

Municipal Stormwater Permits-*Revised definitions explained*

Comment [LS1]: Rather than treating this as a standalone guidance document, the explanation of the definitions should be incorporated into the permit's fact sheet and referenced in the permit's definition section to give it standing.

Ecology is accepting written comments on this draft guidance until Oct.6, 2014.

Please submit written comments to: SWPermitComments@ecy.wa.gov or mail hard copy comments to:

Municipal Permit Comments

Washington State Department of Ecology

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Background

In Washington State, the Department of Ecology has been delegated authority to administer the National Pollutant Discharge Elimination System (NPDES) permitting program for most dischargers, including most municipal stormwater dischargers. The NPDES program is a mechanism of the federal Clean Water Act (CWA) to achieve the water quality goals for *waters of the United States*.

In addition to requirements in federal law, the Washington State Water Pollution Control Act (WPCA, Chapter 90.48 RCW) provides requirements for the control of pollution and requires a permit (RCW 90.48.162) to regulate discharge of pollutants or waste materials to the *waters of the state*. The Washington State Municipal Stormwater Permits (eastern and western Phase II, Phase I and WSDOT) apply to public entities and municipalities (of a certain population) that own or operate separate storm sewer systems (MS4s), and requires the implementation of stormwater management programs to control non-stormwater discharges to *waters of the state*. These permits meet the requirements of both the CWA and WPCA.

Generally, *waters of the United States* are surface waters, such as streams and wetlands. Under State law, *waters of the state* is a broader term, and includes: "...lakes, rivers, ponds, streams, inland waters, underground waters, salt waters and all other surface waters and watercourses within the jurisdiction of the state of Washington" (RCW 90.48.020). ~~There are two~~An important aspects of the definition of *waters of the state* beyond the CWA's *waters of the U.S. definition* that affect the terms and conditions in the Washington State Municipal Stormwater Permits is that ~~waters of the state include groundwater.~~

Comment [LS2]: It would be helpful to include the CWA's reference and definition as was done similarly for the "waters of the state reference".

~~1. *Waters of the state include groundwater.*~~

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~~2. *Waters of the state include stormwater, such as that found within municipal stormwater systems.*~~

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As a combined NPDES and state waste discharge permit, the Washington State municipal stormwater permits must be written to protect govern stormwater discharges to both waters of the United States as well as waters of the state, and authorize discharges to both. Furthermore, the permits' adaptive management approach to address site-specific water quality violations (Permit Special Condition S4.F) clarifies relies "on credible site-specific information that an MS4 discharge is causing or contributing to a known or likely violation of water quality standards is measured or observed in the receiving water, not in a water of the state, which would include the stormwater itself. The municipal stormwater permits rely on the following special conditions and vocabulary to address and explain these requirements:

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- Permit Special Condition S2 explicitly authorizes discharges of stormwater to surface waters and ground waters of the state, except where the discharge would occur through an Underground Injection Control (UIC) well because these facilities are separately regulated through the UIC Rule (Chapter 173-218 WAC). Note that the authorization to discharge to groundwater is associated with state, not federal, law.

Special Condition S2.A.1 states (pertinent part only):

o **S2. AUTHORIZED DISCHARGES**

- A. This permit authorizes the discharge of stormwater to surface waters and to ground waters of the state from MS4s owned or operated by each Permittee covered under this permit, in the geographic area covered pursuant to S1.A. These discharges are subject to the following limitations:
 1. Discharges to ground waters of the state through facilities regulated under the Underground Injection Control (UIC) program, Chapter 173-218 WAC, are not authorized under this permit.

- The permits base their definition of Municipal Separate Storm Sewer System (MS4) used in the permits is based on the definition in the federal rule. However, there is a key adjustment to account for the fact that except where federal rule refers to waters of the US, the Washington State permits refer to waters of the state rather than to waters of the U.S. This makes ensures that permit requirements will be applied to areas that discharges to surface waters as well as in areas that to discharges to groundwater.
- The definition of outfall used in the permits cannot be based entirely restrictly on the federal definition of outfall, which relies heavily on use of since it only pertains to discharges to waters of the U.S. However, if the Washington State permits defined an outfall were defined solely by its discharge to waters of the state, any given point in a municipal stormwater sewer system conveyance receiving stormwater could be considered an outfall because (e.g., stormwater in one pipe is being discharged from one MS4 to stormwater in another pipe stormwater conveyance would constitute a discharge to waters of the state (and stormwater is considered a water of the state).

