	Erosion hazard areas – Development standards and permitted alterations. Erosion hazards near sensitive water bodies – Special district overlay. Definition
21A.24.280	Landslide hazard area / Landslide hazard drainage area	21A.50.260 21A.15.680	Landslide hazard area – Development standards and permitted alterations Definition
21A.24.290	Seismic hazard areas	21A.50.270 21A.15.1045	Seismic hazard area – Development standards and permitted alterations Definition
21A.24.310	Steep slope hazard areas	21A.15.1230 21A.15.1230	Definition. Steep slope hazard areas now included as part of landslide hazard areas. Definition
21A.24.318 – 21A.24.345	Wetlands areas	21A.50.290 – 21A.50.320 21A.15.1415	Wetlands - Development standards and permitted alterations Definition
21A.24.355 – 21A.24.381	Aquatic Areas	21A.50.330 – 21A.50.350	Streams
21A.24.383 - 21A.24.388	Wildlife habitat conservation areas	21A.15.468 21A.50	Wildlife habitat conservation areas

City Equivalents for County Maps

For proposals in the City of Sammamish, all reference in the KCSWDM to the following maps shall be replaced by reference as indicated in the following table.

King County Map or Designation	City of Sammamish Map*
Flow Control Applications Map	Flow Control Applications Map Map to be provided by the City
Landslide Hazard Drainage Areas Map	Landslide Hazard Drainage Area Map Map to be provided by the City
Water Quality Applications Map	Water Quality Applications Map Map to be provided by the City
Flood Hazard Area as defined in KCC 21A.06	Environmentally Sensitive Areas Map Frequently flooded areas include all areas of special flood hazards within the jurisdiction of the City of Sammamish as defined in SMC 21A.50.230 and as shown on the Environmentally Sensitive Areas Map.
Erosion Hazard Area*	Definition provided in SMC 21A.50.220
Landslide Hazard Area*	Definition provided in SMC 21A.50.260
Critical Aquifer Recharge Area*	Definition provided in SMC 21A.50.280

* Maps are on the City's web site at <http://www.ci.sammamish.wa.us/Maps.aspx>.

City Equivalents for County Plans or Studies

In general, references to county-approved plans or studies in the KCSWDM are to be replaced by reference to appropriate City-approved plans or studies. If comparable City-approved plans or studies do not exist, then references to County-approved plans or studies shall be retained for proposals in the City of Sammamish.

County Designations that do not Apply in the City

The following designations are used in the 2009 KCSWDM but are not currently used in the City of Sammamish; any reference in the KCSWDM to the existence of areas with these designation or thresholds or requirements for such areas is to be disregarded for proposals in the City of Sammamish:

- **Agricultural Project**
- **Coal Mine Hazard Area**
- **Forest Production Zone Area**
- **Master Drainage Plans (MDPs)**
- **Rural Residential Development**
- **Sensitive Area Folio** - refer to City of Sammamish Sensitive Areas Maps at <http://www.ci.sammamish.wa.us/Maps.aspx>
- **Stormwater Compliance Plans (SWCPs)**
- **Urban Planned Development**
- **Zoning Classifications:** The KCSWDM references to Agricultural (A) Zoning, Forest (F) Zoning, or Rural (R) Zoning are intended for areas outside of the Urban Growth Boundary; therefore, the City of Sammamish contains no equivalent zoning. Project proponents should refer to City zoning maps to determine which zoning classifications apply to their projects.

Equivalency of the KCSWDM Relevant to the City of Sammamish

Note that King County Code (KCC) Chapter 9.04 (Surface Water Runoff Policy) and the KCSWDM alone are not equivalent with the Ecology manual. In a letter to King County dated February 19, 2008, Ecology identified additional requirements that a Phase II community needs to incorporate in order to be able to adopt the KCSWDM as an equivalent to the Ecology Manual. These other adopted requirements and the aspects of the Ecology manual or permit requirements that they address are listed in the following table. The table also identifies the equivalent City of Sammamish code or the requirement that needs be followed to obtain equivalency and be in compliance with the Permit.

Ecology Requirement	King County Code (KCC)	Sammamish Municipal Code (SMC) or Requirement
Construction erosion and sediment controls are required for all new and redevelopment projects, regardless of project size.	To meet this requirement, King County relies on KCC 16.82.095 Clearing and Grading to require erosion and sediment controls at all sites where a site is disturbed, regardless of whether a permit is required.	The City of Sammamish meets this requirement in SMC 16.15.090 Clearing and Grading.
The application of construction erosion and sediment control requirements and the soil quality and depth best management practice (BMP) for flow control are not currently located in the KCSWDM.	These requirements are located in KCC 16.82 Clearing and Grading.	To meet this requirement, follow “BMP T5.13: Post- Construction Soil Quality and Depth” in the Ecology Manual, and provided herein as Reference 11.
The wetlands protection requirement (Minimum Requirement #8) is not contained in the KCSWDM,	Wetland protection requirements are located in KCC 21A.24 Critical Areas.	The City of Sammamish meets this requirement in SMC 21A.50.290 through 21A.50.632. Wetland management area- Special district overlay is provided in 21A.50.322. Wetland definitions are proved in SMC 21A.15.1395 through 21A.15.1415.
Exemptions for treatment and flow control in rural areas (allowed for up to 4% total impervious area and 15% new pervious area).	Ecology approves the exemptions based on the County’s rural area clearing restrictions in KCC 16.82 Clearing and Grading. Buffer requirements are contained in KCC 21A.24 Critical Areas.	The City of Sammamish meets these requirements in SMC 16.15 and SMC 21A.50.

CHAPTER 1 – Drainage Review and Requirements

The City of Sammamish has made several minor changes to Chapter 1 of the 2009 KCSWDM. This chapter provides replacement and supplemental text for specific sections of Chapter 1. Apart from these changes, the King County version of Chapter 1 applies for proposals in the City of Sammamish. The City’s changes to the County document are as follows:

- **Key Terms and Definitions (page 1-1 of the 2009 KCSWDM)** — Replace all references to KCC 21A with SMC 21A. In addition, the following changes to specific terms apply:

Term (page)	Action
Critical aquifer recharge area (p 1-2)	<p><i>Replace as follows per SMC 21A.15.253:</i> “Critical aquifer recharge areas” is the critical area designation that is applied to areas where extra protection of groundwater quantity and quality is needed because of known susceptibility to contamination and importance to drinking water supply. Such areas are delineated on the _____ available at _____. See the “Definitions” section for more details.</p> <p>Critical aquifer recharge areas are regulated in SMC 21A.50.280 Critical aquifer recharge areas – Development standards.</p> <p>Also mapped. See XXXXX</p>
Critical Drainage Area (p 1-2)	<p><i>Replace as follows per SMC 21A.15.255:</i> “Critical drainage area” means an area that has been formally determined by the King County surface water management department to require more restrictive regulation than countywide standards afford in order to mitigate severe flooding, drainage, erosion, or sedimentation problems that result from the cumulative impacts of development and urbanization. (Ord. O2003-132 § 10).</p> <p>Critical drainage areas are defined in SMC 21A.15.255 and are regulated in SMC 21A.50.355 Lake management areas – Special District overlay.</p>
Erosion hazard area (p 1-2)	<p><i>Replace as follows per SMC 21A.15.415:</i> “Erosion hazard area” is the critical area designation that is applied to areas underlain by soils that are subject to severe erosion when disturbed. See the “Definitions” section for more details.</p> <p>Erosion hazard areas are regulated in SMC 21A.50.220 Erosion hazard areas – Development standards and permitted alterations.</p>
Flood Hazard Area (p 1-3)	<p><i>Replace as follows per SMC 15 Flood Damage Prevention:</i> SMC 15 shall be the basis for establishing the areas of special flood hazard.</p>

