



Signature Report

December 12, 2011

Ordinance 17246

Proposed No. 2011-0459.1

Sponsors Lambert and Phillips

1 AN ORDINANCE regarding surface water management;  
2 revising surface water management rate adjustment  
3 program and timing of its implementation; and amending  
4 Ordinance 16958, Section 7.

5 STATEMENT OF FACTS:

- 6 1. To provide surface water management facilities and programs, King  
7 County charges property owners within its surface water management  
8 service area, which is unincorporated King County, fees based on  
9 impervious surface area, including graduated nonresidential fees and one  
10 uniform rate for all residential parcels.
- 11 2. King County grants requests for rate adjustments based on  
12 demonstration that one or more of the conditions in K.C.C. 9.08.080 are  
13 met.
- 14 3. On November 15, 2010, the council adopted Ordinance 16958, which  
15 revised the surface water management service charge and rate adjustment  
16 program for nonresidential parcels pending the development of a program  
17 that more comprehensively takes into account the effectiveness of on-site  
18 management of storm and surface water runoff.

19 4. The following guiding principles are a reasonable and legitimate basis  
20 for future amendments to the rate adjustment program:

21 a. The rate adjustment program will be, to the extent possible, linked to  
22 the effectiveness of facility or on-site practices that reduce storm water  
23 impacts; that is, the more effective the facility or practices are at reducing  
24 storm water impacts the greater the discount.

25 b. The rate adjustment program is, and will be, administratively feasible.

26 c. The rate adjustment program will provide property owner incentive to  
27 improve on-site control of stormwater, such as via retrofitting existing  
28 facility, improved operations and maintenance and similar approaches.

29 d. The rate adjustment program is, and will be, consistent, meaning not in  
30 conflict, with other King County Code requirements.

31 e. Any amendments to the rate adjustment program will be available to  
32 all nonresidential properties once adopted.

33 BE IT ORDAINED BY THE COUNCIL OF KING COUNTY:

34 SECTION 1. The department of natural resources and parks, water and land  
35 resources division, is undertaking a rate structure study in 2012 for implementation in  
36 2013 that analyzes the current surface water management service charge rate structure,  
37 including a revised rate adjustment program that shall include evaluation of a parcel  
38 aggregation discount, which would treat multiple contiguous parcels under common  
39 ownership as a single parcel for purposes of surface water management fee discounts.  
40 The study shall be transmitted by September 30, 2012, with any legislation implementing  
41 changes to surface water management fees, in the form of a paper and electronic copy

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42 with the clerk of the council, who shall retain the original and provide an electronic copy  
43 to all councilmembers.

44 SECTION 2. The revised rate adjustment program should be based on a stackable  
45 discount, meaning a percentage discount that increases in increments based on the  
46 effectiveness of on-site practices to reduce stormwater impacts, demonstrated through  
47 compliance with specified flow control or water quality protection standards or National  
48 Pollutant Discharge Elimination System stormwater permit standards such that each  
49 demonstration of compliance results in additional percentage discounts, consistent with  
50 the guiding principles that provide the basis for the recommendations in Surface Water  
51 Management (SWM) Fee Discount Rates for Non-Residential Parcels - Proviso Report,  
52 Attachment A to this ordinance.

53 SECTION 3. As provided in section 4 of this ordinance, Ordinance 16958,  
54 Section 4, expires and Ordinance 16958, Section 6, takes effect January 1, 2014, and,  
55 therefore, applications for a two-rate discount on surface water management fees, as  
56 authorized in K.C.C. 9.08.080.B.5, shall no longer be accepted on or after January 1,  
57 2014, or upon the effective date of an ordinance creating and implementing the revised  
58 rate adjustment program informed by the rate study that reflects the guiding principles in  
59 Attachment A to this ordinance, whichever date comes first. The revised rate adjustment  
60 program will replace the two-rate discount currently in effect.

61 SECTION 4. Ordinance 16958, Section 7, is hereby amended to read as follows:

62 A. Sections 1 through 5 of ~~((this-))~~ Ordinance 16958 take effect January 1, 2011.

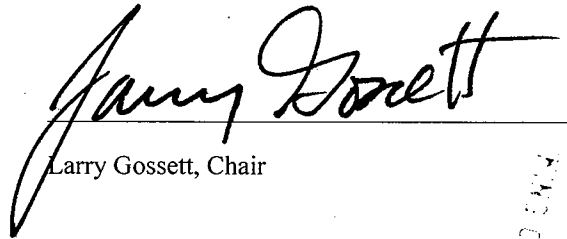
63 B. Section 6 of ~~((this-))~~ Ordinance 16958 takes effect January 1, ~~((2013))~~ 2014.

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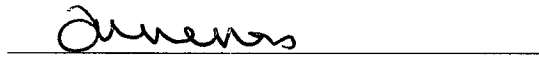
Ordinance 17246 was introduced on 11/7/2011 and passed by the Metropolitan King County Council on 12/12/2011, by the following vote:

Yes: 9 - Mr. Phillips, Mr. von Reichbauer, Mr. Gossett, Ms. Hague, Ms. Patterson, Ms. Lambert, Mr. Ferguson, Mr. Dunn and Mr. McDermott  
No: 0  
Excused: 0

KING COUNTY COUNCIL  
KING COUNTY, WASHINGTON

  
Larry Gossett, Chair

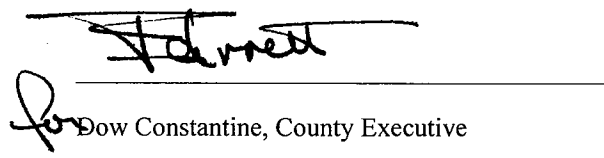
ATTEST:

  
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Anne Noris, Clerk of the Council

RECEIVED  
2011 DEC 21 AM 9:57  
KING COUNTY COUNCIL

APPROVED this 15 day of December, 2011.

  
Dow Constantine, County Executive

Attachments: A. Surface Water Management (SWM) Fee Discount Rates for Non-Residential Parcels - Proviso Report - September 26, 2011

# Surface Water Management (SWM) Fee Discount Rates for Non-Residential Parcels – Proviso Report

September 26, 2011

This report responds to King County Ordinance 16984, Section 75, P1:

“Of this appropriation, \$100,000 shall not be expended or encumbered until the executive transmits a report and legislation that references the proviso's ordinance, section and number and states that the executive has responded to the proviso. This proviso requires the manager of the water and land resources division to provide a report relating to the surface water management fee discount rates allowed for non-residential parcels that are served by one or more flow control or water quality treatment facilities or that can be demonstrated to provide flow control or water quality treatment of surface and storm water, in compliance with the standards in K.C.C. chapter 9.04. The report shall include an evaluation and development of a new fee credit program, as a replacement for the two-year two-rate discount provided for in K.C.C. 9.08.080. The two-year two-rate discount will end January 1, 2013. The executive shall transmit an ordinance containing any revisions to the code required to implement such a program. The executive should transmit to the council the report and legislation required by this proviso by July 31, 2011, filed in the form of a paper original and an electronic copy with the clerk of the council, who shall retain the original and provide an electronic copy to all councilmembers, the council chief of staff and the lead staff for the environment and transportation committee or its successor.”

This report is transmitted as part of the 2012 Executive Proposed Budget as per the July 20, 2011 Omnibus Ordinance. The report documents a body of work completed by the Water and Land Resources Division (WLR) in collaboration with the Executive Office; representatives of King County's gravel mining industry; and Council staff in response to the Proviso above. The report recommends that the findings of this work be incorporated into a more extensive study of the Surface Water Management (SWM) rate structure and the programs funded by that rate in 2012. The SWM rate study is included as part of the 2012 Executive Proposed Budget.

Specifically, the report recommends that the current SWM two-rate discount program be continued through 2012 and that a new discount program that incorporates the percentage discount Option 3 identified as a preferred alternative in this report be transmitted to the King County Council in 2012 as part of a comprehensive legislative package along with other findings of the SWM rate study to be completed and included in the 2013 Executive Proposed Budget. The 2012 SWM rate study will also further analyze discount or other rate options associated

with multiple contiguous parcels under common ownership that are managed as a single site for the purposes of surface water runoff. In addition, WLRD and Executive Office will discuss the 2012 rate study and the new discount program with representatives of the diverse rate payers as well as the gravel mining industry during the 2012 rate study.

The body of work reported below was completed between January and August 2011. It includes a set of principles agreed to by the collaborating parties to guide the Surface Water Management (SWM) discount program; a review of the process undertaken; a description of the analyses, findings and conclusions regarding how the existing and several alternative discount options address the guiding principles; how the existing discount program and the analyzed alternatives compare in terms of amount of discount for different rate classes; and the recommendation to incorporate the preferred percentage discount program (Option 3) into a fuller rate study and legislative package for implementation in 2013.

This proviso was the result of concerns raised by the gravel mining industry that the Surface Water Management (SWM) fee charged to parcels containing gravel mining operations is unfairly high for sites that discharge no or very limited surface water. More specifically, industry representatives noted that many gravel mining sites contain stormwater control facilities that retain and infiltrate (soak into the ground) surface water runoff from impervious surfaces onsite. In addition, these sites are subject to a state-issued National Pollutant Discharge Elimination System (NPDES) general stormwater permit that imposes additional monitoring, reporting, and other requirements on the parcel owner related to management of surface water. Other non-residential parcels do not typically have this obligation.

King County Code 9.08 includes provisions for reducing a parcel's SWM fee charge if the parcel contains stormwater control facilities. However, the code's historical (1987-2010) or "old" one-rate-class discount may be insufficient to reflect the extent to which surface water is managed on sites which infiltrate most of their surface water. In addition, the current discount program may not always reflect certain property distinctions and in some cases may not adequately reflect the effectiveness of stormwater controls on gravel mining sites as well as other non-residential developed properties (also referred to as commercial parcels).