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- ~~To resolve the conundrum presented by the broad definition of *waters of the state* in the context of municipal stormwater permits, the permit's definition of *receiving water*, (or *receiving water body*), must appropriately include *waters of the U.S.* and some, but not all as well as groundwater, an applicable aspect of the *waters of the state* definition in the context of municipal stormwater permits. Because *stormwater itself is a water of the state*, the permits' definition of *receiving water* is intended to exclude *stormwater* within system conveyances, facilities, and BMPs.~~

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Recent Permit Appeal

~~On August 1, 2012, Ecology issued updated Phase I & Phase II Municipal Stormwater Permits for eastern and western Washington (Permits). The Permits became effective on August 1, 2013/2014 for western and eastern WA, respectively. Following the issuance of the Permits, the Western Washington Phase I and Phase II permits were appealed for a variety of issues; the eastern WA permit was not appealed.~~

~~An outcome of the appeal process was a settlement (March 27, 2014) in which Ecology agreed to modify the western WA Phase II Permit by revising the definitions for "outfall" and "receiving water body or receiving waters", and including a new term and definition for "discharge points." In addition, Ecology agreed to release guidance regarding the revised definitions. Several other issues were also argued before the Pollution Control Hearing Board (PCHB) which resulted in an Order (March 21, 2014) to Ecology that directs specific modifications to the Phase I Permit and Stormwater Management Manual for Western Washington, including the addition of another new definition for "conveyance systems." The PCHB decision has been appealed; however this appeal is narrowly focused on an issue unrelated to definitions, and does not prevent Ecology from moving forward with updating these definitions and making other modifications to the Permits which are unaffected by the current appeal.~~

Comment [LS3]: We do not feel that it is necessary to include this section, but if you do, we suggest folding it into the Background Section.

Permit Modification

To provide consistency between the western WA Permits, Ecology proposes to include the definitions from the Phase II settlement agreement and the PCHB Order in the Phase I and Western Washington Phase II Municipal Stormwater Permits at this time. The following revised and new definitions are intended to clarify the point of compliance as well as improve make further distinctions between key different components of the permittee's MS4 that support stormwater management program implementation across jurisdictional boundaries, such as better nomenclature consistency accuracy in mapping stormwater infrastructure features and connections. Each of the following four modified definitions will be discussed, below:

~~**Outfall** means a point source as defined by 40 CFR 122.2 at the point where a discharge leaves the permittee's MS4 and enters a receiving waterbody or receiving waters. Outfall also includes the permittee's MS4 facilities/BMPs designed to infiltrate stormwater.~~

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Receiving waterbody or receiving waters means naturally and/or reconstructed naturally occurring surface water bodies, such as creeks, streams, rivers, lakes, wetlands, estuaries, and marine waters, to which a discharge occurs via an outfall or via sheet/dispersed flow. Receiving waters also include groundwater to which a discharge occurs via facilities/BMPs designed to infiltrate stormwater.

Conveyance system means that portion of the municipal separate storm sewer system designed or used for conveying stormwater.

Discharge Point means the location where a discharge leaves the permittee's MS4 to another permittee's MS4 or a private or public stormwater conveyance. "Discharge point" also includes the location where a discharge leaves the permittee's MS4 and discharges to ground, except where such discharge occurs via an outfall.

Revised Definitions:

Outfall means a point source as defined by 40 CFR 122.2 at the point where a discharge leaves the permittee's MS4 and enters a receiving waterbody or receiving waters. Outfall also includes the permittee's MS4 facilities/BMPs designed to infiltrate stormwater.

Several phrases or words used in this definition of outfall have been ~~selected with the~~ called out to further elaborate on the following intentions behind the revision:

- "a point source as defined by Reference to 40 CFR 122.2" ~~limits outfalls~~ as "discernible, confined, and discrete conveyances."
- "at the point where" further clarifies this is a discernible, confined, and discrete point, ~~and~~ which excludes conveyances that have no outlet (such as dispersion BMPs).
- "leaves the permittee's MS4 ~~and enters a receiving water body~~" is intentionally possessive to a single MS4 permittee, not a group of MS4 permittees. It excludes private and unregulated public stormwater systems for the purposes of its use in this permit.
 - ~~It is likely that m~~ Municipalities will ~~may~~ want to identify private or unregulated public outfalls in order to have a comprehensive understanding of drainage within their jurisdiction.
- The "discharge" ~~is~~ applies not limited only to stormwater, ~~as an~~ but also illicit discharges which could also be released to a receiving water via an outfall.

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Comment [LS4]: Listing these definitions separately and then again with their explanations seems unnecessarily redundant.