Term (page)	Action
Landslide Hazard Area (p 1-3)	<p><i>Replace as follows per SMC 21A 15.680:</i></p> <p>“Landslide hazard area” is the critical designation that is applied to areas potentially subject to severe risk of landslide due to topography, soil conditions, and geology.</p>

- **Section 1.1.1 PROJECTS REQUIRING DRAINAGE REVIEW (page 1-9 of the 2009 KCSWDM)** — Replace the “King County Permits and Approvals” table with the following table:

City of Sammamish Permits and Approvals
Construction Permits
Right of Way Permit
Site Development Permits
Conditional Use Permits
Clear and Grade Permit
Shoreline Management Substantial Development Permits
Short Subdivision Developments (Short Plat)
Subdivision Developments (Plats)
Commercial Site Development Permit (CSDP)
Unified Zone Development Permit (UZDP)
Plat Alterations
<p>Notes: See SMC20.05 - PROCEDURES FOR LAND USE PERMIT APPLICATIONS, PUBLIC NOTICE, HEARINGS AND APPEALS for additional information.</p>

- **Section 1.2 CORE REQUIREMENTS, Downstream Water Quality Problems Requiring Special Attention (page 1-26 of the 2009 KCSWDM)** — The following supplemental information is added to this section:

The 2009 KCSWDM recognizes water quality problems requiring special mitigation measures to protect receiving waters. A water quality problem is defined as a problem documented by the state to exceed the state’s numeric water quality standard. The 2009 KCSWDM references Category 2, 4, and 5 water quality problems as requiring special attention. Within the City of Sammamish, the following water quality problems are currently listed by the Department of Ecology, based on the 2008 Water Quality Assessment, approved by the U.S. Environmental Protection Agency on January 29, 2009.

The latest designated impaired waterbodies can be viewed at <http://apps.ecy.wa.gov/wqawa/viewer.htm>.

Impaired Water Body	Parameter	Category*
Lake Sammamish	Dissolved oxygen, fecal coliform	5
Lake Sammamish	Total phosphorus	2
Pine Lake Creek	Fecal coliform, dissolved oxygen, total phosphorus	5
Laughing Jacobs Creek	Fecal coliform, dissolved oxygen	5
Ebright Creek	Fecal coliform	5
Ebright Creek	Dissolved oxygen	2
Evans Creek	Fecal coliform, dissolved oxygen, temperature	4a
Evans Creek	pH	2
Beaver Lake No. 2	Total phosphorus	2

* Definition of Categories for impaired waterbodies:

- o Category 2: Waters of concern, some evidence of water quality problem.
- o Category 4 (a and b): Polluted waters with a plan (TMDL) or pollution control program in place to address the problem.
- o Category 5: Polluted waters, a TMDL plan is required.

Projects that discharge to the impaired waterbodies identified above may be required to implement special treatment to address the water quality problem in accordance with the requirements outlined in Section 1.2.2.3, Water Quality Problem Impact Mitigation.

Studies and lake management plans have determined that Beaver and Pine Lakes within the City of Sammamish require a higher level of total phosphorus reduction than that currently required by the 2009 KCSWDM. For projects that drain to Beaver Lake or Pine Lake, the project proponent shall contact the City for specific requirements necessary to attain the desired level of total phosphorus reduction.

The federal Clean Water Act requires that a Total Maximum Daily Load (TMDL) cleanup plan be developed for each of the waterbodies on the state’s list of impaired waterbodies, known as the “303(d) list.” The TMDL study identifies pollution problems in the watershed, and specifies how much pollution needs to be reduced or eliminated to achieve clean water. Ecology has prepared TMDLs for fecal coliform bacteria, temperature and dissolved

oxygen for the Bear-Evans watershed. Strategies identified in the TMDLs to address the water quality impairment in the Bear-Evans watershed are listed below. Development or redevelopment projects within the City of Sammamish that ultimately drain to Evans Creek should incorporate these actions as appropriate.

TMDL - Implementation Strategy for Fecal Coliform Bacteria in the Evans Creek Watershed

- o Implement structural (as appropriate) and non-structural stormwater source control best management practices (BMPs).
- o Restore riparian vegetation to help filter out stormwater pollutants.
- o Properly manage domestic animal and livestock wastes.

TMDL - Implementation Strategy for Temperature and Dissolved Oxygen in the Evans Creek watershed

- o Plant new and preserve existing trees in the riparian zone along lengths of the creeks.
- o Investigate opportunities to enhance groundwater recharge.
- o Restore and protect wetlands in areas that will benefit the stream and enhance habitat.
- o Consider a water management strategy that recognizes the benefits of maintaining summer baseflows.
- o Minimize human-caused sources of nutrients in the watershed.

- **Section 1.3.1 SPECIAL REQUIREMENT #1: OTHER ADOPTED AREA-SPECIFIC REQUIREMENTS (page 1-77 of the 2009 KCSWDM)** — Replace the table in Section 1.3.1 on page 1-78 with the following:

Threshold	Requirement
IF a proposed project is in a basin plan or lake management plan...	THEN the proposed project shall comply as codified by the City of Sammamish Municipal Code.

CHAPTER 2 – Drainage Plan Submittal

The City of Sammamish has added supplemental information and made minor changes to Chapter 2 of the 2009 KCSWDM, as described below. Apart from this information, project proponents should refer to the county document for guidance on drainage plan submittal. All submittal reviews shall be conducted by the Department of Community Development (DCD).

Supplemental Information

As part of our Surface Water Design Manual the applicant shall refer to the following documents for Project Plans and As-Builts.

- 1) Site Development Permit – Technical Submittal Requirements (Pages 3-5 relate to Stormwater). This document is provided on the city website at: <http://www.ci.sammamish.wa.us/files/document/7089.pdf>
- 2) The applicant shall use the *City of Sammamish Standard Development Project Close-out (M/D Period) PW Administration Items Requirements/Checklist* form (available from the City of Sammamish Department of Community Development as a guide to assembling a *First Submittal Intake* package.

Section 2.4.2 FINAL CORRECTED PLAN SUBMITTAL (page 2-35 of the 2009 KCSWDM) — Replace Section 2.4.2 in entirety as follows:

The applicant shall use the *City of Sammamish Standard Development Project Close-out (M/D Period) PW Administration Items Requirements/Checklist* form (available from DCD) as a guide to assembling a *Second Submittal Intake* package for project closeout.

CHAPTER 3 – Hydrologic Analysis and Design

The City of Sammamish has made no changes to Chapter 3 of the 2009 KCSWDM. Project proponents should refer to the county document for guidance on hydrologic analysis and design.

