Dictionary of Terms for Use within the Standardized Framework for a Stormwater Management System Inventory

Functional Definitions

• Convey: a stormwater system function that moves water from point a to point b and is generally linear in nature
  o Open Conveyance – a stormwater feature that is not enclosed
  o Closed Conveyance – a stormwater feature that is enclosed

• Control: a stormwater system function designed to hold and/or treat stormwater
  o Flow Control – A stormwater feature that mitigates the increases in runoff from development.
  o Water Quality – A stormwater feature designed to improve the water quality of the runoff it receives.

• Connect: a stormwater system function that serves as either a connection with conveyance or control features or a connection of the stormwater management system to surface or subsurface flows
  o Sump – A connecting structure designed to interrupt the flow of rainwater and allow for settling and collection of sediment, debris, detritus, contaminants, etc., prior to transfer to the outlet pipe. These structures generally contain an opening for stormwater inflow.
  o No Sump – A connecting structure without a sump. These structures generally contain an opening for stormwater inflow.
  o Access – An opening or structure that provides maintenance or inspection access to the stormwater management system. These structures are not designed to accept stormwater inflow.

• Concept*: a regulatory construct that applies to stormwater systems

Stormwater System Definitions

• Conveyance System* –
  The drainage facilities, both natural and man-made, which collect, contain, and provide for the flow of surface and stormwater from the highest points on the land down to a receiving water. The natural elements of the conveyance system include small drainage courses, streams, rivers, lakes, and wetlands. The human-made elements of the conveyance system include ditches, pipes, channels, connecting structures and most retention/detention facilities.

• Infiltration* – Means the downward movement of water from the surface to the subsoil.

• Combined* – Both Water Quality and Flow Control

• Feature* – A discrete element within the Conveyance System that is mappable.
**Access Riser**

*Function: Connect | Function Type: Access*

*Functional:* A vertical maintenance access to a Vault, Tank or other similar structure.

*Structural:* A structure that has an access opening, wide enough for entry to support maintenance and inspection.

**Arch Culvert**

*Function: Convey | Function Type: Closed Conveyance | Component: Culvert*

*Functional:* Convey water from Open Conveyance to another Open Conveyance.

*Structural:* A non-circular Culvert that is designed and manufactured into a shape generally flatter on the bottom and rounder on the top.

**Bottomless Arch Culvert**

*Function: Convey | Function Type: Closed Conveyance | Component: Culvert*

*Functional:* Convey water from Open Conveyance to another Open Conveyance.

*Structural:* A bottomless Culvert designed and manufactured into an arched configuration.
**Standardized Component Definitions**

**Bottomless Box Culvert**

**Function**: Convey  |  **Function Type**: Closed Conveyance  |  **Component**: Culvert

**Functional**: Convey water from Open Conveyance to another Open Conveyance.

**Structural**: A Culvert designed and manufactured into a rectangular configuration without a bottom, typically made of concrete.

**Box Culvert**

**Function**: Convey  |  **Function Type**: Closed Conveyance  |  **Component**: Culvert

**Functional**: Convey water from Open Conveyance to another Open Conveyance.

**Structural**: A Culvert designed and manufactured into a rectangular configuration, typically made of concrete.

**Catch Basin†**

**Function**: Connect  |  **Function Type**: Sump

**Functional**: A structure that functions with a Sump to either allow for water to enter a Conveyance System or connect with other Conveyance features, or both.

**Structural**: A structure that is circular or rectangular usually has a grated metal lid or cover, with a Sump.

*Component Types: CB—Type 1, Type 1L, Type 1P, Type 2, Other*

**Catch Basin Type 1**

**Function**: Connect  |  **Function Type**: Sump  |  **Component**: Catch Basin

**Functional**: Same as Catch Basin.

**Structural**: Rectilinear: Interior Dimensions 22” Wide x 26” Long x 40” Deep; Max knockout size 20” diameter. Max Depth to Pipe invert is 5’. For more detail see WSDOT Standard Plans (B-5.20)

**Catch Basin Type 1L**

**Function**: Connect  |  **Function Type**: Sump  |  **Component**: Catch Basin

**Functional**: Same as Catch Basin Type 1, but for larger Pipes.

**Structural**: Rectilinear: Interior Dimensions 28” Wide x 32” Long x 40” Deep; Max knockout size 26” diameter. Max Depth to Pipe invert is 5’. For more detail see WSDOT Standard Plans (B-5.40).
Standardized Component Definitions

Catch Basin Type 1P

Function: Connect | Function Type: Sump | Component: Catch Basin

Functional: Same as Catch Basin Type 1, but with a deeper Sump and for smaller Pipes.