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Comment [LS5]: We suggest the term *outfall* only apply to discharges from MS4s entering a surface receiving water body or receiving waters. Creating a distinction between discharges occurring over the ground via a "discharge point" and "into" the ground (i.e., groundwater) via an "outfall" will create confusion, particularly since the definition of "stormwater" includes "interflow" which implies that the infiltration stormwater may never actually reach groundwater. This confusion could be eliminated if the definition of outfall pertained only to discharges to surfaces receiving waterbodies or receiving waters.

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Comment [LS6]: This seems to beg the case for not applying the term "outfall" to BMPs designed to infiltrate stormwater as they often do not have a "discernible, confined, and discrete conveyance" associated with their design.

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Comment [LS7]: The reference to *conveyances* is confusing given the reference to "dispersion BMPs" in the parenthetical at the end of the sentence. Does this also refer to "BMPs" with no outlets?

Comment [LS8]: Engineered dispersion BMPs utilizing a perforated pipe flow spreader could be considered as a conveyance with multiple outlets.

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- “and enters a receiving waterbody or receiving waters.” refers to the permit’s definition of receiving waterbody and receiving waters (e.g., surface water and groundwater).
- “facilities/BMPs” is a broad use of the term to accommodate encompass the wide range of designed infiltration facilities, but including any pre-existing facilities and retrofit facilities and is not limited to “stormwater treatment and flow control BMPs/facilities” as defined in the Permit.
- “designed to infiltrate stormwater” excludes facilities that inadvertently may incidentally infiltrate (e.g., infiltration which occurs, but not by design such as in unlined ditches and swales).
 - Note that for the purposes of this permit, UIC facilities are categorically excluded (refer to Permit Special Condition S2). However, ~~it is likely that some~~ municipalities ~~will~~ may choose to identify UIC facilities in order to have a comprehensive understanding of drainage within their jurisdiction.
- ~~It is important to note that~~ Outfall does not include the points where pipes, tunnels, or other constructed conveyances which connect segments of the same receiving waters and are primarily used to convey receiving waters. For example, outfall does not include in-stream culverts that convey a stream under a roadway, nor does it include the outlets of streams that have been piped under development areas. This clarification ~~is based on~~ speaks to language included in the federal definition of outfall. This statement had been in the former definition, but ~~is now~~ removed from the proposed definition to ~~simplify the definition.~~ It is included here as guidance for enhance clarity.

Comment [LS9]: It seems that its application to preexisting and retrofit facilities would go without saying.

Comment [LS10]: It would help if the guidance would elaborate on the types of facilities designed to infiltrate stormwater beyond those already defined in the Permit.

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FORMER PERMIT DEFINITION: *“Outfall” means point source as defined by 40 CFR 122.2 at the point where a discharge leaves the MS4 and discharges to waters of the State. Outfall does not include pipes, tunnels, or other conveyances which connect segments of the same stream or other surface waters and are used to convey primarily surface waters (i.e. culverts).*

Receiving waterbody or receiving waters means naturally and/or reconstructed naturally occurring surface water bodies, such as creeks, streams, rivers, lakes, wetlands, estuaries, and marine waters, to which a discharge occurs via an outfall or via sheet/dispersed flow. Receiving waters also include groundwater to which a discharge occurs via facilities/BMPs designed to infiltrate stormwater via an outfall.

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Comment [LS11]: See comment in LS5. If this language remains, adding “via an outfall” to the end of this sentence would at least help make the connection to the revised *outfall* definition.

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Several phrases or words used in this definition of receiving waterbody or receiving waters have been called out to further elaborate on ~~selected with~~ the following intentions behind the revision:

- A receiving water-body is not defined by the type of discharge it receives. In other words, the definition need not refer to who the discharger (such as an MS4) or what (such as stormwater or surface runoff) the nature of the discharged (such as stormwater, surface runoff, or illicit discharges).

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- Groundwater is considered a receiving water-body in instances where a facility/BMP is designed to infiltrate stormwater via an outfall.

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FORMER PERMIT DEFINITION: “Receiving waters” means bodies of water or surface water systems to which surface runoff is discharged via a point source of stormwater or via sheet flow. Receiving waters may also be ground water to which surface runoff is directed by infiltration.

New Terms and Definitions:

Conveyance system means that portion of the municipal separate storm sewer system designed or used for conveying stormwater.

Discharge Point means the location where a discharge leaves the permittee’s MS4 to another permittee’s MS4 or a private or public stormwater conveyance. “*Discharge point*” also includes the location where a discharge leaves the permittee’s MS4 and discharges to ground, except where such discharge occurs via an outfall.