The City of Sammamish has identified specific areas requiring Level 2 or Level 3 flow control as defined within the KCSWDM. Flow control areas are identified in the flow control maps accompanying this Addendum.

The City of Sammamish accepts continuous models that have been approved by Ecology. Included among these are:

- **King County Runoff Time Series (KCRTS):** This is the hydrologic model that accompanies the 2009 KCSWDM. Ecology has deemed this model to be equivalent to the requirements of the Ecology manual provided that compliance for the flow-duration curves are consistent with the method Ecology uses. The model includes hourly and 15-minute rainfall. The 15-minute rainfall is used to determine peak flows used for conveyance design.
- **Western Washington Hydrologic Model (WWHM):** This is the hydrologic model that accompanies the Ecology manual. WWHM incorporates routines to evaluate LID techniques. WWHM was initially developed for detention and water quality design and did not focus on peak flow predictions for conveyance design. The standard model does not include rainfall data that would be suitable for determining peak flows for conveyance design.
- **MGSFlood:** This is the hydrologic model originally developed for Washington State Department of Transportation (WSDOT) for use in transportation projects. MGSFlood incorporates an extended rainfall database of 158 years in length created by combining rainfall records from different locations in the Pacific Northwest. It has recently incorporated a rainfall that is disaggregated to a 5-minute timestep to assist in the design of conveyance. MGSFlood also incorporates routines to evaluate LID techniques

The approved models are all derivatives of the Hydrologic Simulation Program-FORTRAN (HSPF) model. The City also accepts use of the HSPF model, provided suitable documentation is provided and approved concerning the runoff parameters used for the analyses. Approved regional parameters or basin-specific parameters developed during a basin plan can be used. Alternative parameters can be used following the protocols described in the 2009 KCSWDM.

Hydrologic analysis methods must follow “Table 3.2 Acceptable Uses of Runoff Computation Methods” found on page 3-10 of the 2009 KCSWDM. Derivatives of HSPF (e.g., KCRTS, MGSFlood, and WWHM) can be applied as indicated under the “KCRTS” column. As noted above, there are differences the rainfall data used for these derivative models. These differences are most noticeable in the generation of peak flows used for conveyance design. The City of Sammamish currently accepts both KCRTS and MGSFlood for conveyance design.

CHAPTER 4 – Conveyance System Analysis and Design

The City of Sammamish has made no changes to Chapter 4 of the 2009 KCSWDM. Project proponents should refer to the county document for guidance on conveyance system analysis and design.

CHAPTER 5 – Flow Control Design

The City of Sammamish has added supplemental information and made several minor changes to Chapter 5 of the 2009 KCSWDM, as described below. Apart from this information, project proponents should refer to the county document for guidance on flow control design.

Supplemental Information

The City of Sammamish has identified specific areas where the Conservation Flow Control (Level 2) and Flood Problem Flow Control (Level 3) flow control standards described in the 2009 KCSWDM are to be applied within the City. Locations are shown on the City of Sammamish Flow Control Applications map accompanying this Addendum.

Generally, the King County Basic Flow Control (Level 1) standard does not apply within the City. There may, however, be circumstances where the Basic Flow Control standard can be applied. The 2009 KCSWDM defines the Basic Flow Control Standard as being appropriate for areas that drain to a closed conveyance system that discharges to a waterbody designated as a major receiving water. Lake Sammamish is designated a major receiving water. Developments that drain to closed drainage systems discharging directly to Lake Sammamish could, by definition, be eligible for the Basic Flow Control Standard. This would be the case where runoff from a new or redevelopment project area discharges to an existing system downstream drainage system where downstream capacity issues are likely with an increase in runoff to the system.

Chapter 5 describes various LID techniques. These should be used as the technical guidance for implementing the BMPs specified in the LID Ordinance.

Changes to 2009 KCSWDM

- **Section 5.3.1.1 DESIGN CRITERIA, Detention Ponds in Open Space (page 5-25 of the 2009 KCSWDM)** — This section does not apply. City of Sammamish does not require this signage.
- **Section 5.3.1.1 DESIGN CRITERIA, Figure 5.3.1.D Permanent Surface Water Control Pond Signs (page 5-29 of the 2009 KCSWDM)** — Replace references to King County and the King County logo with City of Sammamish and the City of Sammamish logo, respectively. Also, delete the last sentence and replace with the following:

For more information or to report littering, vandalism or other problems, call City Hall at 425-295-0500. For emergencies after-hours, holidays, and weekends call the public works emergency dispatch number at 206- 296-8100.

CHAPTER 6 – Water Quality Design

The City of Sammamish has added supplemental information and made one minor change to Chapter 6 of the 2009 KCSWDM, as described below. Apart from this information, project proponents should refer to the county document for guidance on water quality design.

Supplemental Information

The City of Sammamish adopts the BMPs and water quality treatment menus in the 2009 KCSWDM. Special treatment requirements for runoff draining to impaired waterbodies are addressed in Chapter 1. An exception to the KCSWDM is the treatment requirement for runoff discharging to lakes designated to receive a higher level of total phosphorus removal. The Sensitive Lake Protection Menu in the 2009 KCSWDM has a treatment goal of 50 percent reduction of annual average total phosphorus (TP), assuming typical pollutant concentrations in urban runoff. Lake management plans and studies have determined that Beaver Lake and Pine Lake require higher levels of phosphorus removal to protect the lakes from eutrophication brought about by development. Within these areas, a treatment goal of 80 percent reduction of TP is required. Areas requiring the higher level of TP reduction are shown on the Water Quality Treatment Application map accompanying this Addendum. Proponents for projects within these areas shall work with the City to determine the appropriate measures to be taken to achieve the 80 percent TP reduction goal.

Change to 2009 KCSWDM

- **Section 6.4.1.2 BASIC DESIGN CRITERIA, Figure 6.4.1.C Waterfowl Sign (page 6-82 of the 2009 KCSWDM)** — This section does not apply. City of Sammamish does not require this signage.

DEFINITIONS

The City of Sammamish has made the following changes to the Definitions Section of the 2009 KCSWDM. Project proponents should refer to the county document for other definitions.

