



CITY OF KIRKLAND

Department of Public Works

123 Fifth Avenue, Kirkland, WA 98033 425.587.3800

www.kirklandwa.gov

MEMORANDUM

To: Kurt Triplett, City Manager

From: Kelli Jones, Surface Water Engineer
Jenny Gaus, Surface Water Engineering Supervisor
Kathy Brown, Public Works Director

Date: June 9, 2016

Subject: Update of Surface Water Design Regulations to meet NPDES Stormwater Permit Requirements

RECOMMENDATION:

It is recommended that Council provide feedback on any issues Council members would like staff to address during the update process.

BACKGROUND AND DISCUSSION:

1. Introduction and Summary

Staff recommends that the Council consider adoption of surface water design standards that are equivalent to the 2012 *Stormwater Management Manual for Western Washington* in order to comply with the Western Washington Phase II Municipal Stormwater Permit (also known as the National Pollutant Discharge Elimination System, or NPDES, Permit). Background on the NPDES Permit and Kirkland's compliance program can be found using the following link: [NPDES Permit](#).

Protection of water quality and salmon habitat provides fishable, swimmable waters for the enjoyment of Kirkland's citizens, and reduces liability from impacts to Tribal fishing rights, Federal Clean Water Act violations, and "takings" under the Federal Endangered Species Act. Stormwater design requirements that emphasize the use of LID principles and practices for development projects will complement city efforts to manage stormwater that include planning for and construction of facilities to treat runoff from existing development (retrofit facilities), pollution source control, education and outreach, and maintenance of the public stormwater system.

Below is a summary of information provided in this memo:

- The NPDES Permit requires that the City adopt surface water design regulations that are equivalent to Ecology's 2012 *Stormwater Management Manual for Western Washington* by December 31, 2016.
- These regulations require use of Low Impact Development (LID) facilities which have been shown to clean and slow the flow of stormwater, and thus are likely to improve water quality and salmon habitat conditions.
- The 2016 *King County Surface Water Design Manual* (KCSDM) is equivalent to -- and may have certain advantages over -- Ecology's manual; staff are therefore likely to ultimately recommend

City of Kirkland adoption of the 2016 KCSDM. Further details on the advantages of each of the manuals and the process of deciding between them are being compiled and will be included in the staff presentation during the Council's study session on June 21, 2016.

- Major changes with adoption of the 2016 KCSDM (or any other means of NPDES compliance) will include requirements for use of LID (where feasible), increased review and documentation for smaller projects, and updates to design and study requirements for facilities that are placed near steep slopes and landslide hazard areas.
- Adoption of the 2016 KCSDM will also trigger updates to the Kirkland Municipal Code (KMC) to allow for flexibility in design and permit review, while meeting NPDES Permit requirements. Further review and evaluation, including site-specific case studies, will need to be completed prior to final staff recommendations.
- Adoption of the 2016 KCSDM (or any means of compliance with the NPDES Permit) will increase cost and complexity of development. The most significantly impacted projects will be "intermediate-sized" projects, such as 2-4 lot short plats. Small projects, such as single-family infill, and large projects, such as commercial properties, will likely see relatively small increases in cost.
- City Capital Improvement Program (CIP) projects will also see increased costs, and estimates of these costs are being incorporated into the CIP update. Similar to development projects "intermediate-sized" CIP projects, such as sidewalk installations, will be most significantly impacted.
- City maintenance and operations may also see altered costs from adoption of the 2016 KCSDM (or any means of compliance with the NPDES Permit). The types of facilities that need maintenance will change, and the mix between maintenance of publicly-owned facilities and inspection of privately-owned facilities will shift as LID encourages construction of small decentralized facilities.
- Adoption of the 2016 KCSDM (or any method of compliance with the NPDES Permit) will interact with the Low Impact Development Code Review Project and the Critical Areas Ordinance update project (Chapter 90 KZC Drainage Basins), and staff are conducting integrated review of these items to identify potential conflicts and synergies.
- Public outreach process for the anticipated 2016 KCSDM adoption has included presentations to Council and internal coordination committees, and open houses for the general public and developers. Future outreach will include a project website, email updates via the Developers listserv, email newsletters and press releases.
- An ordinance adopting the 2016 KCSDM will be presented to Council in October, and the 2017-2018 budget may include requests for resources to assist with surface water review for both private development and CIP projects.