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Several phrases or words used in this definition have been called out to further elaborate on selected with the following intentions behind the proposed revisions:

Comment [LS12]: The distinction between discharges over the ground via a “discharge point” and “into” the ground (i.e., groundwater) via an “outfall” will likely create confusion particularly since the definition of “stormwater” includes “interflow” which implies that the infiltrated stormwater may never actually reach groundwater. This confusion could be eliminated if the definition of *outfall* pertained only discharges to surfaces receiving waterbodies or receiving waters.

- Use of “the location” avoids circular use of “point” in the term and the definition, and avoids confusion with 40 CFR 122.2 point source
- “where a discharge” applies not only to stormwater, but also to illicit discharges
- The use of “*discharge point*” in the permit refers to a permittee’s discharge from their MS4 to something else other than an outfall.
- “Stormwater conveyance” is broadly used to indicate private or public stormwater infrastructure.
- For discharge points to ground:
 - Includes facilities/BMPs the terminus of unlined ditches and swales that inadvertently infiltrate incidentally, (i.e., infiltration which occurs, but not by design such as ditches and swales).
 - Includes stormwater BMP conveyances discharges that have no outlet, such as dispersion BMPs.

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Comment [LS13]: Ties back to the revised *outfall* definition.

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Issues to keep in mind:

MS4 MAPPING- According to the language developed through the settlement of the western Washington Phase II Permit appeal, all known discharge points must be mapped according to the requirements of the Permits. The definition for *outfall* contained in the permits issued August 1, 2012 and effective August 1, 2013 captured all points where discharges leaves the MS4 and discharges to waters of the state and thus apply when discharges occur from one MS4 to surface water, ground waters, other MS4s, and private or unregulated stormwater infrastructure. As such, the requirement to map outfalls is modified to reference *outfalls* and *discharge points* under the proposed new definitions. Strict application of the agreed upon settlement language results in a requirement to map locations of inadvertent infiltration (such as ditches) as discharge points. It is not Ecology's intent to require permittees to map features or areas that provide inadvertent infiltration as discharge points. Nor is it is not Ecology's intent that Permittees must re-label previously mapped *outfalls* as *discharge points* according to the new definition, although this may be helpful for permittees' programs (e.g., in mapping of connections between MS4s). Ecology welcomes comments on these implementation issues during the public comment period for the permit modification.

Underground Injection Control (UIC) Program - The revision of the term "*outfall*" and the addition of the term "*discharge point*" **does not** change how UIC wells are regulated or managed. The Municipal Stormwater Permits categorically exclude discharges to ground water through UIC wells (Special Condition S2.A.1; language provided above). Thus, Wstormwater wells regulated through the UIC program are not required to be mapped under the Municipal Stormwater Permit, as the UIC program rules apply.

UIC wells are manmade structures used to discharge fluids into the subsurface. Examples are drywells, infiltration trenches with perforated pipe, and any structure deeper than the widest surface dimension. The majority of UIC wells in Washington are used to manage stormwater (i.e., drywells) and sanitary waste (large on-site systems), return water to the ground, and help clean up contaminated sites. UIC wells are regulated under the UIC Program (Ch. 173-218 WAC).

UIC Requirements for municipalities with national pollutant discharge elimination system (NPDES) permits¹

The Municipalities that are under a NPDES stormwater permit may also have stormwater discharges to UIC wells. The Stormwater Management Program required by the NPDES stormwater permit includes best management practices that also may be applied to stormwater discharges to UIC wells. To avoid duplication, municipalities that are under an NPDES stormwater permit may choose to

¹ Excerpt from: Guidance for UIC wells that manage stormwater – available at:
<https://fortress.wa.gov/ecy/publications/SummaryPages/0510067.html>

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Comment [LS14]: Seems redundant as by definition, a settlement is agreed upon.

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Comment [LS15]: The context of the discussion of incidental infiltration was in reference to the end of unlined conveyances (e.g., stormwater ditches or swales) that do not result in any discharge at their terminus due to infiltration which occurs, but not by design.

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Comment [LS16]: Since there is a permit requirement to map connections between permittees' systems, we think there is value in relabeling in instances where the permittee previously use the term "outfall" to indicate a discharge into another MS4. This would foster the use of common terminology between permittees.

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Comment [LS17]: As written, this sentence is an awkward read and, given the context, seems unnecessary. We suggest eliminating this sentence.

meet UIC program requirements by applying their Stormwater Management Program to areas served by UIC wells. See Chapter 173-218-090(1) WAC.

Examples

The following scenarios are provided to illustrate each of the new definitions (above) in the context of a typical MS4 system.

Comment [LS18]: Comments assume Ecology amends the definitions as proposed. Additional scenarios were depicted in the settlement negotiations that may be valuable to include.