To address the concerns raised by the gravel mining industry and the fact that the historical discount program did not fully link to the functional benefits of onsite facilities, the one-rate-class facility discount (old discount) was temporarily increased to a two-rate-class facility discount (2011 discount) as part of the 2011 budget pending consideration of a new discount program to better reflect the extent to which a parcel's surface water is managed. The proviso directs the Water and Land Resources (WLR) Division to evaluate and develop a new discount program to replace the temporary two-rate-class 2011 discount. In originating the proviso, Councilmember Kathy Lambert's office asked that WLR work closely with the gravel mining

industry and Council staff to evaluate and develop a new discount program. The report documents this productive collaboration.

## Background

The SWM fee discount program has been in place since the SWM fee was adopted by the King County Council in 1987. Up until 2001, the program consisted primarily of a discount for any non-residential or residential parcel served by a flow control facility maintained by the parcel owner. Additional discounts were adopted in 2001 when the SWM fee service area expanded to encompass all of unincorporated King County. These included a pervious surface absorption discount applicable only to non-residential parcels, a sixty-five-ten discount available to all parcels, and revision of the flow control facility discount to recognize water quality treatment facilities as eligible for a facility discount.

The pervious surface absorption discount recognizes the use of stormwater “low impact development” (LID) type techniques called “flow control best management practices (BMPs)” in King County regulations. Such BMPs include measures that utilize existing pervious areas on the parcel (e.g., lawns, low areas, etc.) to absorb, retain, or disperse runoff from impervious surfaces. This discount can be used on non-residential parcels that are not eligible for a facility discount. The discount amount varies from 10 percent up to 25 percent depending on how much impervious surface is served by flow control BMPs.

The sixty-five-ten discount recognizes the benefit of retaining at least 65 percent of a parcel in a forested or otherwise native condition (i.e., undeveloped natural condition) and minimizing the effect of impervious surface to that of a parcel that is 10 percent or less impervious using flow dispersion techniques. Only parcels in rate classes one, two, and three are able to qualify for the discount. Qualifying parcels in rate class three that are not eligible for a facility discount receive a one-rate-class discount while parcels in rate classes one (residential) and two receive a 50 percent discount.

The water quality treatment facility discount is part of the facility discount for flow control and is useful only to a parcel that is served by a water quality treatment facility but no flow control facility. In other words, the discount is the same regardless of whether there is a flow control facility, a water quality treatment facility, or both serving the parcel.

Of the 2,849 non-residential parcels that pay an annual SWM fee, 623 (22 percent) are currently known or assumed to be eligible for a facility discount. Eighty-one (81) of the 623 parcels assumed to be eligible for a facility discount are gravel mining sites that have not yet applied for a discount. Only a handful of other non-residential parcels are currently receiving the pervious surface absorption discount (one parcel) or the sixty-five-ten discount (four parcels). These low

numbers of non-residential parcels with stormwater controls comports with other information WLR has gathered in the past showing that over a third of the developed land in unincorporated King County was built prior to adoption of regulations requiring stormwater controls to mitigate the runoff impacts of new development. Hence, there are many non-residential developed parcels in the SWM service area that impact the surface and storm water system.

About \$1.2 million in SWM fee discounts were given to non-residential parcels in 2011 using the temporary two-rate-class discount approach (excludes parcels that received discounts in the Kirkland annexation area). This is equivalent to about six percent of the \$20.3 million in total annual revenue collected from the SWM fee. About 25 percent (\$5 million) of the annual revenue comes from non-residential parcels. Another 57 percent (\$11.5 million) comes from residential parcels, and the remaining 19 percent comes from County roads (\$3.1 million, 15 percent) and State roads (\$0.7 million, 4 percent).

The current discount program costs WLR about \$278,000 a year to administer and requires approximately 2.4 FTE. Most of this expense (\$239,000, 2.1 FTE) is associated with inspections of facilities to verify that they are being maintained to County standards as required by the criteria for discount and by state and federal stormwater regulations. An inspection program at this level is needed since WLR has found a high level of noncompliance if inspections are less frequent. About \$39,000 of this is for 0.33 FTE of engineering staff time and supporting resources to review about 24 new discount requests per year.



## Analysis and Results

In response to the proviso, WLR assembled a work group of representatives from the gravel mining industry, WLR staff, Council staff, and Executive's Office staff. A list of work group members is provided in **Appendix A**.

Beginning in January 2011 and continuing through May 2011, WLR convened four meetings of the work group to develop a new recommended discount program for non-residential parcels. Agendas and related information are provided in **Appendix B**. Meeting summaries are provided in **Appendix C**. An additional meeting and a telephone conference were held in July and September to discuss the aggregation discount (see below); maintaining the two-rate-class discount program in 2012; and incorporating the preferred percentage discount program into a legislative package as part of the 2013 Executive Proposed Budget following a more comprehensive SWM rate study that will be done in 2012.

### Guiding Principles

Surface Water Management rates must be consistent with applicable legal requirements. To that end, the workgroup agreed on a set of principles for guiding the process of developing an updated discount program for non-residential parcels (a.k.a., commercial parcels). The guiding principles are:

1. The new discount program will be, to the extent possible, linked to the effectiveness of facility or on-site practices that reduce storm water impacts, i.e., the more effective the facility is at reducing storm water impacts the greater the discount.
2. Program is administratively feasible.
3. Program provides property owner incentive to improve on-site control of stormwater, e.g., via retrofitting existing facility; improved operations/maintenance etc.
4. New discount program is consistent (not in conflict) with other King County code and other legal requirements.
5. New discount program will not be at the expense of properties not in the discount program in 2011, but the new program will be available to all commercial properties once adopted (i.e., 2012 and beyond).

6. New discount program results in minimal or no changes to the fundamental structure of the King County surface water management (SWM) fee unless directly tied to optimal achievement of the other principles.<sup>1</sup>

These guiding principles will be used in the SWM rate study proposed for 2012 to ensure fairness and compliance with applicable law.

### Current Discount Program

The work group reviewed the old (one-rate-class) discount program to understand its structure and potential shortcomings, including the lack of incentive related to facility effectiveness and its use of the *rate class method of discounting*<sup>2</sup>. The group agreed the discount program could be improved in two ways to better reflect contribution to runoff:

1. Under the current discount program, parcels within any given rate class all get the same percentage discount regardless of the effectiveness or function of their facilities in mitigating runoff impacts. Facility effectiveness and functions<sup>3</sup> can vary significantly depending on when the parcel was developed and the type of facility that was required at the time of development. For example, modern flow control facilities, designed to 1990 or later King County standards can be four to ten times larger and hence more effective at controlling runoff quantity than those designed to pre-1990 standards. Also, water quality treatment facilities were not required on developments prior to 1990.
2. Parcels with the same facility effectiveness or function can end up with vastly different percentage discounts because of the rate class method of discounting. The percentage discount can vary from 20 percent to just less than 100 percent depending on which rate class the parcel is in.

As a result of the above issues, there are variables among parcels that need to be addressed and little incentive for parcel owners receiving a discount to improve the effectiveness or function of their facilities. **Appendix D**, "Issues with Current Facility Discount" includes more details discussion.

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<sup>1</sup>Note that timeline to complete the proviso report did not allow for completion of a SWM Rate Study, which would be needed to analyze and propose significant changes to the rate structure.

<sup>2</sup>The *rate class method of discounting* reduces a parcel's SWM fee to that of a lower rate class than the base rate class of the parcel. A parcel's base rate class is determined by its percentage of impervious surface. See the second page of Appendix 4 for a table of the current SWM fee rate classes by percentage of impervious surface and their rates per acre of parcel area.

<sup>3</sup>*Functions* means the relative capability of different types of stormwater control such as flow control facilities, water quality treatment facilities, and flow control BMPs/infiltration facilities to mitigate either or both the quantity and quality of stormwater runoff from a parcel served by the facilities.

## **Decision to Pursue a Percentage Discount Approach**

In reviewing the above issues, the work group agreed that some form of percentage discount that granted a flat discount percentage based on the relative effectiveness or function of the parcel's facilities would be more equitable in that it would better reflect contribution to runoff. Such a discount would consistently reflect facility effectiveness and stormwater control functions. The question then became how could a percentage discount be determined and what would be the appropriate maximum and minimum percentage discount.

## **Early Alternatives Considered for Determining Percentage Discount**

The work group reviewed and compared two alternatives prepared by WLR for determining discount percentage, the "Ratio Method" and the "Simple Function Method." The Ratio Method gives a discount based on the relative ratio of facility size to impervious area. The Simple Function Method gives a discount based on a flat percentage for each of several facility types. See **Appendix E** for a detailed description and comparison of these methods.

The work group favored the Simple Function Method over the Ratio Method due to its ease of administration and simplicity. The group agreed to use the method's concept of a flat percentage discount for each type of facility and to evaluate a program of additive discount percentages for each facility. This concept, also referred to as "stackable credits," served as the basis for developing the new discount program for non-residential parcels. The work group reviewed the guiding principles and agreed that this concept of "stackable credits" each representing a flat percentage discount for each facility met the guiding principles.

## **Maximum Percentage of Discount**

In reviewing the early alternatives for percentage discount, discussion focused on whether the maximum discount should be 70 percent or something higher. The 70 percent value was initially proposed by WLR because it is the discount given to King County roads and State roads to generally reflect both their impact on downstream surface waters and their management of the road drainage system. Following discussion, WLR agreed that State and County management of roads is different than the runoff mitigation occurring on non-residential parcels served by a full suite of stormwater controls. In addition, many parcels were already receiving higher than 70 percent and approaching 100 percent under the old one-rate-class discount.