Term (page)	Action
<p><i>Critical aquifer recharge area</i> (p 1-2)</p>	<p><i>Replace as follows (from SMC 21A.15.253):</i></p> <p><i>Critical aquifer recharge areas</i> (CARAs) means those areas in the City of Sammamish with a critical recharging effect on aquifers used for potable water as defined by WAC 365-190-030(2). CARAs have prevailing geologic conditions associated with infiltration rates that create a high potential for contamination of groundwater resources or contribute significantly to the replenishment of groundwater. CARAs shall be classified based on the following criteria:</p> <ol style="list-style-type: none"> (1) Class 1 CARAs include those areas located within the mapped one- or five-year capture zone of a wellhead protection area. (2) Class 2 CARAs include those areas located within the mapped 10-year capture zone of a wellhead protection area. (3) Class 3 CARAs include those areas outside wellhead protection areas that are identified as high aquifer recharge potential areas based on characteristics of surficial geology and soil types. (Ord. O2005-193 § 2)
<p><i>Erosion hazard area</i> (p 1-2)</p>	<p><i>Replace as follows (from SMC 21A.15.415):</i></p> <p><i>Erosion hazard areas</i> mean those areas in the City underlain by soils that are subject to severe erosion when disturbed. Such soils include, but are not limited to, those classified as having a severe or very severe erosion hazard according to the USDA Soil Conservation Service, the 1973 King County Soils Survey or any subsequent revisions or addition by or to these sources. These soils include the following when they occur on slopes 15 percent or steeper:</p> <ol style="list-style-type: none"> (1) The Alderwood gravely sandy loam (AgD); (2) The Alderwood and Kitsap soils (AkF); (3) The Beausite gravely sandy loam (BeD and BeF); (4) The Everett gravelly sandy loam (EvD); (5) The Kitsap silt loam (KpD); (6) The Ovall gravely loam (OvD and OvF); (7) The Ragnar fine sandy loam (RaD); and (8) The Ragnar-Indianola Association (RdE). (Ord. O2005-193 § 2; Ord. O2003-132 § 10)
<p><i>Flood hazard area</i> (p 1-3)</p>	<p><i>Replace as follows (per SMC 21A.15.680):</i></p> <p><i>Flood hazard areas</i> means those areas in the City of Sammamish subject to inundation by the base flood and those areas subject to risk from channel relocation or stream meander including, but not limited to, streams, lakes, wetlands, and closed depressions. (Ord. O2003-132 § 10)</p>

Term (page)	Action
<p>Frequently Flooded Area SMC 21A.50.230</p>	<p><i>Add new definition as follows (from SMC 21A.50.230):</i></p> <p>(1) Frequently flooded areas include all areas of special flood hazards within the jurisdiction of the City of Sammamish.(a) The areas of special flood hazard are identified by the Federal Insurance Administration in a scientific and engineering report entitled "the Flood Insurance Study for King County," as amended, as stated in SMC 15.10.060. The flood insurance study is on file at Sammamish City Hall. The best available information for flood hazard area identification as outlined in SMC 15.10.130(2) shall be the basis for regulation until a new FIRM is issued that incorporates the data utilized under SMC 15.10.130(2).</p> <p>(b) The director may use additional flood information that is more restrictive or detailed than that provided in the Flood Insurance Study conducted by the Federal Emergency Management Agency (FEMA) to designate frequently flooded areas, including data on channel migration, historical data, high water marks, photographs of past flooding, location of restrictive floodways, maps showing future build-out conditions, maps that show riparian habitat areas, or similar information.</p> <p>(2) Development in frequently flooded areas shall be subject to the provisions in Chapter 15.10 SMC. (Ord. O2005-193 § 1; Ord. O99-29 § 1)</p>

Term (page)	Action
<p>Landslide Hazard Area (Steep slope) (page 1-3 of KCSWDM)</p>	<p>Replace as follows (per SMC 21A.15.680):</p> <p>Landslide hazard areas mean those areas in the City of Sammamish potentially subject to risk of mass movement due to a combination of geologic, topographic, and hydrologic factors. These areas are typically susceptible to landslides because of a combination of factors including: bedrock, soil, slope gradient, slope aspect, geologic structure, groundwater, or other factors. Landslide hazard areas include the following:</p> <ol style="list-style-type: none"> (1) Areas of historic failures, such as: <ol style="list-style-type: none"> (a) Those areas delineated by the U.S. Department of Agriculture's Natural Resources Conservation Service as having a "severe" limitation for building site development; (b) Areas designated as quaternary slumps, earthflows, mudflows, or landslides on maps published by the U.S. Geological Survey or Department of Natural Resources; (2) Areas that have shown movement during the Holocene epoch, from 10,000 years ago to the present, or which are underlain by mass wastage debris from that epoch; (3) Any area with all three of the following characteristics: <ol style="list-style-type: none"> (a) Slopes steeper than 15 percent; and (b) Hillside intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and (c) Springs or groundwater seepage; (4) Areas with a slope of 40 percent or steeper and with a vertical relief of 10 or more feet except areas composed of consolidated rock. A slope is delineated by establishing its toe and top and measured by averaging the inclination over at least 10 feet of vertical relief; (5) Slopes that are parallel or subparallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials; (6) Slopes having gradients steeper than 80 percent subject to rock fall during seismic shaking; (7) Areas potentially unstable because of rapid stream incision, stream bank erosion or undercutting by wave action; and (8) Landslide hazard areas do not include those areas composed of slopes greater than 40 percent that were created from a previously non-landslide hazard area through legal grading activity and that are confirmed to be stable by a qualified professional. (Ord. O2005-193 § 2; Ord. O2003-132 § 10)

The City of Sammamish has made the following changes to the Appendices section of the 2009 KCSWDM. Project proponents should refer to the county appendices where referenced below.

Appendix A: Maintenance Requirements for Flow Control, Conveyance, and WQ Facilities – The City of Sammamish has made no changes, and Appendix A applies in its entirety to the City of Sammamish.

Appendix B: Master Drainage Plan Objective, Criteria and Components, and Review Process – This appendix does not apply within the City of Sammamish.

Appendix C: Small Drainage Requirements – This is a separately bound document included with the KCSWDM and this appendix applies in its entirety to the City of Sammamish. Appendix C provides guidance for many of the low impact development (LID) techniques referenced in the City of Sammamish LID Ordinance.

Appendix D: Erosion and Sediment Control Standards – This is a separately bound document included with the KCSWDM and this appendix applies in its entirety to the City of Sammamish.

REFERENCE

Table Ref-1 identifies which reference sections in the KCSWDM apply and those that do not apply to the City of Sammamish. Table Ref-2 lists additional City of Sammamish references that apply.

Table Ref-1. Applicability of KCSWDM References to City of Sammamish Projects

No.	Description	Action
1	KCC 9.04 Surface Water Runoff Policy	This reference document applies. The King County surface water runoff policy, as adopted by reference in Chapter 9.04 KCC as adopted by SMC 15.05 (Ordinance 099-17 § 1)
2	Adopted Critical Drainage Areas	This reference document shall be deleted in entirety. Project proponents should refer to City codes, ordinances, and sensitive areas maps for description and requirements within sensitive areas.
3	Other Adopted Area Specific Drainage Requirements	This reference document shall be deleted in entirety. Project proponents should refer to City codes, ordinances, and sensitive areas maps for description and requirements within sensitive areas. The project proponent shall also work with the City on additional requirements that may apply to their project.
4	Other Drainage Related Regulations and Guidelines A. Grading Code Soil Amendment Standard B. Clearing & Grading Seasonal Limitations C. Landscape Management Plan Guidelines D. Shared Facility Maintenance Responsibility and Guidance	A. This standard is applicable. B. Not applicable. See SMC 16.15 C. Applicable. D. Applicable.
5	Wetland Hydrology Protection Guidelines	These guidelines apply.
6	Hydrologic/Hydraulic Design Methods A Infiltration Rate Test B Pond Geometry Equations	This reference section is applicable.
7	Engineering Plan Support A. King County Standard Map Symbols	A. Applicable.