Comment [LS19]: Redundancy as MS4 = Municipal Separate Storm Sewer System

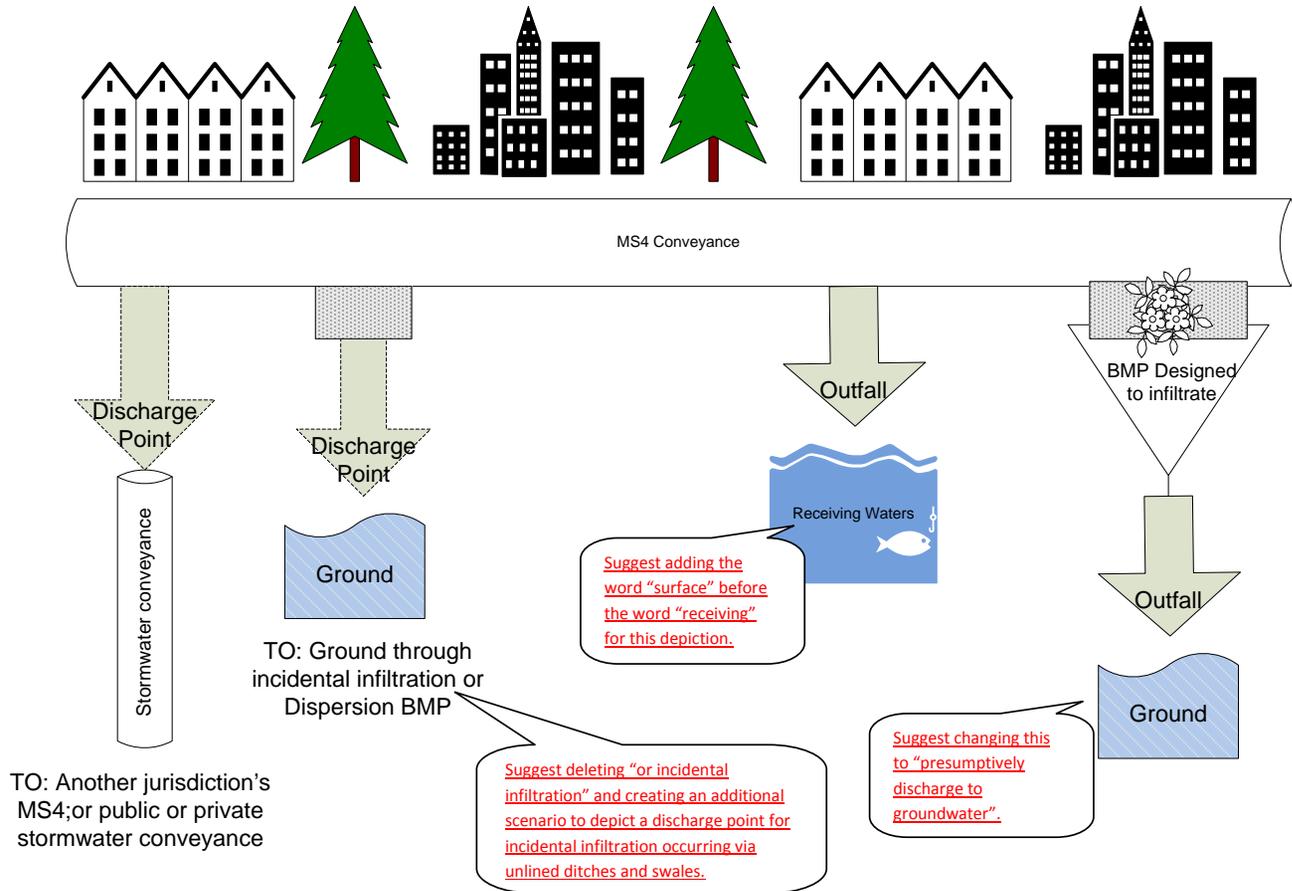


Figure 1: Simplified overview of the selected terms used to describe the Municipal Storm Sewer System (MS4) (e.g., outfall, discharge points)