WLR proposed, and the work group agreed, that the maximum percentage be 90 percent contingent upon analysis of its impacts to SWM fee revenue. The non-discounted fee (i.e., the 10 percent remaining after the discount) represents a reasonable charge for unmitigated impacts and the cost of site inspection to ensure the facilities are functioning.

## Evaluation of Percentage Discount Options

WLR staff prepared, analyzed, and reviewed with the work group, three options for applying the concept of additive percentage discounts. All three options had the same breakdown of stormwater control functions and varied only in the amount of discount credited to each function. The types of stormwater control functions considered are:

1. Basic flow control— providing credit for flow control facilities that meet any King County standard for flow control that ever existed in County Code.
2. Modern flow control – providing additional credit for flow control facilities that meet 1990 or later King County standards for flow control.
3. Pervious surface absorption (PSA) – providing credit for County-standard BMPs or infiltration facilities that minimize the volume of stormwater discharges through absorption, retention, or dispersion of runoff from impervious surfaces.
4. Water quality (WQ) treatment – providing credit for water quality treatment facilities, or equivalent, that meet any King County standard for such treatment.
5. NPDES permit controls – providing credit for the additional management of onsite surface and storm water discharges that is required by the State under a National Pollutant Discharge Elimination System (NPDES) stormwater permit.

The three options, simply titled, “Percentage Discount Options 1, 2, and 3,” have the following breakdown of percentage ranges and amounts of additive percentage discount for each stormwater control function:

Option 1: Minimum 10 percent discount, maximum 90 percent (10 percent for basic flow control, 20 percent for modern flow control, 20 percent for WQ treatment, up to 20 percent for PSA, 20 percent for NPDES stormwater permit)

Option 2: Minimum 20 percent discount, maximum 90 percent (20 percent for basic flow control, 10 percent for modern flow control, 20 percent for WQ treatment, up to 20 percent for PSA, 20 percent for NPDES stormwater permit)

Option 3: Minimum 20 percent discount, maximum 90 percent (20 percent for basic flow control, 20 percent for modern flow control, 20 percent for WQ treatment, up to 20 percent for PSA, 10 percent for NPDES stormwater permit)

WLR’s analysis assessed the impacts of the various options to total annual SWM fee revenue and to the potential SWM fees charged to non-residential parcel owners in the service area eligible for a discount under the old discount program.

The potential maximum difference in **SWM fee revenue impact** between any of the three options and that of the old one-rate-class discount is relatively small as shown in the table below. The table also shows the revenue impact of the 2011 temporary two-rate-class discount, both the actual discounts granted to date and the maximum possible if all eligible parcels met requirements for receiving a discount in 2011 (excludes parcels in the Kirkland annexation area). The revenue impacts of all discount options would increase over time as newly developed or redeveloped parcels with modern stormwater controls are added to WLR's discount inventory and/or as parcel owners take advantage of discount incentives to add new or upgraded stormwater controls. The revenue impacts of the new discount options are relatively small, but the new options will provide an incentive to property owners to improve stormwater management and benefit property owners whose facilities provide better mitigation.

**SWM Fee Revenue Impact of Old, 2011, and New Discount Options**

Old Discount (1 rate class)	2011 Discount (2 rate classes)	2011 Actual Discount Granted	Percentage <sup>4</sup> Discount Option 1	Percentage <sup>4</sup> Discount Option 2	Percentage <sup>4</sup> Discount Option 3
\$1.15million	\$1.90million	\$1.19 million	\$1.09 million	\$1.19 million	\$1.27 million

The **cost of administering** any of the percentage discount options is estimated to be about \$40,000 more than the existing cost of \$278,000 per year (about a 14 percent increase in cost). The increase is primarily due to the stackable discount approach which offers more opportunities for parcel owners to reduce their fees and thus requires more staff time to process discount requests in the first year and inspect adherence to maintenance requirements in out years. The increase in staff time of about 0.34 FTE is based on the extra time spent in 2010 responding to discount requests and inquiries from a number of gravel mine parcel owners after they received their first SWM fee bills. It is a best guess of increased demand and will have to be refined based on actual demand in 2012.

In order to make the new discount program more equitable and reflective of stormwater control effectiveness and in keeping with the guiding principles, a number of older developed parcels with flow control facilities only will see an increase in SWM fee due to a smaller discount given for basic flow control alone. Other parcels, with modern stormwater controls or infiltration facilities, will see a fee decrease (greater discount) due to a larger discount given for these substantially more effective facilities. Consequently, there are different numbers of

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<sup>4</sup> Revenue impacts of these options are calculated as the maximum potential under the assumptions that all known eligible parcels apply for and receive 100 percent of each possible discount.

negatively and positively affected parcels depending on which percentage discount option is applied, but the discounts correspond to contribution to runoff. The table below shows the number of negatively and positively affected parcels in the full service area and the extent to which they are impacted by each discount option.

**Impact of the New Percentage Discount Options on Non-Residential Parcels known or assumed to be Eligible for Discount (628 parcels affected)**

Comparison of Old vs. New Discount	% Discount Option 1	% Discount Option 2	% Discount Option 3
No. of Parcels w/Increased Fee	367	323	268
Largest Fee Increase (% Increase)	\$11,880 (97%)	\$9,203 (75%)	\$9,203 (75%)
No. of Parcels w/Fee Increase > \$10,000	3	0	0
No. of Parcels w/Fee Increase > \$5,000	13	7	7
No. of Parcels w/Fee Increase > \$1,000	85	66	64
No. of Parcels w/Decreased Fee	207	251	360
Largest Fee Decrease (% Decrease)	\$36,356 (86%)	\$36,356 (86%)	\$36,356 (86%)
No. of Parcels w/Fee Decrease > \$10,000	8	8	8
No. of Parcels w/Fee Decrease > \$5,000	10	10	12
No. of Parcels w/Fee Decrease > \$1,000	51	51	63

Since there are a large number of older developed parcels, the number of negatively impacted parcels is primarily driven by the amount of discount given for basic flow control. Under the old discount program, basic flow control received anywhere from 20 percent to just less than 100 percent discount. New discount Option 1 gives only a 10 percent discount for basic flow control, which reflects the fact that older flow control facilities, which qualify for this credit alone, are about one tenth to one fourth the size and hence effectiveness of present day flow control facilities. Option 1's discount for modern flow control is twice the basic flow control amount, reflecting its significantly greater effectiveness.

Option 1 results in a fee increase for well over half of all parcels currently known or assumed to be eligible for discount. The intent of Option 2 was to reduce this impact by increasing the discount for basic flow control from 10 percent to 20 percent and reducing the discount for modern flow control from 20 percent to 10 percent. This shift seemed inequitable and not reflective of the value of modern flow control. The intent of Option 3 was to increase Option 2's discount for modern flow control from 10 percent to 20 percent by reducing Option 2's discount for the NPDES stormwater permit from 20 percent to 10 percent, thus reflecting the value of modern flow control but also recognizing the desire to reduce negative fee impacts to the extent possible while meeting the guiding principles.

## Selection of Recommended Percentage Discount Option

The gravel mining industry representatives on the work group tended to prefer Option 2 because of its strong recognition of the value of the NPDES stormwater permit while WLR favored Option 3 because of its greater recognition of structural controls that mitigate the impacts of runoff on the downstream surface and storm water system. WLR recommends Option 3 for implementation in 2013 following a comprehensive SWM rate study for the following reasons:

1. Gives appropriate credit for modern flow control (20 percent) like Option 1 but increases the minimum credit for basic flow control to 20 percent to reduce the impact to majority of parcels with facilities. Note that modern flow control facilities (i.e., facilities designed to 1990 or later King County surface water design standards) are 4 to over 10 times larger than earlier flow control facilities and hence significantly more effective in flow control.
2. Gives a more appropriate credit of 10 percent rather than 20 percent for compliance with a state-issued NPDES stormwater permit. While the permit provides additional assurance that a parcel's stormwater controls will be properly operated and maintained, it is not a physical stormwater control and under the guiding principles should not be credited the same as a physical stormwater control.
3. While WLR recognizes the value of NPDES stormwater permits, such permits are only required for very few types of commercial operations. Thus, the relative equity of the greater discount percentage for all commercial properties in the SWM service area is decreased as the relative discount for a condition (compliance with site-specific NPDES permit) that only a few property owners can achieve is less.
4. Although Option 3 has the largest revenue impact of the three percentage discount options, the difference in impact between it and the old one-rate-class discount is only \$120,000 or 0.6 percent of the total annual base SWM fee revenue (\$21 million).

After further discussions the gravel mining industry representatives agreed that these factors constitute a reasonable basis for Option 3. In addition the work group noted that Option 3 impacted the fewest rate payers with higher rates.

## Evaluation of the Aggregation Discount Option

WLR staff also analyzed an additional discount discussed with the work group, called the "Aggregation Discount." This additional discount would allow owners of contiguous parcels to aggregate them for the purposes of determining their base SWM fee.<sup>5</sup> The gravel mining industry representatives felt such a discount would reflect single site management of multiple parcels.

This could be an optional discount if the single site management corresponded with reduced runoff. Such a discount could be proposed wherein an owner of multiple contiguous parcels could compare the sum of SWM fee charges for all the parcels to what the SWM fee would be if the multiple parcels were treated as one (i.e., aggregated). A savings in total fees can be achieved in some cases if the impervious surface percentage of the aggregated properties results in a lower rate class than the rate class and area summed for all the individual parcels (see **Appendix F** for graphics illustrating how aggregation benefits some but not all contiguous parcels). If the aggregation results in a lower SWM fee, then that would become the base SWM fee from which qualifying percentage discounts would be subtracted for stormwater controls that mitigate the runoff impacts from impervious surfaces. WLR would administer this discount like it does other discounts in that a request would have to be made, reviewed, and approved and then have to be checked annually to see that the criteria for discount are still being met (e.g., parcels have not been sold to another owner).