No.	Description	Action
	B. Standard Plan Notes and Example Construction Sequence C. Stormfilter Access & Cartridge Configuration	B. Replace with City’s standard plan notes. Contact City for most current version of notes. C. Not applicable. Delete this reference subsection in entirety.
8	Forms and Worksheets	
	A. TIR Worksheet B. Clearing and Grading Seasonal Limitations C. Offsite Analysis Drainage System Table D. Flow Control and Water Quality Facility E. CSWPPP Worksheet Forms F. Adjustment Application Form and Process Guidelines G. Dedication and Indemnification Clause H. Bond Quantity Worksheet I. Maintenance and Defect Agreement J. Declaration of Covenant K. Drainage Release Covenant L. Drainage Easement M. Flow Control BMP Covenant (see replacement form name below. N. Impervious Surface Limit Covenant O. Clearing Limit Covenant P. River Protection Easement Q. Leachable Metals Covenant	A. Applicable. B. Applicable. C. Applicable. D. Applicable. E. Applicable. F. Applicable. G. Applicable, replace with COS updated form. H. Applicable. I. Applicable. J. Applicable, replace with COS updated form. K. Applicable, replace with COS updated form. L. Applicable, replace with COS updated form. M. Delete in entirety; not applicable. N. Delete in entirety; not applicable. O. Delete in entirety; not applicable. P. Delete in entirety; not applicable. Q. Delete in entirety; not applicable.
9	Interim Changes to Requirements	Delete in entirety
10	King County Identified Water Quality Problems	Delete in entirety

No.	Description	Action
11	BMP T5.13 Post-Construction Soil Quality and Depth	<p>New section added. Excerpt from 2005 Stormwater Manual for Western Washington, Ecology. Excerpt applies in entirety except final section, <i>Flow Reduction Credits</i>, does not apply.</p> <p>The most current version of <i>Guidelines and Resources for Implementing Soil Quality and Dept BMP T5.13</i> is available at:</p> <p>http://www.soilsforsalmon.org/pdf/Soil_BMP_Manual.pdf</p>

Table Ref-2. City of Sammamish References

No.	Description
1	<p>Area-Specific Drainage Requirements</p> <p>A Flow Control Applications Map</p> <p>B Water Quality Applications Map</p> <p>C Landslide Hazard Drainage Areas Map</p> <p>[Others to be determined]</p>



Planning Commission

801 228th Avenue SE • Sammamish, WA 98075 • Phone: 425.295.0500 • Fax: 425.295.0600 • web: www.ci.sammamish.wa.us

Date: March 8, 2011

To: City Council

From: Joe Lipinsky, Chair

RE: Proposed Surface Water code and manual

On behalf of the Planning Commission, I am pleased to forward our recommendations for the adoption of the 2009 Surface Water Design Manual, and associated code amendments, including relevant sections of new Title 13 of the Sammamish Municipal Code.

The City is required under provisions of the City's National Pollutant Discharge Elimination System (NPDES) Phase II permit issued by the Department of Ecology, to adopt either the Department of Ecology Stormwater Manual for Western Washington, or an approved equivalent Phase I jurisdiction manual. The 2009 King County Surface Water Design Manual, and associated code provisions located elsewhere in King County code have been determined to meet the equivalency standard. Sammamish has proposed to adopt the King County 2009 manual with an addendum that is specific to Sammamish, and to incorporate the other required code provisions into the Sammamish Municipal Code.

The primary policy decision that the planning commission discussed is whether to adopt the 2009 King County manual for all development in the city, or to bifurcate the manual and allow developments that disturb under one acre of area to continue to utilize King County's 1998 manual, which is also the City's current Surface Water Design manual. This is allowed under the provisions of the NPDES permit.

The Commission was split on this issue, and voted five to two to recommend adoption of a bifurcated manual, which would allow the continued use of the King County 1998 manual for projects disturbing less than one acre of area. The commission also recommends adoption of the appropriate provisions to meet equivalency, new Title 13 of the Sammamish Municipal Code.

Since the decision was not unanimous, a minority report is attached to this memorandum for your consideration.

The Planning Commission completed three public meetings (including public hearings and deliberations) on January 6th, January 20th and February 3, 2011. The following are key aspects of our recommendations:

- Allow continued use of the King County 1998 manual for sites that disturb less than one acre of soil.
- If an applicant proposes to disturb more than 40,000 square feet, but less than one acre (43,560 square feet), require a post-development survey to verify that the actual development area is less than one acre per the approved plan.

We look forward to presenting our recommendations and answering your questions. Please let staff know if you need more information or have questions.



Planning Commission

801 228th Avenue SE • Sammamish, WA 98075 • Phone: 425.295.0500 • Fax: 425.295.0600 • web: www.ci.sammamish.wa.us

Date: March 8, 2011

To: City Council

From: Planning Commissioners Mahbubul Islam and Jan Klier

RE: Dissenting Minority - Proposed Surface Water code and manual

As noted in the Planning Commission recommendation memorandum, the Planning Commission was unable to come to a consensus on the proposed Surface Water Design Manual (SWDM). Commissioners Mahbubul Islam and Jan Klier did not support the Planning Commission's recommendation to bifurcate the Surface Water Design Manual (i.e. only require compliance with the updated Surface Water Design Manual for lots greater than one acre).

Commissioners Mahbubul Islam and Jan Klier recommend that the City Council not bifurcate the Surface Water Design Manual for the following reasons:

1. A balance between the environmental protection and the cost for a homeowner/developer is necessary; unfortunately the Planning Commission recommendation serves mainly the economic interests of the homeowners/developers. The updated SWDM incorporates updated science and best management practices to minimize the polluted surface water discharge to streams and lakes. If the majority of the parcels are exempted (please note: less than one acre parcel size is the dominant category within our urban growth boundary) from using the most updated mitigation technology, we will find ourselves in a difficult situation to comply with our NPDES permit and the Clean Water Act requirements.
2. The temporary exemption for smaller sized projects created by the bifurcation is not equitable. It is likely that the option to bifurcate will only be available for a few years. Once the bifurcation option is eliminated, property owners will be required to evaluate all site improvements since 2001 and "retrofit" drainage improvements to address work permitted at the lower standard during the period the bifurcated manual was applied. Consequently, even temporary relief from the updated Surface Water Design Manual does not really provide a benefit to property owners.
3. If development and improvements for a majority of properties in Sammamish are permitted under the lesser standards, the discrepancies only grow making future reconciliation ever more painful. A possibly unpopular but strong stance by the City Council would set the tone for this and other upcoming related topics such as CAO that benefits many of the citizens of Sammamish in the long run.
4. The bifurcation allows perpetuation of a problem with water quality protection.
5. Experts have not identified a "safe" threshold for water quality / water retention impacts; therefore even small sites may contribute to negative impacts on water quality and water retention. We also have to consider the cumulative impact if an exemption were to be granted on small sites, given the over-proportional share these sites represent.

Finally, please consider that homeowners (and others) that find the new Surface Water Design Manual too strict, should continue to take that issue up with the Department of Ecology, and not attempt to work around it by exempting certain properties in a convoluted application of the manual. Ultimately DOE sets the standard here, and if that standard is unreasonable, that's where the debate needs to happen.

Thank you for your consideration of our recommendations. If you have any questions, please contact Kamuron Gurol at 425.295.0520 or kgurol@ci.sammamish.wa.us.