2. NPDES Permit Requirement: Low Impact Development for Stormwater Management

The NPDES Permit requires action in 6 areas to improve the quality of stormwater, including Controlling Runoff from New Development, Redevelopment and Construction Sites (see [NPDES Permit](#) section S5.C.4 for details). In order to comply with the NPDES Permit, Kirkland must adopt the 2012 *Stormwater Management Manual for Western Washington* or an equivalent manual by December 31, 2106. This design manual emphasizes a new approach to controlling stormwater: Low Impact Development (LID).

Stormwater picks up pollutants from hard surfaces such as roadways and parking lots and conveys them to the nearest stream or lake. Stormwater is the largest source of pollution to Puget Sound (Puget Sound Partnership, 2009). Recent experiments with untreated stormwater show that it can be deadly to salmon, and that it can contain a toxic mix of metals, oil, nutrients, and even pharmaceuticals ([Seattle Times, October 8, 2015](#) ; [Solving Stormwater](#)). In addition, stormwater pollution can lead to swimming beach closures and fouled water for boaters. Current stormwater science, including a modeling study conducted on the Juanita Creek Watershed (King County, 2012) suggests that the use of LID can improve outcomes for water quality and for fish.

LID design principles use contact with soils and vegetation to slow and clean stormwater runoff. Examples of LID design principles include site layout that reduces impervious surface and preserves trees and native vegetation. LID facilities include dispersion through vegetation, infiltration into native soils, rain gardens (bioretention), and permeable paving materials. Taken together, LID principles and facilities mimic the hydrologic properties of a forest.

There are 94 jurisdictions in Western Washington that are subject to Phase I and Phase II NPDES Permits. All must adopt drainage design standards that are equivalent to the *Stormwater Management Manual for Western Washington*. Differences in stormwater design standards is no longer a deciding factor in siting development projects, and the benefits of these standards will be realized across the Puget Sound area.

3. Why the 2016 KCSDM? What's in the Addendum?

- The NPDES Permit requires that jurisdictions adopt Ecology's 2012 *Stormwater Management Manual for Western Washington* (2012 Ecology manual) or an equivalent manual. The 2016 *King County Surface Water Design Manual* (KCSDM) is equivalent to -- and may have certain advantages over -- Ecology's manual; staff are therefore likely to ultimately recommend City of Kirkland adoption of the 2016 KCSDM. Further details on the advantages of each of the manuals and the process of deciding between them are being compiled and will be included in the staff presentation during the Council's study session on June 21, 2016.

Staff's preliminary recommendation is likely to be for the adoption of the 2016 King County Surface Water Design Manual (2016 KCSDM) with a Kirkland addendum to meet this requirement. Reasons for this recommendation are:

- The City currently follows the 2009 King County Surface Water Design Manual – there is consistency in approach between this manual and the 2016 KCSDM.

- The 2016 KCSDM went through an extensive public involvement process.
- Ecology has approved the 2016 KCSDM as equivalent to Ecology's manual.
- The 2016 KCSDM contains more detailed guidance and design details, which is helpful for developers and reviewers alike. In particular, the 2016 KCSDM contains guidance on items such as conveyance requirements that are not covered in the Ecology Manual.
- King County provides excellent technical/interpretation support and training on the KCSDM.

The Kirkland Addendum to the 2016 KCSDM will contain guidance on how the manual will be implemented in Kirkland. For example, the 2016 KCSDM refers to King County Code sections and departments/divisions – the addendum states the relevant Kirkland Municipal Code sections and refers to the appropriate departments (see [Current Addendum](#)). The addendum also includes Kirkland-specific interpretations of definitions, exemptions, and implementation requirements that assist both reviewers and developers to understand the City's understanding of the manual. If there are places where the KCSDM goes above or beyond Ecology requirements, Kirkland has the choice of whether to adopt these items or not – that decision would be included in the Addendum. As mentioned above, further evaluation will be done before staff makes a final recommendation.

4. Overview of Changes from Current Requirements, Project Impacts, and Vesting

This section summarizes the major changes between current regulations and the 2016 KCSDM, and estimates the relative cost impacts to different types and sizes of projects. A vesting table for private development projects is presented, as this is one of the most commonly asked questions regarding the regulations.