WLR's analysis found that some 686 non-residential parcels would potentially be eligible for an aggregation discount by virtue of having two or more contiguous parcels under the same ownership. About 455 of these aggregations would result in a lower base SWM fee for the property owners and would have a potential **SWM fee revenue impact** of about \$1.6 million. The full potential revenue impact of the aggregation discount plus Percentage Discount Option 3 would be about \$2.7 million annually at current rates. This is more than double the impact of the old discount program (\$1.15 million).

The **cost of administering the aggregation discount** in the first year under the current rate structure is estimated to be about \$114,000 in the first year assuming 686 requests and two hours of staff time per request (0.95 FTE). In out years, this is estimated to drop to about \$38,000 (0.31 FTE) assuming 455 active discounts and one hour of staff time per discount to check and document continued eligibility. This would be above and beyond the \$278,000 cost

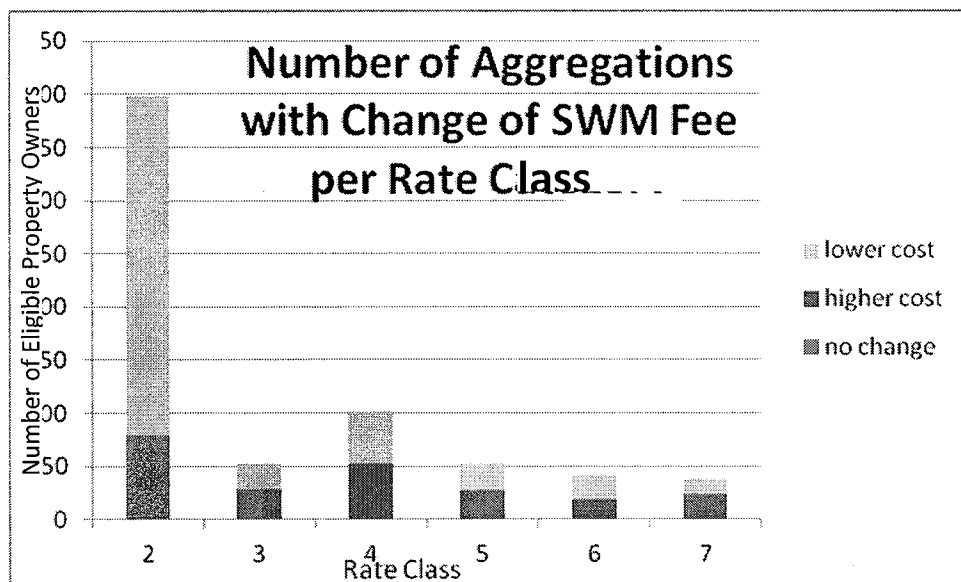
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<sup>5</sup> Aggregation of contiguous parcels can result in a lower SWM fee if the percentage of impervious surface for the aggregated site is such that it puts the site into a lower rate class.



to administer the existing discount program and the additional \$40,000 cost to administer the new percentage discount.

Further analysis of the aggregation discount by WLR found results that strongly influenced WLR's recommendation to not offer such a discount at this time. First, the aggregation discount is mainly a manifestation of the stair-stepped SWM fee rate structure with the most benefit being available to parcels in Rate Class 2. This rate class is intended to provide a small fee (per parcel only) for largely undeveloped parcels (less than 10 percent impervious). The rate class is not intended to reflect appropriate charges for parcels that have higher levels of impervious surface. The number of parcels that benefit from the aggregation discount by rate class is shown below.



As can be seen, the largest number of “beneficiaries” (i.e., those that would pay less annual SWM fees are those that fall into Rate Class 2). Second, for Rate Classes 3 and greater, the chances of a property owner getting a benefit from the aggregation discount is random and tends to favor parcel aggregations that have most impervious surface within a given rate class. The closer the percent impervious surface of an aggregation is to the top of a rate class, the greater the decrease in SWM fee is on a per acre basis. Similarly, the closer the percent impervious surface of an aggregation is to the bottom of a rate class, the greater the increase in SWM fee on a per acre basis. This basically rewards parcel aggregations that have the most impervious surface within a given rate class, which is contrary to the guiding principles’ intent to incentivize property owners to improve control of their stormwater runoff.

## Aggregation Discount Recommendation

While the representatives of the gravel mining industry on the work group favor an aggregation discount because they feel it is no different from all the parcels being merged through a County-approved boundary line adjustment, WLR disagrees. WLR recommends against offering the aggregation discount in 2012 for the following reasons:

1. Based on the initial analysis of the aggregation discount under the current rate structure, there appears to be no demonstrated benefit to the surface water system achieved by offering an aggregation discount. The fundamental goal of the discount program is to give fee reductions for stormwater controls that reduce the adverse impacts of runoff from impervious surface on the surface water system. The aggregation discount does not meet this goal.
2. Because no surface water benefit is achieved, this discount is counter to the following guiding principle: "The new discount program will be, to the extent possible, linked to the effectiveness of facility or on-site practices that reduce storm water impacts, i.e., the more effective the facility is at reducing storm water impacts the greater the discount."
3. There is no incentive to the property owner to improve stormwater control. This is counter to the following guiding principle: "Program provides property owner incentive to improve on-site control of stormwater, e.g., via retrofitting existing facility; improved operations/maintenance etc."
4. Because no surface water benefit is achieved and the aggregation discount mainly benefits parcels within Rate Class 2 that already pay the lowest SWM fees, the extra cost to administer this discount (\$114,000 in the first year and \$38,000 per year in out years) is not justified.
5. The aggregation discount would more than double the SWM fee revenue impact of the old discount program (increasing it from \$1.15million to \$2.7million), which could necessitate increasing SWM fees for parcels outside of the discount program to compensate for this impact alone. This is counter to the following guiding principle: "New discount program will not be at the expense of properties not in the discount program in 2011..." While there may be other reasons to increase SWM fees in the future, the potential for significant revenue shifts between parcels should be analyzed and addressed through a comprehensive rate study to ensure equity of impacts and consistency with the guiding principles. .
6. For parcel aggregations in rate class three or greater, the discount tends to reward those aggregations that have the highest impervious surface percentage within a given rate class.

This is counter to the basic intent of the SWM fee rate class structure to assess a greater, not lesser, fee for higher impervious surface percentage. This intent reflects the statutory authority of the SWM fee in RCW 36.89, which allows charges based on contribution to the problem.

Nevertheless the underlying concept of aggregating multiple parcels under single ownership and single purpose management if and when that management reduces surface water impacts is a reasonable construct. However, the concept requires further evaluation within the scope of the comprehensive SWM rate study to be conducted in 2012.

## Recommendations

The analysis of the current discount program, the flat percentage discount options and the aggregation discount showed that all discount options are dependent on the current SWM rate structure. The SWM rate structure is based on seven categories or classes of impervious surface, reflecting the statutory authority that the rate should be based on relative contribution to the problem (as represented by impervious area). While the dependence of a discount on the underlying rate structure is obvious, as described in greater detail in **Appendix D**, the relative amount of discount a given parcel receives is only dependent upon the underlying rate category and not on the relative reduction in stormwater runoff due to the facility or site management.

Each rate category includes parcels that have a range of impervious surface area, varying from ten to approximately twenty-five percentage points. When this rate structure was adopted, the technology available to administer a rate structure that separated the amount of impervious surface on a parcel into more finely divided percentage classes was limited. However, with the advent of Geographic Information Systems (GIS) and advances in remote sensing mapping capabilities, it may be that a rate structure based on more finely divided additional or different rate categories, that represent the conditions on a single parcel or group of parcels managed together might be both feasible to define and administer.

Following extensive discussion, with the work group, and in recognition of the new municipal stormwater NPDES permit that will be issued in 2012, WLR recommends that a comprehensive study of the SWM rate and SWM services be completed in 2012 and that the two-rate-class discount program, currently in place be continued through 2012. The scope of the SWM rate study will include an evaluation of the rate classes; a new discount program for non-residential parcels based on the Percentage Discount Option 3 described above; an evaluation of discounts based on the aggregation of multiple parcels managed under single ownership relative to surface water runoff, and an evaluation of both operating and capital needs in light of the new municipal NPDES stormwater permit and the increasingly rural nature of the SWM service area. The findings of this SWM rate study including a new discount program for non-residential parcels based on Percentage Discount Option 3 will be part of the 2013 Executive Proposed Budget. The rationale for recommending Option 3 over Options 1 and 2 is provided in the previous sections.