Memorandum

Date: January 11, 2011
To: City of Sammamish Planning Commission
From: Kamuron Gurol, Community Development Director
Re: Stormwater Code Update and Stormwater Design Manual Addendum

Background:

The City of Sammamish is a National Pollutant Discharge Elimination System (NPDES) Phase II permittee. Sammamish has been issued a permit that allows for the discharge of stormwater into waters of the state from the Washington State Department of Ecology. The NPDES Phase II permit has Minimum Requirements for the control of stormwater that each municipality needs to adopt. The City of Sammamish is adopting the 2009 King County Surface Water Design Manual (KCSWDM) to meet the Minimum Requirements in the NPDES permit.

The KCSWDM is the implementing regulation that comes out of King County Code (KCC) Title 9, Surface Water Management. The City adopted KCC Title 9 at the time of incorporation. The language in Sammamish Municipal Code SMC Title 15 adopts KCC Title 9 by reference. Staff is recommending that instead of referencing Title 9, the City should bring the language into the SMC. Title 9 is not available in the SMC, so staff is proposing to use Title 13. The draft that is attached is essentially what you would find in KCC Title 9, but with sections removed that are not applicable to Sammamish.

Also attached is the Draft Stormwater Design Manual Addendum. This addendum was prepared to address Sammamish specific rules, and will be the location of the bifurcation language if that is the direction given from the Planning Commission.

During the Planning Commission (PC) meeting on January 6th, 2011, the PC asked for some pros and cons of the proposal to bifurcate the stormwater regulations for sites under and acre. The following is a short representation of some pros and cons:

Pros

1. A bifurcated manual would not introduce new regulations for sites under an acre.
 - a. Redeveloped sites would only have to mitigate for flow control on new impervious surface.
 - b. Sites that disturb over 7,000 sq. ft. of land would not be required to amend soils.
 - c. Existing conditions are what was here in 1979 rather than what was here before European settlement.
2. A bifurcated manual would offer the greatest amount of flexibility to applicants on sites under an acre.

Cons

1. Regulating development with two manuals rather than just one has a higher probability for confusion for both applicants and staff.
2. If the threshold is for sites under an acre of disturbance, what happens when an applicant tells the City that the project will disturb less than an acre, but then the project ends up disturbing more than an acre during construction.
3. The Department of Ecology has already hinted that the next permit that will be issued in 2012 will likely lower the threshold to something less than an acre, so we may find that we get to this again in a year or two.

Materials:

1. Draft Title 13
2. Stormwater Design Manual Addendum
3. Bifurcated manual scenario table

Bifurcation Scenarios for Sites Under an Acre

The City is adopting new rules for stormwater to satisfy our NPDES permit. The permit regulates sites that disturb more than an acre. The 2009 KCSWDM regulates all sites, so some jurisdictions have adopted the new manual and added language to make it only apply to sites that disturb more than an acre, hereafter referred to as a bifurcated manual. In those jurisdictions, sites that disturb less than an acre are still being regulated with the standards that were in place before the NPDES permit. To help with understand the impacts of the new manual if it were applied to sites under an acre; the follow table of scenarios was create.

The following table applies to sites that disturb **less than an acre**:

	Versions of the King County Surface Water Design Manual	
	1998 KCSWDM	2009 KCSWDM
SFR on undeveloped land Less than 10,000 ft ² of Imp Less than 5,000 ft ² of PGIS Less than 7,000 ft ² of Land Disturbance	Small Site BMP's (Appendix C)	Small Site BMP's (Appendix C)
SFR on undeveloped land Less than 10,000 ft ² of Imp Less than 5,000 ft ² of PGIS Greater than 7,000 ft ² of Land Disturbance	Small Site BMP's (Appendix C)	Small Site BMP's (Appendix C) Soil Amendments Required
SFR Redevelopment Greater than 10,000 ft ² of Imp Greater than 5,000 ft ² of PGIS Greater than 7,000 ft ² of Land Disturbance	TIR Required Flow Control Required Predevelopment modeled as existing conditions (ie credit for existing driveway) Water Quality Required	TIR Required Flow Control Required Predevelopment modeled as forested conditions Water Quality Required Soil Amendments Required
Commercial Redevelopment Greater than 5,000 ft ² of new and or replaced Impervious but less than 10,000 ft ² Less than 5,000 ft ² of new and or replaced PGIS Greater than 50% remodel	TIR Required No Flow Control No Water Quality Required	TIR Required Flow Control Required to Historical Site Conditions of Forested.
Commercial Redevelopment Greater than 10,000 ft ² of new and or replaced Impervious Surface Greater than 5,000 ft ² of new and or replaced PGIS Greater than 50% remodel	TIR Required Flow Control required for only New Impervious Surfaces Water Quality Required	TIR Required Flow Control Required to Historical Site Conditions of Forested. Water Quality Required

BMP = Best Management Practice, PGIS = Pollution Generating Impervious Surface, Imp = Impervious surface, SFR = Single Family Residence, TIR = Technical Information Report, KCSWDM = King County Surface Water Design Manual, NPDES = National Pollutant Discharge Elimination System

Scenarios for Sites that Disturb Over an Acre

The City is considering the use of a bifurcated stormwater manual that would regulate sites above and below an acre of disturbance differently. One of the challenges of using a bifurcated manual is what happens when an applicant depicts less than an acre of disturbance on their application, but then disturbs more during construction. The City would be forced to apply the more stringent new manual on the project, which would presumably result in higher mitigation costs for the applicant. The Planning Commission has asked staff to brainstorm some ways to mitigate the risk of this happening. The following is a summarized list of ideas to combat this potential problem.

List of ideas to help applicants not disturb more than depicted on their plans:

1. Education by emphasis of the importance of the situation in pre-application meeting notes and notes on the issued permits. (Staff Idea)
2. Require a Pre-Construction meeting where the approved clearing limits would be demarcated using orange construction fencing and verified by staff. (Staff Idea)
3. Instead of simply using the actual size of an acre, 43,560 sq. ft., in the regulations; use an amount like 40,000 sq. ft., so that the applicant would have some room to exceed their permit before the City was forced to use a different manual. (Staff Idea)
4. If a project is proposing more than 40,000 sq. ft. but less than an acre, then require that the applicant verify by survey upon completion of the project that the area of disturbance was less than an acre. (Staff Idea)
5. Require the applicant to bond for the estimated cost difference between using the two manuals, thereby ensuring that if they go over an acre the City would have a financial guaranty. (Planning Commission Idea)

The Planning Commission also wanted a rough idea on how many lots in the City were over an acre in size? It should be noted that any number of smaller lots could be grouped together with a project that would exceed an acre of disturbance. The rough number of lots in the City that exceed an acre in size, excluding public lands, is somewhere around 1,400 lots.

The Planning Commission also wanted some examples of projects on residential lots that exceed an acre of disturbance. Staff has included some examples in the list below. Also included in the list below are some other examples of projects that could occur within the City. During the Planning Commission's last meeting, it was expressed that we should exclude short plats from our consideration, because they are proposed by developers who are more sophisticated. Staff would like to stress that this is not always the case, because often a short plat is proposed by an inexperienced land owner. These proposals use a disproportionate amount of staff time to educate and enforce the development code, and are some of the projects that are most likely not to accurately portray the extent of the land disturbing activities.