King County created a fact sheet summarizing changes between the 2009 and 2016 King County manuals and detailing where the 2016 King County manual differs from the 2012 Ecology manual (Attachment A). The following are the most significant changes in the 2016 KCSDM:

- LID is required to the maximum extent feasible for all sites including single-family in-fill. The 2009 KCSDM requires a percentage of impervious area to be directed to LID facilities or handled through LID practices, and transportation projects were exempt from use of LID.
- Facility design requirements and precautions are updated for sites near steep slopes to protect the public from landslide hazards.
- Process changes for smaller projects may streamline the process for the applicant (certain sizes of projects will not require an engineer).

The 2016 KCSDM will likely change the cost and complexity of stormwater design and implementation for both development projects and city CIP projects (Attachment B). For development projects, the largest potential change will be for the medium sized projects such as 2-4 lot short plats, because additional requirements, such as evaluation of flow control facilities and providing LID to the maximum extent feasible, will now be required. (Attachment C) For small and large projects, there may be minimal or no change to facility requirements depending on site

conditions. Additional documentation and review will be required, and may increase design and review costs.

City transportation, parks, and other CIP projects will also be impacted by the implementation of the 2016 KCSDM. In the 2009 KCSDM, LID for right of way projects was recommended, not required. In the 2016 KCSDM, LID for right of way projects that create more than 2,000 square feet of new plus replaced impervious surface is now required to the maximum extent feasible. The other large change to the manual is that all projects creating more than 2,000 square feet of new plus replaced impervious surface will need to evaluate whether thresholds for providing flow control are tripped. There may be cost impacts associated with these changes and we are working to incorporate estimates of these impacts into the CIP update.

The 2016 KCSDM includes maintenance performance standards that apply to both publicly and privately-maintained facilities. Standards for types of facilities used in the past (detention tanks, for example) have not changed, but standards for new facility types have been added. New facilities may have different maintenance needs and costs than existing facility types. Publicly-maintained facilities that will be provided either via private development projects or city CIP projects will shift to types that promote infiltration (permeable pavement, infiltration trenches, rain gardens (bioretention)) which will have increased maintenance needs compared to existing facility types. At the same time, there will be a shift to large numbers of small facilities that serve single properties that will be privately maintained, but that will need to be inspected by city staff. Staff are continuing to analyze maintenance needs and costs, and will present this information as part of the adoption process and (if needed) as part of the 2017-2018 budget process.

“What is the vesting schedule?” is one of the most commonly-asked questions regarding adoption of new surface water design requirements; developers want to be able to cost and design projects with certainty. Attachment D provides detailed guidelines.

Projects will be able to vest with the 2009 KCSDM with a complete submittal of the building, short plat, or subdivision application prior to December 31, 2016. Submittal of other types of land use or zoning permits, and the Design Review Board process will not vest a project with regards to surface water regulations. (Attachment D) These guidelines may differ from vesting under the critical area ordinance update. We are currently working with the CIP Group to determine what will vest a CIP project (most CIP projects do not currently obtain city permits).

5. Interaction with Low Impact Development Code Review Project and the Critical Areas Ordinance Update

The purpose of this section is to highlight other efforts that interact or intersect with update of surface water design regulations. Council discussion and action on these items will take place separately, and this information highlights the ways that these projects impact one another.

In addition to requiring adoption of updated surface water design requirements, the NPDES Permit section regarding Control of Runoff from New Development and Redevelopment also includes a requirement that “No later than December 31, 2016, Permittees shall review, revise and make effective their local development-related codes, rules, standards, or other enforceable documents to incorporate and require LID principles and LID BMPs.....The intent of the revisions shall be to make LID the preferred and commonly-used approach to site development....” Examples of LID

design principles include clustering of houses and the use of narrow streets. Examples of ways that code could encourage use of LID facilities (BMPs, or Best Management Practices) include allowing LID facilities to be placed in required landscaping in parking lots, allowing use of permeable paving surfaces on public streets, and requiring retention of trees and native vegetation.

The LID Code Review Project is a separate effort from adoption of the 2016 KCSDM, and will support implementation of the LID portions of this manual. Staff from the Planning and Building and Public Works departments are currently wrapping up the code review and gap analysis (see Attachment E). Code changes will be drafted and presented to the public and to elected officials in fall of this year. In general, Kirkland codes already facilitate the use of LID principles and facilities. For example, Kirkland code has required "skinny" streets since approximately 2000. The Cottage Housing and LID chapters of the Zoning Code (KZC Chapters 113 and 114) allow clustering of houses which helps to preserve trees and native vegetation.