Percentage Discount Option 3 is a tiered system of stackable percentage discounts that give credit for various levels or types of surface and storm water controls applied to the runoff from developed surfaces on the parcel. The stackable percentage discounts are as follows:

1. A maximum 20 percent discount is given for flow control facilities that meet any current or previous King County standard for design of such facilities. This discount is referred to as the “basic flow control facility discount,” and any other qualifying discounts listed below are in addition to this discount.
2. A maximum 20 percent discount is given for flow control facilities that meet modern design standards, that is, standards adopted in the 1990 or later versions of the King County Surface Water Design Manual (SWDM). Such facilities are typically four to ten times larger than those meeting pre-1990 design standards. This discount is in addition to the basic flow control facility discount above for a maximum possible discount of 40 percent discount for modern flow control facilities. The 40 percent value reflects the true importance of flow control in protecting public safety and property from flooding and erosion and protecting streams and aquatic resources from erosive flows. This discount is also in addition to any other qualifying discounts below.
3. A maximum 20 percent discount is given for County standard flow control BMPs and/or infiltration facilities that serve to absorb, retain, or disperse runoff onsite so its discharge to the surface water system is minimized. This encourages groundwater recharge and reduces the impacts of runoff volumes to streams and aquatic resources. As mentioned earlier, what the County calls flow control BMPs are essentially low impact development BMPs. This discount replaces the current pervious surface absorption discount and, unlike the current discount, is in addition to any other qualifying discounts in this list.
4. A maximum 20 percent discount is given for County standard water quality treatment facilities or equivalent that serve to remove pollutants from runoff prior to discharge to the surface water system or to groundwater. The “or equivalent” would be demonstration through regular monitoring of stormwater discharges that State water quality standards for surface and/or ground water are not being violated. This discount replaces the current water quality treatment facility discount and, unlike the current discount, is in addition to any other qualifying discounts in this list.
5. A maximum 10 percent discount is given to parcels in which stormwater discharges are regulated under an NPDES stormwater permit issued by the State. The discount recognizes the additional rigor in which surface and storm water runoff is required to be managed on a parcel with an NPDES permit. An NPDES permit requires ongoing monitoring and reporting of stormwater discharges and immediate correction of problems that are detected. Sites that are subject to an NPDES permit also receive more frequent inspections. This discount is addition to any other qualifying discounts in this list.

The first four stackable discounts will be prorated to the amount of the parcel's impervious surface that is served by the stormwater control eligible for discount. The proration will be in increments of 4 percent discount for every 20 percent of impervious surface served. The increments will be applied as shown in the table below:

Impervious Surface Served	Discount Amount
4% to <20%	4%
20% to <40%	8%
40% to <60%	12%
60% to <80%	16%
80% to 100%	20%

The NPDES permit discount of 10 percent will be applied if the majority of the parcel's impervious surface (greater than 50 percent) drains to the discharge point or points covered under the permit.

In addition to replacing the current facility rate-class type discount and pervious surface absorption rate-class type discount with the above tiered system of stackable percentage discounts, the preferred new discount program for non-residential parcels would also replace the current sixty-five-ten one-rate-class discount with a flat percentage discount of 80 percent. This would address perceived differences between parcels in Rate Class 3 as identified in **Appendix D** and would provide a percentage discount comparable to that of a parcel that has all the physical controls credited in Percentage Discount Option 3. The rationale is that the same level of stormwater control effectiveness is achieved.

Although the preferred discount program would be targeted at non-residential parcels as directed by the 2010 proviso, the change to the sixty-five-ten discount would benefit residential parcels that currently receive a 50 percent discount (\$65.50). The change would provide greater incentive for residential parcels to retain forest and minimize the effect of impervious surface. Residential parcels that currently receive a 50 percent discount for onsite flow control or water quality facilities will continue to receive this amount of discount under the new discount program.

### **Program Implementation**

If the preferred discount framework is adopted by the Council in conjunction with the comprehensive SWM rate study in 2012, WLR will update the County's SWM Fee Protocols and

initiate the process to adopt them by public rule. The SWM Fee Protocols outline the procedures and technical details for applying SWM fee discounts and credits as authorized in code. The SWM Fee Protocols are available online at:

<http://your.kingcounty.gov/dnrp/library/archive-documents/wlr/surface-water-mgt-fee/pdf/swm-fee-protocols.pdf>

To get a sense of implementation timeline and costs, WLR made the following assumptions about implementation steps, based on the incomplete information is available to WLR regarding the full extent to which stormwater controls are provided on parcels:

1. The **new basic flow control discount** would be *applied*<sup>6</sup> immediately at the 20 percent maximum based on the current inventory of parcels eligible for the old facility discount. The extent to which this discount needs to be prorated to the amount of impervious surface served by the facility would be determined later through future facility inspections by WLR. Parcel owners not currently receiving this discount may request a SWM fee review by WLR Stormwater Services staff at 206-296-1900 to check eligibility for this or any other available discount. As part of the SWM fee review, WLR may ask the parcel owner to supply technical information necessary to determine eligibility.
2. The **new modern flow control discount** would be *applied* immediately at the 20 percent maximum if there is date of installation information in WLR's records indicating the facility was constructed to 1990 or later Surface Water Design Manual standards. The extent to which this discount needs to be prorated to the amount of impervious surface served by the facility would be determined later through future facility inspections by WLR. Parcel owners may request a SWM fee review by WLR Stormwater Services staff at any time to check eligibility for this discount.
3. The **new pervious surface absorption discount** would be *applied* immediately if there is information in WLR's records indicating the amount of impervious surface served by flow control BMPs or infiltration facilities. Otherwise, parcel owners will have to request a SWM fee review by WLR Stormwater Services staff to determine eligibility for this discount.
4. The **new water quality treatment discount** would be *applied* immediately at the 20 percent maximum if there is information in WLR's records indicating the presence of a County-

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<sup>6</sup>*Applied* in this context means the discount will be granted if WLR has determined through inspection or other means that the stormwater control eligible for discount is fully functioning in accordance with County standards and is not in violation of King County Code 9.12, Water Quality, which requires use of stormwater pollution prevention BMPs applicable to activities occurring on the parcel.

standard water quality treatment facility. The extent to which this discount needs to be prorated to the amount of impervious surface served by the facility would be determined later through future facility inspections by WLR. Parcel owners may request a SWM fee review by WLR Stormwater Services staff at any time to check eligibility for this discount.

5. The **new NPDES stormwater permit discount** would be available by request only and would require a SWM fee review by WLR Stormwater Services staff to determine eligibility based on permit information submitted by the parcel owner.
6. The **revised sixty-five-ten discount** would be *applied* immediately if the parcel is in WLR's inventory of parcel's already determined to be eligible for this discount. Otherwise, parcel owners will have to request a SWM fee review by WLR Stormwater Services staff to determine eligibility for this discount.



## Appendix A

### SWM Fee Discount Work Group

Name	Affiliation	Phone Number	email
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Karen Garnes	Lakeside Industries	425-313-2660	<a href="mailto:kgarnes@lakesideind.com">kgarnes@lakesideind.com</a>
Bill Dempsey	Lakeside Industries	425-313-2686	<a href="mailto:billd@lakesideind.com">billd@lakesideind.com</a>
Curtis Koger	AESI	425-827-7701	<a href="mailto:ckoger@aegeo.com">ckoger@aegeo.com</a>
Owen Reese	Aspect Consulting	206-838-5844	<a href="mailto:oreese@aspectconsulting.com">oreese@aspectconsulting.com</a>
Jim Hay	Robinson Noble	253-475-7711	<a href="mailto:jhay@robinson-noble.com">jhay@robinson-noble.com</a>
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Michael McKinney	Eucon/Quality Aggregates	509-533-1615	<a href="mailto:michael.mckinney@euconcorp.com">michael.mckinney@euconcorp.com</a>
Brad Smith	Eucon/Quality Aggregates	253-740-0008	<a href="mailto:bradsmith@euconcorp.com">bradsmith@euconcorp.com</a>
Christine Jensen	KC CM Lambert's office	206-296-0308	<a href="mailto:christine.jensen@kingcounty.gov">christine.jensen@kingcounty.gov</a>
Rick Bautista	KC Council Staff Analyst	206-296-0329	<a href="mailto:ricardo.bautista@kingcounty.gov">ricardo.bautista@kingcounty.gov</a>
Bruce Chattin	Washington Concrete Assoc. (WACA)	206-878-1622	<a href="mailto:bchattin@washingtonconcrete.org">bchattin@washingtonconcrete.org</a>
Curt Crawford	KC Stormwater Services, WLRD	206-296-8329	<a href="mailto:curt.crawford@kingcounty.gov">curt.crawford@kingcounty.gov</a>
Megan Smith	King County Executive Environmental Advisor	206-263-9605	<a href="mailto:megan.smith@kingcounty.gov">megan.smith@kingcounty.gov</a>
Jennifer Lehman	King County Executive Budget Analyst	206-263-9705	<a href="mailto:jennifer.lehman@kingcounty.gov">jennifer.lehman@kingcounty.gov</a>

## Appendix B

### Work Group Meeting Agendas and Notes

#### Meeting 1 Agenda

#### Kick Off Meeting King County Or. No. 2010-0532 Budget Proviso

8<sup>th</sup> floor Conference Center\*  
King Street Center  
201 South Jackson Street  
Seattle WA 98104

Tuesday, January 18, 2011  
9:30-11:30 a.m.

#### *Agenda*

1. Welcome and Introductions
2. Review agenda and agree on purpose of meeting
  - Purpose – come to common understanding of proviso; agree on guiding principles and discuss options for addressing proviso; agree on roles and schedule to meet proviso.
3. Review and discuss Proviso – see attached text\*\*
  - Christine Jensen/Rick Bautista (Council intent)
  - Roundtable discussion
4. Guiding Principles Discussion
  - equitable/fair to different industries;
  - administratively feasible
  - other
5. Technical options that achieve these principles/goals (e.g., effectiveness of facility; type of industrial/commercial activity, etc)
6. Discussion of work tasks, roles and future meeting

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## Meeting 1 Recap

### **January 18, 2011 Meeting Recap and Guiding Principles King County Or. No. 2010-0532 Budget Proviso**

January 24, 2011

Staff from King County Council and King County's Water and Land Resources Division (WLR) of the Department of Natural Resources and Parks (DNRP) met on January 18, 2011 with representatives of the gravel mining industry to plan a response to King County Ordinance No. 2010-0532 budget proviso regarding the development of a new fee credit program (AKA a new discount program) as a replacement for the two-year two-rate discount provided in K.C.C. 9.08.080.

**The group agreed to meet again on Friday, February 11, 1:00 – 3:00 pm in the King/Chinook Conference Room on the 6<sup>th</sup> floor of the King Street Center, 201 S. Jackson Street, Seattle WA 98104. Note this is a different date than the date we discussed at our meeting.**

The following guiding principles were discussed and agreed to by the attendees (see attached list of attendees). These principles will guide the development of the new discount program.