Scenarios of developments in residentially zoned areas that could exceed an acre:

- Single Family Residence with Long Driveway
- Large Single Family Residence
- Single Family Residence with Playfield
- Horse Facility
- Daycare
- Adult Home Care Facility
- Small Church
- Small Park Project
- Small Public Works Project
- Short Plat

OCTOBER 2004 SURFACE WATER DESIGN MANUAL PUBLIC RULE REVISION

SUMMARY OF CHANGES TO THE 1998 DESIGN MANUAL

Chapter 1, Drainage Review and Requirements

This chapter describes the basic drainage requirements that implement King County adopted surface water runoff policies and explains how these requirements are applied to proposed projects through the drainage review process. The most significant changes to this chapter are as follows:

1. Added new terms and definitions for "land disturbing activity," "maintenance," "native vegetated surface," and "new pervious surface."
2. Reduced the drainage review threshold for new impervious surface from 5,000 square feet to 2,000 square feet.
3. Added a drainage review threshold for projects proposing 7,000 square feet or more of land disturbing activity.
4. Revised the sensitive area drainage review threshold to capture only projects that contain or are adjacent to a flood hazard area.
5. Eliminated the 2,000-square-foot drainage review threshold for projects located within a Landslide Hazard Drainage Area.
6. Eliminated the drainage review threshold for projects subject to areal clearing limits under KCC 16.82.150C.
7. Revised the drainage review threshold for large redevelopment projects from one based on the total cost of proposed improvements to one based on the assessed value of existing site improvements.
8. Changed "Small Site Drainage Review" to "Small Project Drainage Review" and revised the thresholds to include small agricultural projects as well as single family residential projects. Also revised and added new thresholds for impervious surface and new pervious surface.
9. Revised "Targeted Drainage Review" and "Full Drainage Review" thresholds consistent with the above changes to initial drainage review thresholds.
10. Changed "Large Site Drainage Review" to "Large Project Drainage Review" and revised the threshold for sole source aquifers to one based on critical aquifer recharge areas.
11. Revised the problem-specific mitigation requirements in Core Requirement #2 to address significant hydrologic impacts to wetlands when identified through a critical area report per KCC 21.24.110.
12. Added more guidance in Core Requirement #2 on how to identify and mitigate impacts to downstream drainage problems.
13. Expanded Core Requirement #3 to include the application of flow control BMPs as well as flow control facilities. Revised the main exemptions for Core Requirement #3 accordingly, mostly by moving those pertaining to flow control facilities to the section on area-specific flow control facility requirements. Some of the current exemptions from Core Requirement #3 will become "area-specific exceptions" to the area-specific flow control facility requirement. What remains of the main exemptions is revised to add a new exemption for transportation redevelopment projects, change the existing exemption for large redevelopment projects, and update the basic impervious surface exemption.
14. Added a new flow control facility exemption for sites that will be no more than 4% impervious after development.
15. Added a new term "target surfaces" for specifying which proposed surfaces (i.e., new or replaced impervious surface and new pervious surface) must be mitigated by required flow control facilities.

The target surfaces for a proposed project will depend on which flow control area it is located. Target surfaces can also be reduced in size through application of "full dispersion" flow control BMPs.

16. Changed "Level 1 Flow Control Areas" to "Basic Flow Control Areas" and significantly reduced the current extent of these areas. These areas may be expanded in the future through subbasin-specific stormwater plans or studies. The Level 1 flow control standard will continue to be applied in these areas.
17. Changed "Level 2 Flow Control Areas" to "Conservation Flow Control Areas" and significantly expanded the current extent of these areas. Almost all of unincorporated King County will be designated as Conservation Flow Control Area. The Level 2 flow control standard will continue to be applied but with a new predevelopment assumption of "historic site conditions" (e.g., forest) rather than "existing site conditions." In addition, larger redevelopment projects will be required to provide flow control facilities to mitigate replaced impervious surface as well as new impervious surface. Another key change is that impervious surface added on or after January 8, 2001 will have to be mitigated by flow control facilities if the surface has not yet been mitigated.
18. Changed existing "Level 3 Flow Control Areas" to "Flood Problem Flow Control Areas." The Level 3 flow control standard will continue to be applied but the predevelopment assumption will depend on which of the other two flow control areas is downstream of the Flood Problem Flow Control Area.
19. Added criteria for "fully dispersed surfaces," which can be used to reduce target surfaces and facility size.
20. Added flow control facility sizing credits for application of required flow control BMPs.
21. Revised the "Offsite Runoff Bypass" requirement to be more flexible. Changed the name to "Mitigation of Target Surfaces that Bypass Facility."
22. Added a provision for "mitigation trades" to allow flow control facility mitigation of a currently unmitigated developed surface in exchange for not mitigating the target surface.
23. Added a new section to Core Requirement #3, requiring the application of flow control BMPs to proposed impervious surfaces to the maximum extent practicable on all projects.
24. Added a new implementation requirement in Core Requirement #4 addressing groundwater protection for ditches/channels constructed in outwash soils.
25. Added two new categories of erosion and sediment control (ESC) measures to Core Requirement #5, one for dewatering control and one for flow control on construction sites.
26. Added new performance criteria to Core Requirement #5 based on a turbidity test rather than a sieve test.
27. Added a requirement that the designated ESC supervisor responsible for maintenance of ESC measures must be certified.
28. Clarified language in Core Requirement #6 regarding drainage facilities to be maintained by King County and those to be maintained by private parties.
29. Revised exemption language in Core Requirement #8 to change the cost exemption for redevelopment projects, add a new exemption for transportation redevelopment projects, and update the standard infiltration and soil treatment exemptions for increased groundwater protection. Also, moved what used to be the "Forested Open Space Exemption for Rural Residential Projects" to the section on area-specific water quality facility requirements, where it will be replaced by allowed reduction of target surfaces through use of "full dispersion" flow control BMPs.
30. Eliminated the provision allowing redevelopment projects to apply Basic WQ treatment regardless of which WQ treatment area they were located.

31. Eliminated existing "Resource Stream WQ Treatment Areas" (to become additional Basic WQ Treatment Areas) and changed the "Resource Stream Protection menu" to the "Enhanced Basic WQ menu." The Enhanced Basic WQ menu will now be applied based on land use rather than geographic area. It will apply to land uses that generate the highest concentrations of metals in stormwater runoff within either Basic or Sensitive Lake WQ Treatment Areas.
32. Revised the water quality facility and implementation requirements to incorporate the concept of target surfaces. Another key change is that target surfaces will include impervious surface added on or after January 8, 2001 that has not yet been mitigated.
33. Added salmon conservation plans, stormwater compliance plans, and flood hazard reduction plans to the list of other adopted area-specific requirements in Special Requirement #1.
34. Clarified the language in Special Requirement #2 related to delineation of floodplains/floodways.
35. Clarified the language for applying source controls in Special Requirement #4.
36. Clarified the language for applying oil control to high use sites in Special Requirement #5.
37. Revised the language for appealing adjustment decisions consistent with KCC 20.20.