LID facilities will be required (unless they are proved to be infeasible) once the 2016 KCSDM is adopted. Currently, the LID chapter of the Zoning Code (Chapter 114 KZC) provides incentives for use of these facilities; as LID becomes required, it will be necessary to revise or remove items such as allowing increased density in exchange for using LID facilities. Other changes proposed may include removal of lot coverage credits granted for use of permeable materials (because this results in a higher percentage of lot coverage), updates to landscaping requirements, and updates to standard plans and details to include LID facilities.

Update of the Critical Areas Ordinances, including the Drainage Basins portion of the Zoning Code (Chapter 90 KZC), is underway. Planning Department staff are using Best Available Science (BAS) to guide the update. BAS recognizes that stormwater has significant impacts on wetlands and streams, and so the updates will include reference to stormwater design standards as they interact with sensitive areas. For example, there will be references to Municipal Code sections (i.e. sections of KMC that adopt the 2016 KCSDM) that detail erosion control measures that protect streams and wetlands from sediment deposition. The proposed code will also include restrictions on placement of stormwater outfalls and facilities in streams wetlands or their buffers. Surface water staff will be reviewing the proposed code to identify any conflicts, and to suggest ways that Chapter 90 KZC can best be coordinated with surface water design standards.

6. Outreach Process

The 2016 KCSDM will change surface water requirements for development projects. Coordination and public outreach for the 2016 KCSDM adoption has the goals of informing city staff and elected officials, the development community, and the public about the upcoming changes, and gathering input on matters where there may be leeway in how/whether certain portions of the 2016 KCSDM are adopted. To date, the following outreach has occurred:

- Parks/Public Works/Human Resources Council Committee
- CIP Steering Committee
- Open House for the Community
- Open House for Developers and Design Engineers

At these meetings, questions and concerns have been raised regarding the public process/vetting that has occurred for the 2016 KCSWM, costs of implementation for development and CIP projects, and the space available/feasibility of LID.

Future outreach efforts will include development of a project website, solicitation of input regarding any optional items or decisions that are included in the Kirkland Addendum, solicitation of comments on the draft Kirkland Addendum, and further notification of the date that the changes will become effective (along with notification of the vesting requirements).

King County provided training on the 2009 KCSWM and is considering providing training on the 2016 KCSWM. If, however, King County does not provide training, the surface water group will develop training for design engineers and developers. Prior to the implementation of the 2016 KCSWM, we will be training internal staff on requirement changes and the Kirkland Addendum.

7. Timeline and Next Steps

A timeline for adoption of the 2016 KCSWM is attached (Attachment F). Staff will return to Council in October with an ordinance to adopt the 2016 KCSWM. The effective date of the 2016 KCSWM will be set at January 1, 2017 in order to comply with the NPDES Permit. Staff will use the time between adoption and the effective date to provide and attend training, and to update the Pre-Approved plans with details and policies associated with the 2016 KCSWM. A service package may be included in the 2017-2018 budget for resources to assist with surface water design review for both private development and CIP projects.

Attachment A – Changes from 2009 to 2016 KCSWM

Attachment B – Impacts to Projects by Size and Type from Adoption of the 2016 KCSWM

Attachment C – Summary of Examples

Attachment D – Vesting

Attachment E – Timeline for LID Code Review Project

Attachment F – Timeline for 2016 KCSWM Adoption

Fact Sheet: Updates of the King County Stormwater Code and Associated Manuals

- **What:** Updates to the King County stormwater code, Surface Water Design Manual, and Stormwater Pollution Prevention Manual for unincorporated King County.
 - The stormwater code regulates runoff and water quality for new development, redevelopment, and existing development.
 - The Surface Water Design Manual sets design standards for managing stormwater in new development, re-development, and construction sites.
 - The Stormwater Pollution Prevention Manual outlines best management practices (BMPs) to reduce contamination of polluted runoff on commercial, multi-family, and residential properties.
- **Why:** These updates will protect water quality from polluted stormwater and prevent flooding and erosion that can be caused by stormwater runoff. In addition, updates are required by the state to match the greater focus on Low Impact Development (LID) BMPs in the new Ecology stormwater manual and to comply with the National Pollutant Discharge Elimination System (NPDES) municipal stormwater permit.
- **How often do we have to do this:** Every five years when the permit is re-issued.
- **Do other jurisdictions have to do this:** Yes, other counties and cities are required to make similar updates.
- **Timeline:** Enabling ordinance 18257 passed KC Council. Public rule adopting the SWDM and SPPM were signed and filed on March 25, 2016. **The official effective date of the manual (s) is April 24, 2016.**