Structural: Rectilinear: Interior Dimensions 22” Wide x 26” Long x 52” Deep; Max knockout size 16” diameter. Max Depth to Pipe invert is 5’. For more detail see WSDOT Standard Plans (B-5.60).

Catch Basin Type 2

Function: Connect | Function Type: Sump | Component: Catch Basin

Functional: Same as Catch Basin, but for larger Pipes and/or deeper inverts

Structural: Cylindrical: Interior Diameter 36” or greater, typically 15’ max depth to bottom, 24” Sump. For more detail see WSDOT Standard Plans (B-10.20).

Cleanout

Function: Connect | Function Type: Access

Functional: A Pipe spur to the Conveyance System that allows for cleaning or inspection.

Structural: A Pipe with a cap that opens for access.

Combined Pond/Vault*

Function: Control | Function Type: Flow Control | Component: Pond/Vault

Functional: A stormwater management feature that is designed to provide Flow Control and Water Quality.

Structural: See Pond/Vault definition.

Combined Tank*

Function: Control | Function Type: Flow Control | Component: Tank

Functional: A stormwater management feature that is designed to provide Flow Control and Water Quality.

Structural: See Tank definition.

Concrete/Curb Inlet

Function: Connect | Function Type: No Sump

Functional: Similar characteristics to a Catch Basin Type 1 but without a Sump. These structures are generally used to accept stormwater inflow through a curb opening.

Structural: A square shaped structure without a Sump.
**Standardized Component Definitions**

**Control Structure**

Function: Control  |  Function Type: Flow Control

**Functional:** A stormwater management feature that regulates flow by either metering or directing it.

**Structural:** Varies, see subtype for specific structural definition. Generally located either within a Pond/Vault or a Tank or in a Catch Basin Type 2 connected to a Pond/Vault or Tank.

*Component Types: Flow splitter, weir, orifice, baffle, riser, combination*

**Culvert**

Function: Convey  |  Function Type: Closed Conveyance

**Functional:** Convey water from Open Conveyance through some structure to another Open Conveyance.

**Structural:** A Closed Conveyance that drains open channels, Swales, or Ditches for the purpose of passing under a roadway, embankment or other structure. Typically, a Culvert is not connected to a structure on one or both ends.

*Component Types: Round, Arch, Box, Bottomless Box, Bottomless Arch, Squash*

**Curb / Gutter**

Function: Convey  |  Function Type: Open Conveyance

**Functional:** Used to concentrate and Convey runoff

**Structural:** A Curb/Gutter is the raised edge or perimeter barrier of a roadway or other hard surface

*Component Types: asphalt wedge curb, rolled curb, vertical curb, concrete barrier*

**Detention Pond/Vault**

Function: Control  |  Function Type: Flow Control  |  Component: Pond/Vault

**Functional:** A stormwater management feature that is designed to provide Flow Control.

**Structural:** See Pond/Vault definition.

**Detention Tank**

Function: Control  |  Function Type: Flow Control  |  Component: Tank

**Functional:** A stormwater management feature that is designed to provide Flow Control.

**Structural:** See Tank definition.
Standardized Component Definitions

**Ditch**

**Function:** Convey  |  **Function Type:** Open Conveyance

**Functional:** Used to intercept and Convey runoff.

**Structural:** A long narrow constructed channel.

**Drop Inlet**

**Function:** Connect  |  **Function Type:** No Sump

**Functional:** Designed with a high hydraulic capacity, these structures are effective in passing large debris. The grates of these structures are generally on grade and accept flow.