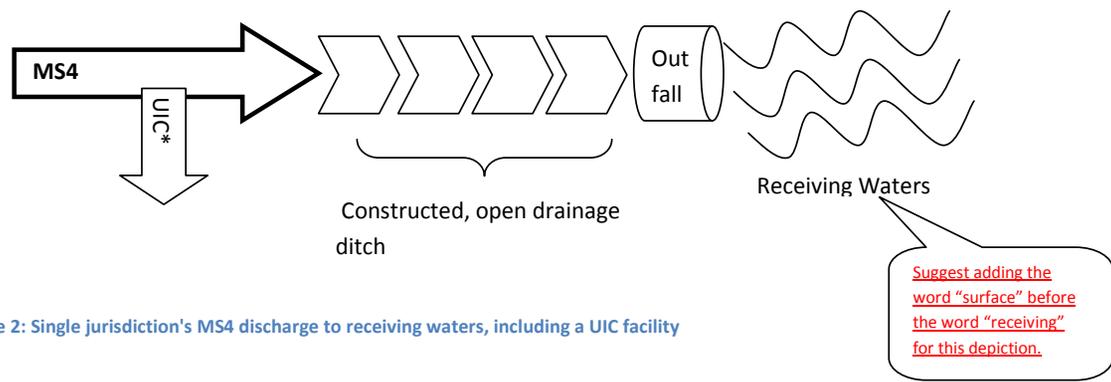


Figure 2: Single jurisdiction's MS4 discharge to receiving waters, including a UIC facility

*Regulated through the Underground Injection Control (UIC) Program. UIC facility is excluded from Municipal Permit. (See S2.A.1.).

However, consider mapping **UIC feature** for comprehensive understanding of municipal drainage.

UIC Program additional info:
<http://www.ecy.wa.gov/programs/wq/grndwtr/uic/index.html>

In Figure 2, the permittee would not need to ~~map document~~ the open drainage ditch as a Discharge Point on their facilities map as any loss to ground is incidental (i.e., infiltration which occurs, but not by design such as in unlined ditches and swales). The point where the runoff leaves the MS4 ditch and discharges to the receiving water is mapped as an outfall. The UIC well is regulated through its own program.

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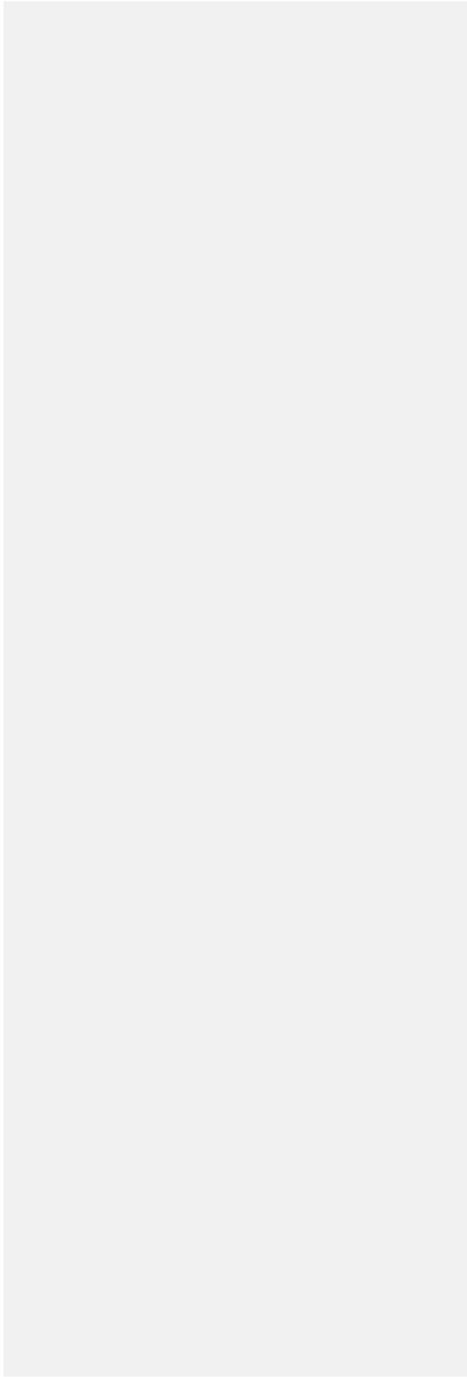
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Comment [LS20]: This explanation will not be necessary if language is clarified per the comments in LS15