What are the major changes:

- New Core Requirement 9: Flow Control BMPs
- Implement LID BMPs such as bioretention, gravel infiltration trenches, and permeable pavement to maximum extent feasible using prescribed lists or modeling to LID Performance Standard.
- LID Performance Standard required to be achieved for large, rural projects as demonstrated through modeling
- LID BMPs are now required for roads;
- Address public safety hazards posed by beaver dams by specifying when King County can enter private property to take action;

- Streamline the drainage review process for single family residents and farmers by simplifying and standardizing requirements (DIRECTED DRAINAGE REVIEW);
- Update facility requirements near steep slopes to protect the public from landslide hazards.
- KCRTS modeling software is being replaced with WWHM12 and MGS Flood as approved models.

Where do King County requirements differ from Ecology requirements?

- Require mitigation for existing surfaces added after January, 2001
- Require minimum flow control BMP implementation where infiltrative BMPs are not feasible by requiring reduced footprints and vegetation preservation
- Allow modest modeling credit, but do not allow explicit modeling of FCMBPs in flow control facility design to protect downstream systems—both “gray” and “green” infrastructure required.
- Use a modified “Cafeteria approach” to applying pre-modeled equivalent performance BMPs. Permeable pavement, bioretention, and limited infiltration are considered equal choices on the list approach.
- Allow run-on from standard pavements onto permeable pavement—making permeable pavement a more attractive option for roads by putting permeable pavement on shoulders
- Provide a premodeled FCBMP list approach for large rural lots in contrast with Ecology’s requirement to perform hydraulic modeling demonstrating LID Performance Standard compliance.
- Added new techniques for dispersing runoff onto farm fields instead of requiring stormwater facilities that take agricultural land out of production (farmland dispersion BMP and 4% exemption for agriculture properties from flow control facilities)

Resources/information: Contact Mark Wilgus, Engineer IV, Water and Land Resources Division, Department of Natural Resources and Parks, at 206-477-4848 or email at mark.wilgus@kingcounty.gov.

The manuals and detailed chapter by chapter summary of changes are available for review at <http://www.kingcounty.gov/environment/water-and-land/stormwater.aspx> . Updated documents will be available by the end of the 1st week of April that incorporate known errata edits, add revised figures, and address Ecology comments.

Impacts to Projects by Size and Type from Adoption of 2016 KCSDM

Project Size	Typical Project	Change with New Manual	Change to Projects
< 500 sf of new plus replaced impervious surface	Addition of a patio or parking area to a single-family house	No change	No Change
<i>Small</i> - 500 - 1,999 sf of new plus replaced impervious surface	Addition to a single-family house	No change	No Change
<i>Medium</i> - 2,000 - 9,999 sf of new plus replaced impervious surface or < 5,000 sf of new impervious surface	2-4 lot shortplat, large single-family house	LID required to the maximum extent feasible, potentially full drainage review instead of small type II for projects	Potentially Large Change
<i>Large</i> - > 10,000 sf of new plus replaced impervious surface or > 5,000 sf of new impervious surface	Large commercial facility, plat of > 4 lots	LID required to the maximum extent feasible	Potentially Small Change because facilities are already required

Project – Single Family In-Fill (Tear Down / Rebuild)

Background – An existing 9,600 sf lot is planning on tearing down their house and building a new house. The lot currently has an existing house that totals 1,900 sf.



Developed Conditions – The new house will total 2,500 sf (600 sf of new impervious, 1,900 sf of replace impervious surface).

2009 KCSDM – This project would fall under a **Small Type II Drainage Review**. No flow control facilities (vaults, tanks, etc) would need to be evaluated. Impervious area totaling 10 – 20% of the lot size would need to be routed to some form of LID.

2016 KCSWM – This project would fall under a **Simplified Drainage Review**. No flow control facilities would need to be evaluated. LID would need to be implemented to the maximum extent feasible.