Chapter 2, Drainage Plan Submittal

This chapter describes the requirements and specifications for submittal of design plans for drainage review, including report and plan formats, and scopes. The most significant changes to this chapter are as follows:

1. Added a requirement for submittal of a construction stormwater pollution prevention plan (CSWPP) with the engineering plans required for drainage review. The CSWPP will include the currently required ESC plan plus a new stormwater pollution prevention and spill (SWPPS) plan.
2. Updated the TIR contents to reflect the new SWPPS plan and the Declaration of Covenant required for flow control BMPs.
3. Revised the specifications for ESC plans to address new ESC measures.
4. Added specifications for the new SWPPS plan.

Chapter 3, Hydrologic Analysis and Design

This chapter presents the acceptable methods of hydrologic analysis used to estimate runoff and design flow control, conveyance, and water quality facilities. The most significant changes to this chapter are as follows:

1. Revised language to reflect changes made in Chapter 1 related to application of flow control standards and BMPs, including the new predevelopment assumption of "historic site conditions."
2. Clarified the acceptable uses of runoff computation methods and the selection of runoff time series record types.
3. Clarified post development land cover assumptions for modeling runoff from pastures and playfields.

Chapter 4, Conveyance System Analysis and Design

This chapter presents the acceptable methods, details, and criteria for analysis and design of conveyance systems. The most significant changes to this chapter are as follows:

1. Updated allowable pipe materials.
2. Added language clarifying the use of drop manholes and structures.
3. Eliminated previously recommended fish habitat improvement at new outfalls.

4. Revised conveyance requirements for bridges and deferred to the King County Road Standards for clearance requirements.
5. Updated the floodway determination methodology and submittal information.

Chapter 5, Flow Control Design

This chapter presents the acceptable methods, details, and criteria for analysis and design of flow control facilities. The most significant changes to this chapter are as follows:

1. Eliminated the roof downspout control requirements for subdivisions. These have been combined with the new flow control BMP requirements.
2. Added a new section on site design that discusses the use of low impact development techniques.
3. Revised the section on flow control BMPs to include new project-specific requirements for application of BMPs based on site size and impervious surface coverage.
4. Added implementation requirements for flow control BMPs, including provisions for future implementation on subdivision lots, identification of maintenance responsibility, and recording of covenants to provide notice to future property owners and allow access for County inspection.
5. Eliminated language pertaining to use of wetlands for detention.
6. Added a new simple detention pond design for cleared areas.
7. Updated procedures for measuring and determining infiltration rates.
8. Added language pertaining to performance testing of infiltration facilities.
9. Revised language for protecting infiltration facilities from sediment during construction.
10. Revised groundwater protection language to correspond to "critical aquifer recharge areas" rather than "sole source aquifers."

Chapter 6, Water Quality Design

This chapter presents the acceptable methods, details, and criteria for analysis and design of water quality facilities. The most significant changes to this chapter are as follows:

1. Added a reference to work sheets for use in designing WQ facilities.
2. Revised the language for application of WQ treatment menus to be consistent with the changes to Core Requirement #8 in Chapter 1.
3. Changed "leaf compost filter" to the proprietary name "Stormfilter."
4. Revised the requirement for and the thickness of treatment liners.
5. Updated geotextile requirements throughout Chapter 6.
6. Clarified the need to retain the retention time when adjusting the biofiltration swale fit the site.
7. Clarified access requirements for biofiltration swales.
8. Revised the design criteria for wetponds and wetvaults to require an approved adjustment if internal berms or walls are used to lengthen flowpath in order to meet minimum length to width ratios.
9. Added a presettling treatment goal for media filtration facilities.
10. Clarified design method for basic and large sand filters.
11. Updated ventilation requirements for vaults.

Definitions Section

This section provides a formal list of the words, terms, and abbreviations accompanied by their meaning as applied in this manual. New definitions are added and existing ones are revised to reflect the changes made to other portions of the Manual.

Appendix A, Maintenance Standards for Privately Maintained Drainage Facilities

This appendix contains the frequency, thresholds, and standards for maintenance of all privately maintained drainage facilities. The most significant changes to this Appendix are as follows:

1. Revised the title of Appendix A to "Maintenance Standards for Standard Drainage Facilities."
2. Updated maintenance standards for various facilities.
3. Added maintenance standards for wet biofiltration swales.

Appendix B, Master Drainage Plan Objective, Criteria Components and Review Process

This appendix describes in a general outline, the objectives, criteria, components, and review process for Master Drainage Plans prepared for Urban Planned Developments and very large projects. No significant changes are made to this appendix.

Appendix C (detached), Small Site Drainage Requirements

This appendix describes, in a separate booklet available from DNRP or DDES, the simplified drainage requirements for certain smaller projects. The appendix has been re-titled and totally rewritten to include the "small project drainage requirements" for single family residential projects and agricultural projects that are subject to Small Project Drainage Review as described in the changes to Chapter 1 above. This appendix will also be referenced by other portions of the Manual for the design specifications of flow control BMPs to be used on all projects. The new appendix includes a large number of new flow control BMPs compared to what is currently in the 1998 Manual.

Appendix D (detached), Erosion and Sedimentation Control (ESC) Standards

This appendix describes, in a separate booklet available from DNRP and DDES, the required measures to be implemented during construction to prevent the transport of sediment from construction and disturbing activities on the project site. The most significant changes to this appendix are as follows:

1. Revised throughout to reflect changes made to Core Requirement #5 in Chapter 1, including two new categories of ESC measures for dewatering control and flow control.
2. Revised cover measures to include use of "surface roughing," "polyacrylamide (PAM)," "compost blankets," and "bonded fiber matrix."
3. Revised perimeter protection measures to include use of "triangular silt dikes" and "compost socks" and to update the specifications for "compost berms."
4. Revised traffic area stabilization measures to include use of "wheel wash systems."
5. Revised sediment retention measures to include use of "block and gravel filters," "gravel and wire mesh filters," "curb inlet protection with wooden weir," "curb and gutter sediment barriers," and "excavated drop inlet sediment traps."
6. Revised surface water collection measures to include use of "subsurface drains" and to update the conditions of use for "pipe slope drains."
7. Added a new section for ESC performance and compliance provisions consistent with and expanding upon those in Core Requirement #5 in Chapter 1.

8. Updated the specifications for ESC plans consistent with the changes made in Chapter 2.

Flow Control Applications Map

This map delineates the three designated "flow control areas" in unincorporated King County referred to by Core Requirement #3 of Chapter 1 for determining which set of area-specific flow control facility requirements apply to a proposed project. The map is revised to reflect the new flow control area names and geographic coverage as described in the changes to Chapter 1 above.

Water Quality Applications Map

This map delineates the designated "water quality treatment areas" in unincorporated King County referred to by Core Requirement #8 of Chapter 1 for determining which set of area-specific water quality facility requirements apply to a proposed project. The map is revised to reflect the elimination of "Resource Stream WQ Treat Areas" and the new geographic coverage of "Basic WQ Treatment Areas" as described in the changes to Chapter 1 above.

Landslide Hazard Drainage Areas Map

This map delineates the areas with unincorporated King County where the County has determined that overland flows from new projects will pose a significant threat to health and safety because of their close proximity to CAO-defined landslide hazard areas that are slopes greater than 15%. Other than updates to the unincorporated area of the County, no significant changes are made to this map.