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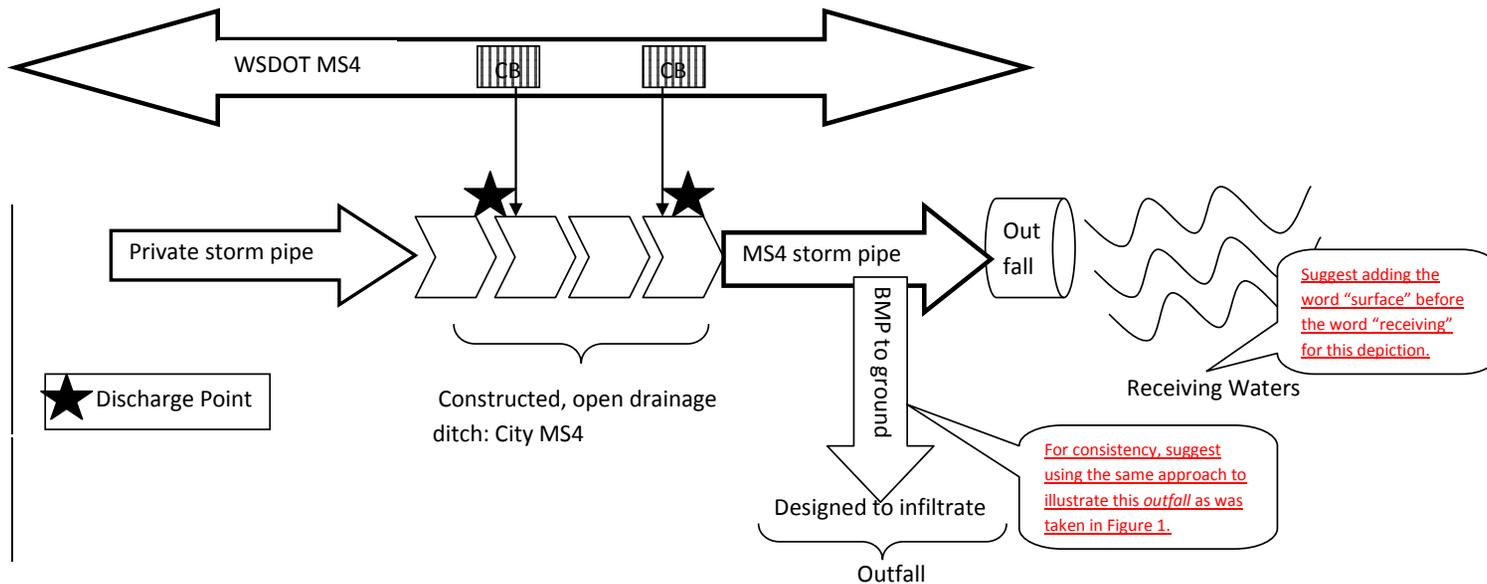


Figure 3: Example of Dept. of Transportation (WSDOT) MS4 discharging to a City's MS4

In Figure 3, WA Dept. of Transportation would map two Discharge Points where their catch basins direct runoff to a city's MS4 (i.e., ★). The city would map the BMP that was designed to infiltrate and the overflow pipe/and or pipe discharging to the receiving water as outfalls. In addition, the BMP would be mapped (and as a stormwater treatment and flow control BMP/facility if used to meet Appendix 1 Minimum Requirements #6 (treatment), #7 (flow control), or both). The point where the private stormwater pipe enters/discharges to the city's MS4 is not required to be mapped as a Discharge Point.

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- Comment [LS21]: To even suggest mapping it as a *discharge point* given the definition would be inaccurate as it only applies to discharges from a MS4.
- Comment [LS22]: By definition it would not be a *discharge point*, but, if the City chooses, it could be mapped as a "private" or "unregulated discharge point."
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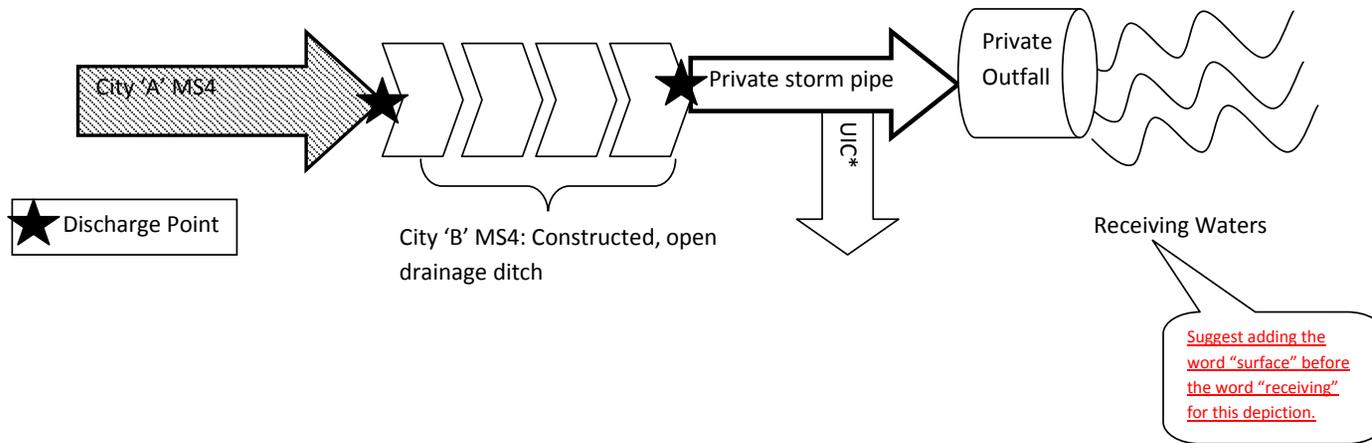


Figure 4: Example of Two MS4s discharging to private storm system. NO MS4 outfall.