Change Between Manuals – Rather than providing LID sized for impervious area equivalent to 10% of their lot (LID sized for 960 sf of impervious area prior to draining into the City storm system), LID would need to be provided to the maximum extent feasible. If the site was feasible to infiltration (assume limited infiltration) the table below summarizes the difference in size. In Policy L-1, Kirkland allowed a decrease in facility size if a connection to the City storm system was made. Policy L-1 will be updated (or removed) with the requirements in the new manual.

	LID Sizing per		
	2009 KCSDM	COK Policy L-1	2016 KCSDM
Drywell	230 - 570 CF	90 CF	790 - 1820 CF
Infiltration Trench	75 - 190 LF	30 LF	52.5 - 130 LF
Rain Garden	240 CF	240 CF	125 CF

Project – 2 Lot Short Plat

Background – An existing 16,000 sf lot is planning to subdivide to two 8,000 sf lots. The lot currently has an existing house and driveway that totals 3,500 sf.



Developed Conditions – Each lot is assumed to build 4,000 sf of impervious area (maximum lot coverage allowed per zoning). This would result in 4,500 sf of new impervious surface and 3,500 sf of replaced impervious surface

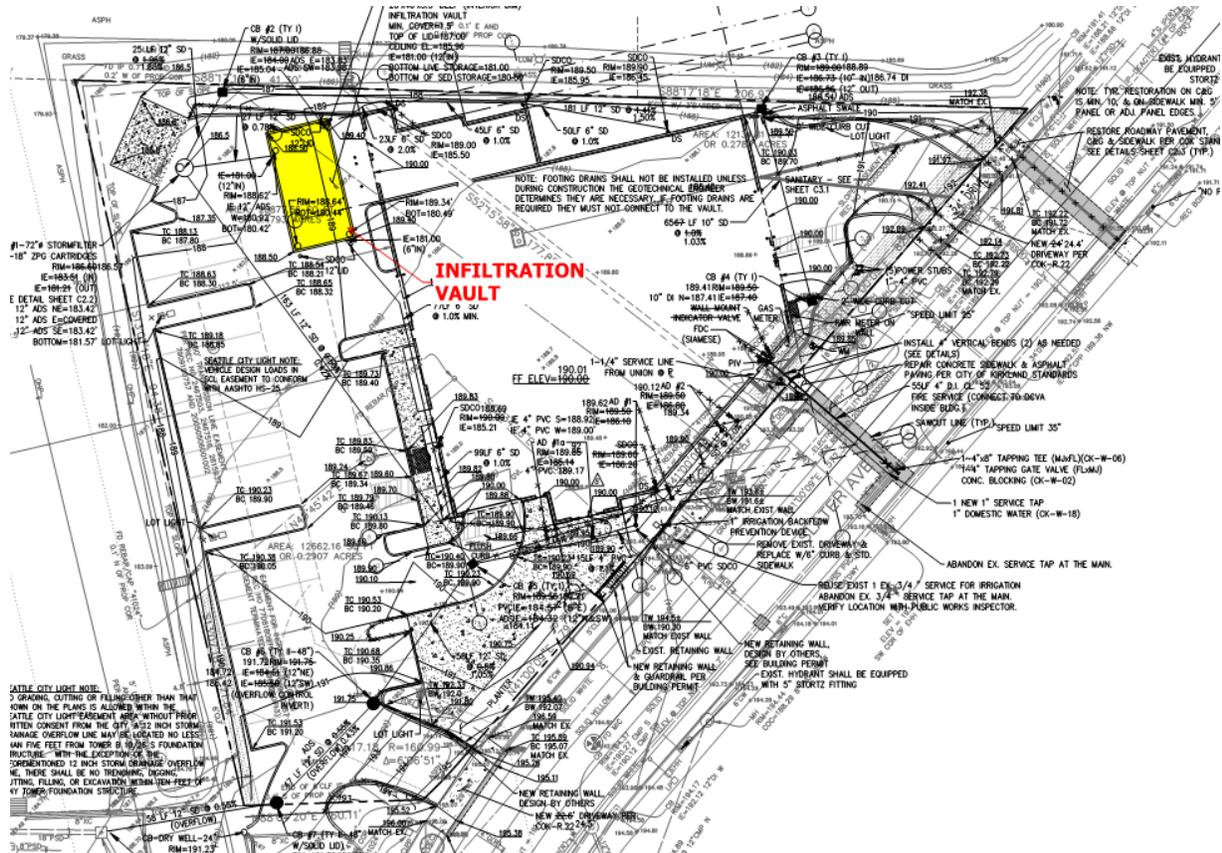
2009 KCSDM – This project would fall under a **Small Type II Drainage Review**. No flow control facilities (vaults, tanks, etc) would need to be evaluated. Impervious area totaling 10 – 20% of the lot size would need to be routed to some form of LID.