#### **Guiding Principles** (Principle No. 5 was later revised as per the Report)

1. The new discount program will be, to the extent possible, linked to the effectiveness of facility or on-site practices that reduce storm water impacts, i.e., the more effective the facility is at reducing storm water impacts the greater the discount.
2. Program is administratively feasible.
3. Program provides property owner incentive to improve on-site control of stormwater, e.g., via retrofitting existing facility; improved operations/maintenance etc.
4. New discount program is consistent (not in conflict) with other King County code requirements.
5. New discount program has no or minimal effect on charges for properties not in the discount program.
6. New discount program results in minimal or no changes to the fundamental structure of the King County surface water management (SWM) fee unless directly tied to optimal achievement of the other principles.<sup>7</sup>

Principles 1 and 3 are principles that Executive Constantine recommended.

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<sup>7</sup>Note that the July 31, 2011 deadline for completion of this work, development of associated legislation and submittal to the King County Council dictates this principle. The group agreed that if a concept that included a fundamental change in the SWM fee structure came out of the development of the new discount program, such concept could be considered in a later analysis if deemed appropriate.

The group agreed that the new discount program would continue current practice of allowing the property owner to demonstrate to King County eligibility for the new discount program through an engineering report and site inspection or other comparable manner as agreed to and adopted by the King County Council. This practice ensures that local, on-site conditions are considered in the discount program.

The group discussed several elements of the current SWM fee structure including its basis in impervious area (not effective impervious area) and parcel acreage; calculation based on area of each separate tax parcel as opposed to aggregations of tax parcels owned and operated as a single property; the basis of the rate structure in stair step classes versus exact on-site impervious area; the basis on which perviousness and imperviousness and hence impervious area is founded; and shallow versus deep groundwater infiltration.

The group also discussed the challenge of managing any changes to the discount program that might result in some property owners paying more – while others pay less. To this end, it is likely that the new discount program will be reviewed by stakeholders including other industries that pay the SWM fee to King County. In addition, the new discount program will be reviewed by the King County Prosecuting Attorney's Office and by the Executive Office prior to finalization.

The group agreed to complete the following work prior to the February 11, 2011 meeting.

**King County**

Develop a scope of feasible technical options for the new discount program that meets these principles.

**Gravel Industry**

Evaluate key characteristics of a new discount program that apply to the gravel industry and meet these principles.

Meet 2 Agenda

Meeting 2  
King County Or. No. 2010-0532 Budget Proviso

8<sup>th</sup> floor Conference Center  
King Street Center  
201 South Jackson Street  
Seattle WA 98104

Friday, February 11, 2011  
1:00 – 3:00 pm

*Agenda*

1. Welcome and Introductions
2. Review and finalize guiding principles (document attached) – any issues/concerns
3. Report from gravel industry – Bruce Chattin
  - Key characteristics of a new discount program that apply to the gravel industry and meet the principles
  - Discussion
4. Report and Discussion of feasible technical options for the new discount program that meet the principles – Curt Crawford
  - Range of discount classes (maximum discount/minimum discount)
  - Simple Function Method (more facility functions = larger discount)
  - Generic Examples of Simple Function Method
  - Ratio Method (more R/D facility volume/impervious area = larger discount)
  - Generic Examples of Ratio Method
  - Comparison of Simple Function vs. Ratio Methods
  - Next steps on technical options
5. Other new discount ideas – all
  - Contiguous sites – what would criteria be?
  - Other ideas?
6. Next meeting March 14 – 31?

Meet 3 Agenda

Meeting 3  
King County Or. No. 2010-0532 Budget Proviso

7th Floor Tipping Room  
King Street Center  
201 South Jackson Street  
Seattle WA 98104

Thursday April 14, 2011  
1:00 – 3:00 pm

*Agenda*

1. Review guiding principles
2. Conditions for additional discount (termed NPDES in summary sheet) – Bruce Chattin
  - Discussion
3. Overview and Discussion of Discount Analysis and supporting spreadsheets – Curt Crawford
  - Options 1, 2, 3
  - Aggregation Option
4. How do these options meet guiding principles? – all
  - Options 1, 2, 3
  - Aggregation Option
5. Agree on Preferred Options and/or Additional Analysis – all
6. Next Steps and Timeline to meet Proviso deadlines

Copies of the Detailed Spreadsheets will be provided at the meeting

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## Guiding Principles

### King County Or. No. 2010-0532 Budget Proviso

January 24, 2011

The following guiding principles were discussed and agreed to by the attendees (see attached list of attendees). These principles will guide the development of the new discount program.

#### Guiding Principles

1. The new discount program will be, to the extent possible, linked to the effectiveness of facility or on-site practices that reduce storm water impacts, i.e., the more effective the facility is at reducing storm water impacts the greater the discount.
2. Program is administratively feasible.
3. Program provides property owner incentive to improve on-site control of stormwater, e.g., via retrofitting existing facility; improved operations/maintenance etc.
4. New discount program is consistent (not in conflict) with other King County code requirements.
5. New discount program will not be at the expense of properties not in the discount program in 2011, but the new program will be available to all commercial properties once adopted (i.e., 2012 and beyond).
6. New discount program results in minimal or no changes to the fundamental structure of the King County surface water management (SWM) fee unless directly tied to optimal achievement of the other principles.<sup>8</sup>

Principles 1 and 3 are principles that Executive Constantine recommended.

Principle 5 was revised at the February 2, 2011 meeting

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<sup>8</sup> Note that the July 31, 2011 deadline for completion of this work, development of associated legislation and submittal to the King County Council dictates this principle. The group agreed that if a concept that included a fundamental change in the SWM fee structure came out of the development of the new discount program, such concept could be considered in a later analysis if deemed appropriate.

Meeting 4 Agenda

**Meeting 4**  
**King County Or. No. 2010-0532 Budget Proviso**

Executive Conference Room 1st floor\*  
Chinook Bldg  
401 5th Avenue  
Seattle WA 98104

Monday May 23, 2011  
10:00 a. m. - 12 noon

*Agenda*

1. Welcome/Review and finalize Agenda
2. Percentage Discount Option Discussion
  - Industry Feedback – Bruce Chattin et al.
  - King County Feedback – (re. Option 3 see attached handout)
3. Property Aggregation Option (see attached handout)
  - Review results of analysis
  - Conflicts with guiding principles (Curt Crawford/Joanna Richey)
  - Clarification of what current code allows
4. Legislative Proposal
  - Discussion of WLRD preferred option (see attached draft legislation KCC 9.08.080)
  - Discuss and agree on a final option
5. Next steps – stakeholder meetings/PAO Review/other?
6. Executive Draft Timeline and Process to meet Proviso deadlines



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## Appendix C

### Work Group Meeting Summaries

#### Meeting 1: January 18, 2011

- Discussed and achieved common understanding of the proviso.
- Discussed and shared perspectives on the current discount program.
- Tentatively agreed on draft guiding principles for revising the discount program.
- Discussed roles and options for addressing proviso.
- Agreed that WLR would prepare feasible technical options for discussion at next work group meeting.

#### Meeting 2: February 11, 2011

- Reviewed and refined draft guiding principles for revising discount program.
- Heard additional information presented by the industry regarding their interests.
- Discussed and agreed on statement of issues with current discount program.
- Discussed two feasible technical options prepared by WLR to address stated concerns and meet guiding principles (see **Appendix E** for second meeting handouts pertaining to the simple function method and the ratio method).
- Agreed to further pursue a **percentage discount** approach based on “stackable” credits or units given for various stormwater control functions provided by onsite facilities and practices. WLR agreed to prepare and analyze options around this discount approach.
- Discussed the maximum percentage of discount that should be given if all stormwater control functions are provided. The previous one-rate class discount approach resulted in discounts ranging from 20 percent to over 95 percent. WLR proposed a maximum of 70 percent which in the discount already given to KCDOT and WSDOT. Industry representatives felt that a larger maximum was more appropriate based on the extent to which stormwater is controlled on gravel mining sites. WLR agreed to consider a maximum higher than the 70 percent.
- Discussed an idea floated by the industry representatives of allowing contiguous parcels under the same ownership to be considered as one parcel for the purposes of

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determining the base SWM fee. WLR agreed to evaluate further as a possible additional discount (aggregation discount).

### **Meeting 3: April 14, 2011**

- Reviewed and finalized guiding principles.
- Reviewed WLR's quantitative analysis of three percentage discount options based on the idea of stackable credits/units for stormwater control functions provided by onsite facilities and practices. All three options added up to a maximum discount of 90 percent.
- Agreed that all three percentage discount options were consistent with the guiding principles.
- Tentatively agreed that the 90 percent maximum discount was reasonable contingent upon industry reps obtaining feedback from their constituents. WLR also wanted to assess impacts of the new discount on various rate payers.
- Reviewed WLR's quantitative analysis of an aggregation discount option and concluded that more evaluation was needed to determine whether the option was viable and could be applied in a manner consistent with the guiding principles.

### **Meeting 4: May 23, 2011**

- Heard feedback from the industry representatives on the percentage discount. Feedback focused more on procedural issues than the actual discount proposal. Concerns expressed about inspection by multiple agencies; the required covenant to allow WLR inspection access; and small mining operations or other small businesses being able to afford new facilities necessary for the discount.
- WLR recommended percentage discount option 3 and presented rationale for selection. Industry representatives preferred option 2 because it gives more credit to a site regulated by a NPDES stormwater permit. Industry representatives asked for further consideration of how the discount would be applied to different example sites.
- Reviewed WLR's additional analysis of the aggregation discount option which shows it only reduces the base SWM fee for some contiguous parcels, predominantly those in Rate Class 2. WLR noted that the aggregation discount fails to meet the guiding principles because it creates an administrative burden with no environmental benefit or incentive to improve stormwater control. WLR further noted that a form of aggregation is already provided by existing discount procedures because they allow parcels to

receive a facility discount even if the facility is on a separate parcel. Industry representatives noted that the aggregation discount should be allowed because the reduction could be achieved through a boundary line adjustment any way. Agreement not achieved.