In Figure 4, City 'A' would map the *Discharge Point* where its MS4 discharges to City 'B's open drainage ditch (i.e., *star on left*). City B would not need to map the drainage ditch as a *Discharge Point as any loss to ground is incidental*, but would map the location where the drainage ditch (part of the MS4) discharges to the private storm system as a *Discharge Point (i.e., star on right)*. The private infrastructure would not be required to be mapped per the Permit, although this may be helpful for a permittee's program. The UIC well must follow UIC Program rules and is not required to be mapped per the Municipal Stormwater Permit.

Suggest adding the word "surface" before the word "receiving" for this depiction.

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- Comment [LS23]: Since this point was made in Figure 2, it probably does not need to be made again here.
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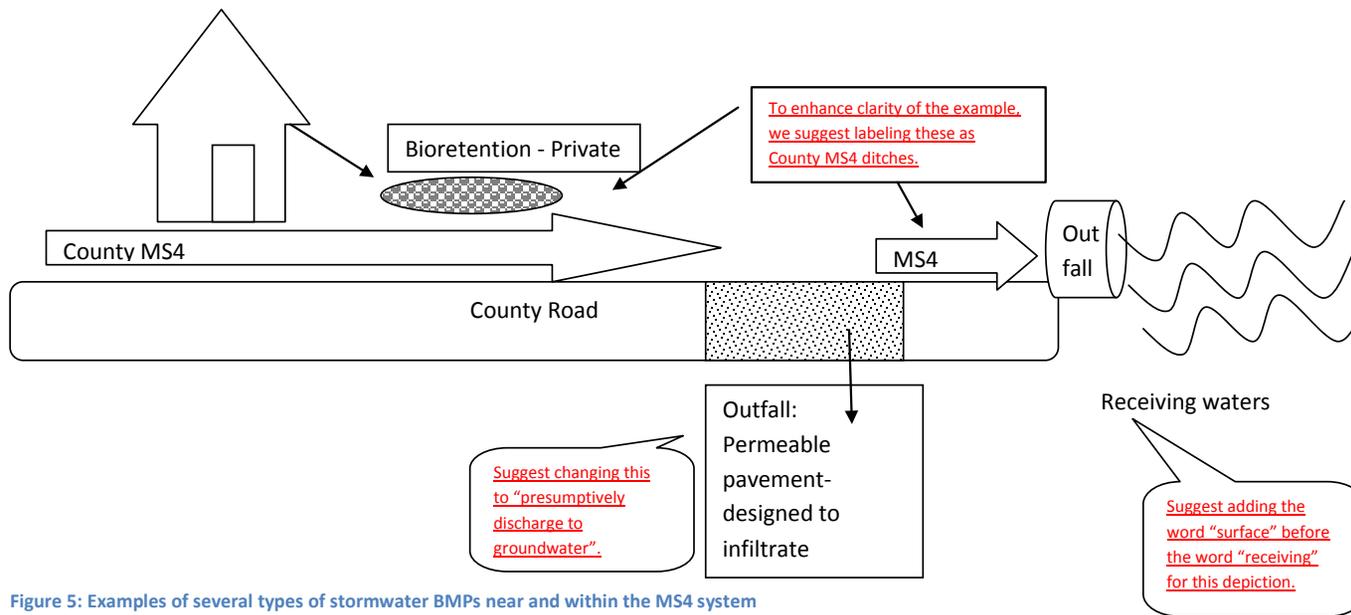


Figure 5: Examples of several types of stormwater BMPs near and within the MS4 system

In Figure 5, the centroid of the permeable pavement area, which has been designed to infiltrate stormwater runoff, would be mapped as an outfall. The bioretention facility located on private property would not be mapped as a discharge point nor an outfall because it is not part of the permittee's MS4. If either the bioretention facility or the permeable pavement were constructed to help meet Appendix 1 Minimum Requirements #6, #7, or both, then these facilities would be considered stormwater treatment/flow control BMPs/facilities. The point where there is a discharge from the MS4 conveyance ditch to surface receiving waters would be mapped as an outfall.

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