2016 KCSWM – This project would fall under a **Full Drainage Review**. Flow control facilities would need to be evaluated because an exemption would not be able to be met (assuming till soils). LID would need to be implemented to the maximum extent feasible.

Change Between Manuals – This project, under the new manual, is now required to install a facility meeting flow control requirements and provide LID to the maximum extent feasible. If LID was feasible for the whole site, each lot would need to implement porous pavement for the driveways, and the house would be directed to either drywells (1100 CF – 1460 CF), infiltration trenches (74 – 182 LF), or rain gardens (175 CF). The range in size depends on soil type. Also, approximately 4,500 CF of detention storage would need to be provided for this short plat.

Project – Commercial Project

Background – Hyundai car dealership was reviewed in 2013 under the King County 2009 Manual. The total parcel size was 45,700 square feet. Existing impervious on site was approximately 20,000 sf.



Developed Conditions – This project proposed to remove all existing impervious onsite and build a new dealership. New and replaced impervious on site totaled 38,000 sf.

2009 KCSMD – This project fell under a **Full Drainage Review**. Flow control, water quality, and LID for 20% of the site needed to be evaluated.

2016 KCSWM – This project would fall under a **Full Drainage Review**. Flow control, water quality, and LID would need to be evaluated.

Change between manuals – The main difference between the manuals in this case would be to provide LID to the maximum extent feasible rather than just 20% of the site. This is met through the infiltration vault which infiltrates the full site. The same design would meet both manuals.



Notice on Vesting under the 2009 King County Surface Water Design Manual

To comply with the National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit, Kirkland must alter stormwater design standards in 2017. Later in 2016, Kirkland intends to adopt the **2016 King County Surface Water Design Manual with an Addendum** to meet permit requirements. The new design requirements are effective on **01/01/2017**. Development proposals received on or after this date will be required to comply with the new design standards. Some projects that were in process prior to this date may be vested under the old requirements (*2009 King County Surface Water Design Manual*), as shown in the table below depending on when the City received a complete application.

Projects must start construction by January 1, 2022 to remain vested to the 2009 King County Surface Water Design Manual.

Permit Type	Complete application submitted:	The manual stated below applies to permit		Notes
Short Plat	prior to 01/01/17	2009 King County Surface Water Design Manual		Pursuant to KMC 22.20.370, short plats must be recorded within five years of approval and surface water standards vest with the filing of a complete short plat application.
	on or after 01/01/17		2016 King County Surface Water Design Manual and Addendum	
Subdivision	prior to 01/01/17	2009 King County Surface Water Design Manual		Pursuant to RCW 58.17.140(3)(a), a final plat must be submitted within five years of preliminary subdivision approval and surface water standards vest with the filing of a complete preliminary subdivision application.
	on or after 01/01/17		2016 King County Surface Water Design Manual and Addendum	
Building	prior to 01/01/17	2009 King County Surface Water Design Manual		BLD application must include the design for surface water infrastructure (quality, quantity, and conveyance) in order to vest.
	on or after 01/01/17		2016 King County Surface Water Design Manual and Addendum	
Design Review Board (DRB)				DRB process per KZC 142.35 does not apply for surface water requirements. A complete building application must be submitted prior to January 1, 2017 to vest to the 2009 King County Surface Water Design Manual.

Note: Unless the permit type is mentioned above, submittal of other Land Use or Zoning permits (ex: Master Plan, variance, use permits, etc.) does not vest a project with regard to surface water requirements.

Timeline for Adoption of 2016 King County Surface Water Design with Kirkland Addendum

	2016										2017
	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan
PW / Parks Committee Presentation											
CIP Outreach											
Public Outreach											
Overview to Council											
Draft Kirkland Addendum to KC Manual											
Presentation for Council Adoption											
Adoption of Manual											
Update Policies and Pre-Approved Plans											
Train Staff											
Implementation of 2016 KCSDM											