- Reviewed WLR's proposed code changes to KCC 9.08 for implementing the percentage discount. Comments on revised language to be submitted by June 3<sup>rd</sup>. No comments were received.
- Discussed next steps for resolving remaining issues and wrapping up the process.

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## Appendix D

### Issues with Current SWM Fee Stormwater Facility Discount

#### Old Stormwater Facility Discount:

Parcel owners qualified for a “stormwater facility discount” if at least 51 percent of their parcel’s developed runoff was served by at least one flow control facility or at least one water quality facility, either of which was required under KCC 9.04 or demonstrated to be equivalent to the current KCC 9.04 standard. Prior to 2011, this discount consisted of the parcel being charged at the rate of one rate class lower than as classified by the parcel’s percentage of impervious surface coverage. This was changed to a two rate class discount for 2011 pending revisions to the discount program being developed in response to the Council’s SWM fee budget proviso.

#### Issues with Old (and Current 2011) Facility Discount:

##### Facility Variability not taken into account

Parcels within a given rate class all get the same percentage discount regardless of the effectiveness or function of their facilities in mitigating runoff impacts. However, it is appropriate to make adjustments to reflect changes in technology.

The effectiveness of any one type of stormwater facility can vary substantially from one parcel to the next depending on when the parcel was developed. This disparity is due to an evolution in facility standards over time as the technology of stormwater management has improved. For example, flow control facilities now required on developments are about nine times larger than those required in the 1970s when the County first began requiring them.

The function of stormwater facilities has also improved over time. Prior to 1990, only flow control facilities were required on new development. In 1990, King County began requiring water quality (WQ) treatment facilities. In 1998, low impact development BMPs (flow control BMPs) were adopted in County code.

**Rate Class Issue** Parcels with the same facility effectiveness or function can end up with different percentage discounts because of the rate class approach to discounting. The percentage discount can vary from 20 percent to just under 100 percent depending on which rate class the parcel is in (see attached table).

##### Lack of Incentive

There is no incentive to increase facility effectiveness (e.g., increased detention volume) or add

facility functions (e.g., increased absorption) on a parcel that is already getting a facility discount.

### Annual SWM rates effective January 1, 2011

Rate Class	Description	% Impervious Surface	Fee	One Rate Class Discount	Two Rate Class Discount
1	Residential	-	\$133.00 per parcel	NA	NA
2	Very light	≤ 10%	\$133.00 per parcel	NA	NA
3	Light	10.1 - 20%	\$320.61 per acre	58% (1 ac) 79% (2 ac) 92% (5 ac) 96% (10 ac)	58% (1 ac) 79% (2 ac) 92% (5 ac) 96% (10 ac)
4	Moderate	20.1 - 45%	\$702.61 per acre	54%	81% (1 ac) 91% (2 ac) 96% (5 ac) 98% (10 ac)
5	Moderately heavy	45.1 - 65%	\$1,199.36 per acre	41%	73%
6	Heavy	65.1 - 85%	\$1,641.53 per acre	27%	57%
7	Very heavy	85.1 - 100%	\$2,046.72 per acre	20%	41%

## Appendix E

### Discount Methods Considered –

#### Ratio Method

This method gives a percentage discount that varies with the ratio of flow control facility size to effective impervious area (EIA) on a developed parcel. The discount in percent is simply the ratio calculated by dividing a parcel's total facility volume (in thousands of cubic feet) by EIA (in acres). For example, the ratio of 48,000 cubic feet and 2 acres is  $48/2 = 24$  (i.e., a 24 percent discount).

- EIA is basically the total impervious area (TIA) minus any impervious area from which runoff is fully infiltrated. Partial infiltration credit is given for use of low impact development BMPs (flow control BMPs) such as permeable pavement, flow dispersion, rain gardens, etc.

In this method, when the ratio is larger, the discount is larger. The ratio can be increased by either increasing flow control facility volume or decreasing EIA or both, thus providing incentive for improved flow control and retrofit of low impact development BMPs.

When the ratio exceeds 70, the discount is then set at 70 percent consistent with the maximum discount given to King County Roads. King County Roads manages most of the County's stormwater in the roads system. If the ratio is less than 10, then the discount is set to 10 percent. Based on past case studies, modern flow control facilities tend to have ratios approaching 70. Pre-1990 facilities tend to have ratios well below 10.

Parcels with water quality facilities but no flow control facilities would receive the minimum 10 percent discount or possibly a larger discount. While this would not provide incentive to put in treatment on parcels with flow control facilities, there are plenty of commercial parcels without such facilities (more than with facilities) where this would be an incentive.

#### Generic Examples:

1. A typical gravel mine with any amount of TIA, which fully infiltrates runoff in the mine's R/D pond would automatically get the highest discount because EIA would be zero making the ratio of R/D volume to EIA approach infinity. If the maximum discount is 70 percent, that becomes the mine's discount.
2. A sample pre-1990 developed commercial parcel with 5 acres of TIA and no infiltration (EIA = TIA) and an R/D volume of 12,000 cubic feet would have a ratio of  $12/5 = 2.4$ . If the minimum discount is 10 percent, then that becomes the parcel's discount.
3. A sample 1990 developed commercial parcel with 6.5 acres of TIA and no infiltration (EIA = TIA) and an R/D volume of 104,400 cubic feet would have a ratio of  $104/6.5 = 16$  qualifying the site for a 16 percent discount. If EIA is cut in half by retrofitting all TIA with LID BMPs, the ratio then becomes  $104/3.25 = 32$  or a 32 percent discount.
4. A 2005 developed commercial parcel with say 6.5 acres of TIA, an EIA of 5.2 acres, and an R/D volume of 210,000 cubic feet would have a ratio of  $210/5.2 = 40$  (40 percent).

## Simple Function Method

This method gives a unit of discount for each of three facility functions that can occur on a parcel depending on when it was developed. The functions are as follows:

Detention Function	Any King County approved flow control facility or equivalent that serves >50 percent of a parcel's developed area and stores runoff from that area	1 discount unit
Water Quality Function	Any King County approved WQ treatment facility or equivalent that serves >50 percent of parcel's developed area (includes WQ testing in lieu of a formal facility)	1 discount unit
Absorption Function	Any King County approved facility/flow control BMP or equivalent that reduces runoff through absorption from >50 percent of a parcel's impervious area	1 discount unit*
* Note: the absorption discount unit could be split into smaller fractions like the current Pervious Surface Absorption (PSA) Discount.		

The above functions are additive for a maximum of 3 discount units on any one parcel. If the maximum discount ends up being 70 percent, each discount unit would be 23.33 percent. (Note: 70 percent is the discount given to King County Roads because they manage almost all the County's constructed stormwater conveyance system using funds from sources other than the SWM fee).

### Generic Examples:

1. A typical gravel mine would qualify for all three discount units. If each discount unit was say 23.33 percent, then the total discount for the typical gravel mine would be  $3 \times 23.33 = 70$  percent
2. A typical pre-1990 developed commercial parcel with no infiltration of runoff would qualify for only the first discount unit, which would give a total discount of 23.33 percent.
3. A typical 1990 developed commercial parcel with no infiltration of runoff would qualify for both the first and second discount units, which would give a total discount of 46.66 percent.
4. A typical 2005 developed commercial parcel with no infiltration would likely qualify or be close to qualifying for all three discount units because flow control BMPs were required in 2005.
5. Any parcel with no flow control BMPs could retrofit such BMPs on over 50 percent of the parcel's impervious surface to qualify for the absorption discount unit or 23.33 percent discount.

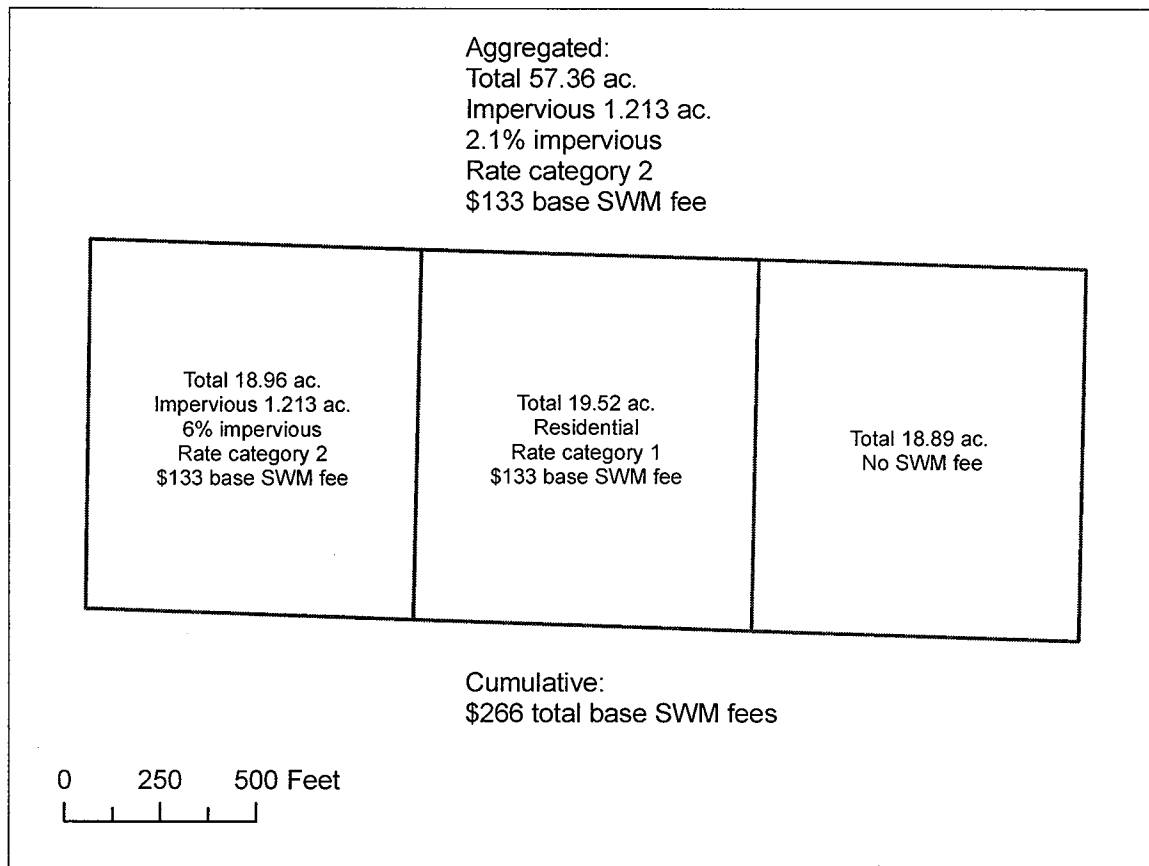
## Comparison of Simple Function and Ratio Methods

Items of Comparison	Simple Function Method	Ratio Method
Administration	Will require a small increase in administration to address engineering evaluation for the absorption function.	Will require a much larger increase in administration to address engineering evaluation for both detention volume and EIA.
Simplicity	Easy	More complicated
Incentive for upgrading flow control facility	No incentive	Incentive provided
Incentive for adding flow control facility	Incentive provided	Incentive provided
Incentive for adding water quality treatment	Provides incentive to all sites that currently don't have water quality treatment.	Provides incentive to only those sites that currently have no stormwater facilities (majority of commercial sites)
Incentive to adding low impact development BMPs (flow control BMPs)	Provides incentive but it takes significant investment to get the discount	Provides incentive in an incremental manner so that small gains can be made with less retrofitting expenditure
Relative benefit to sites that have full infiltration	Provides maximum discount but the difference between sites without infiltration is less (only 23.33 percent if max discount is 70 percent)	Provides maximum discount and has a larger difference in discount amount with sites that have no infiltration

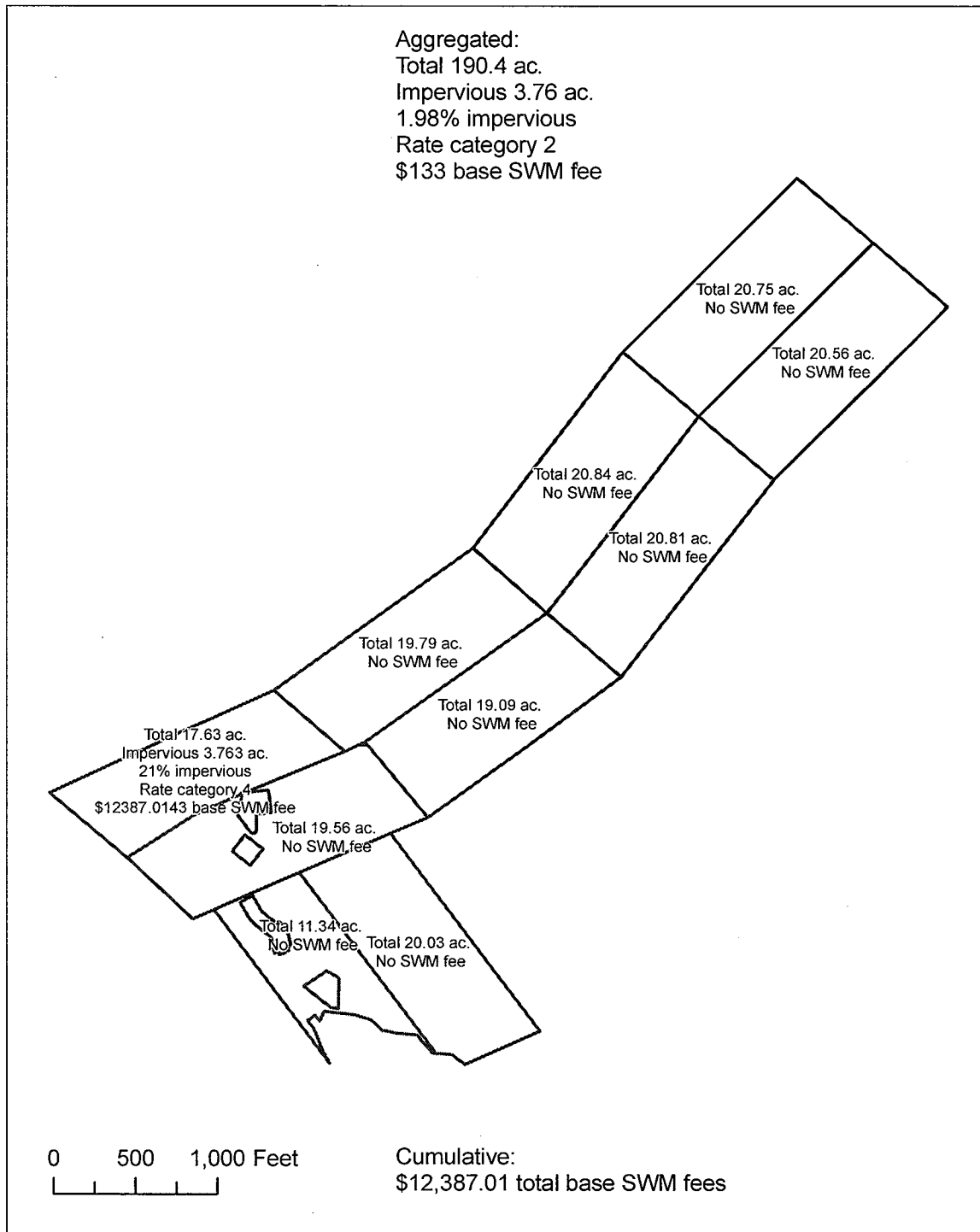


## Appendix F

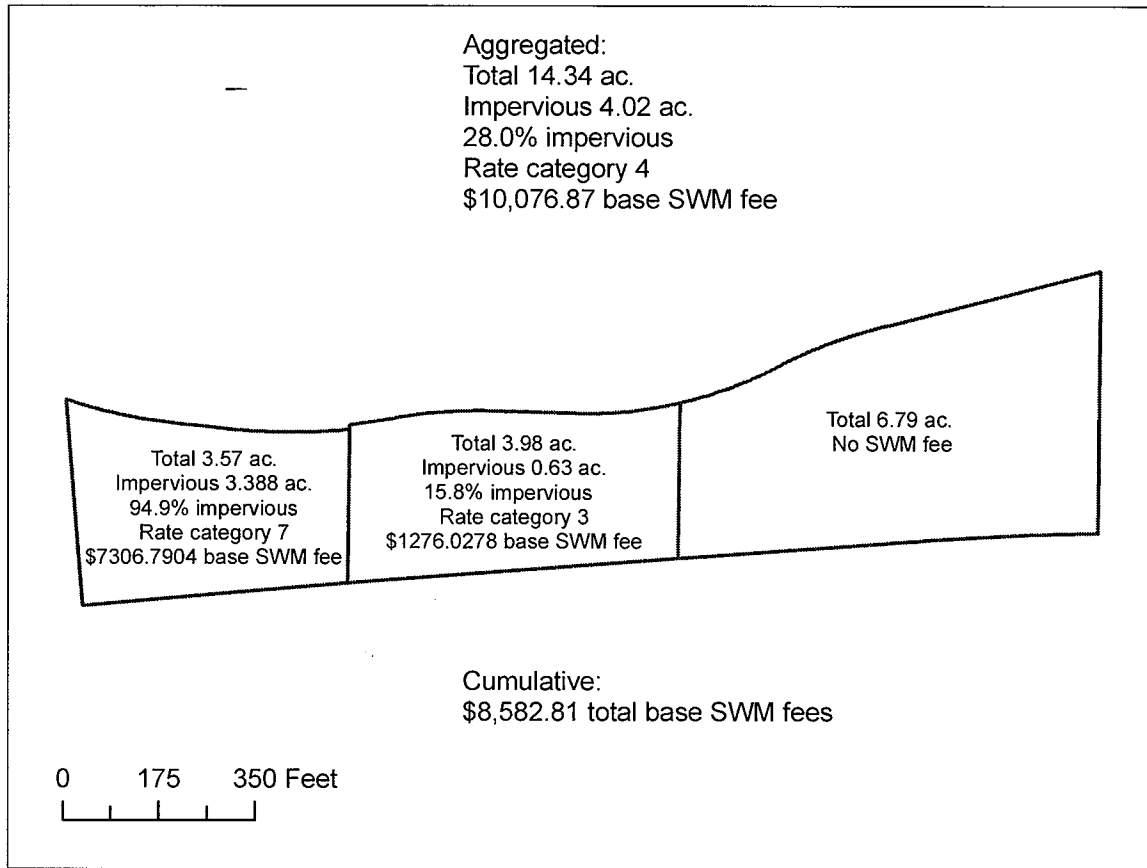
### Example Aggregations of Contiguous Parcels



Example of aggregation that results in a reduction in base SWM fees.



Example of aggregation that results in a reduction in base SWM fees. This example is typical of groups of large parcels that gain large reductions in fee by moving into rate category 2.



Example of aggregation that results in an increase in base SWM fees.