**Structural:** A trapezoidal shaped structure without a Sump.

**Drop Inlet Type 1***

**Function:** Connect  |  **Function Type:** No Sump  |  **Component:** Drop Inlet

**Functional:** Same as Drop Inlet; terminates Ditch, inflow from one side

**Structural:** Trapezoidal; Interior Dimensions: 30" Wide x ~72" Long x ~48" Deep; Max knockout size 34” diameter. For more detail see WSDOT Standard Plans (B-45.20-00)

**Drop Inlet Type 2***

**Function:** Connect  |  **Function Type:** No Sump  |  **Component:** Drop Inlet

**Functional:** Same as Drop Inlet; positioned at mid-Ditch, inflow from two sides

**Structural:** Trapezoidal; Interior Dimensions: 30” Wide x 108” Long x ~48” Deep; Max knockout size 34” diameter. For more detail see WSDOT Standard Plans (B-45.40-00)

**Filter**

**Function:** Control  |  **Function Type:** Water Quality

**Functional:** A stormwater management feature that provides Water Quality.

**Structural:** Designed to pass water through a filtration medium or vegetation.

*Component Types: Filter strips, media filter drain, sand filter*
Standardized Component Definitions

**Force Main**

Function: Convey  |  Function Type: Closed Conveyance  |  Component: Pipe

**Functional:** Conveys water.

**Structural:** A circular closed Pipe that is designed for pressurized flow.

**Grate Inlet Type 1**

Function: Connect  |  Function Type: Sump

**Functional:** Similar characteristics to a Catch Basin but with a larger inlet area.

**Structural:** A structure that is rectangular and has a rectangular, metal grate and a Sump; cannot support traffic loads. Interior Dimensions 23" Wide x 42" Long x Variable Depth, 12' Max.; Max Depth to Pipe invert is 9’ 6”. For more detail see WSDOT Standard Plans (B-35.20-00)

**Grate Inlet Type 2**

Function: Connect  |  Function Type: No Sump

**Functional:** Similar characteristics to a Catch Basin but with a larger inlet area.

**Structural:** A structure that is rectangular and has a rectangular, metal grate and no Sump; welded grates on this type can only be subjected to light traffic. Interior Dimensions 23” Wide x 42” Long x Variable Depth; Max Depth to Pipe invert is 9’ 7.5”. For more detail see WSDOT Standard Plans (B-35.40-00)

**Half Round**

Function: Convey  |  Function Type: Open Conveyance  |  Component: Ditch  |  Descriptor: Material

**Functional:** Conveys runoff.

**Structural:** A section of Pipe cut along the longitudinal axis, typically constructed of CMP or concrete

**Infiltration Pond/Vault**

Function: Control  |  Function Type: Flow Control  |  Component: Pond/Vault

**Functional:** A stormwater management feature that is designed to provide Infiltration.

**Structural:** See Pond/Vault definition.

**Infiltration Tank**

Function: Control  |  Function Type: Flow Control  |  Component: Pond/Vault

**Functional:** A stormwater management feature that is designed to provide Infiltration.

**Structural:** See Tank definition.
**Standardized Component Definitions**

*Infiltration Swale*

**Function:** Control  |  **Function Type:** Flow Control  |  **Component:** Pond/Vault  
**Functional:** A stormwater management feature that is designed to provide Infiltration.  
**Structural:** See Swale definition.

*Manhole (Maintenance Hole)*†

**Function:** Connect  |  **Function Type:** Access  
**Functional:** Connect one Pipe to another Pipe, with an opening to the surface.  
**Structural:** A structure that is cylindrical, deeper than wide, has an access opening, and does not have a Sump. Pipe outlet(s) are at the base of structure, often in “channel and shelf”  
**Component Types:** Type 1, type 2, Type 3, Type 4, other

**Manhole Type 1**

**Function:** Connect  |  **Function Type:** Access  |  **Component:** Manhole  
**Functional:** Same as Manhole  
**Structural:** Cylindrical: Diameter 48, 54 or 60 inches, 8 feet min depth to bottom, including a riser cone. For Pipes needing knockout larger than 48" use Manhole Type 2. For more detail see WSDOT Standard Plans (B-15.20).

**Manhole Type 2**

**Function:** Connect  |  **Function Type:** Access  |  **Component:** Manhole  
**Functional:** Same as Manhole Type 1, but for larger Pipes.  
**Structural:** Cylindrical: Diameter 72 + inches. For Pipes needing knockout larger than 48”. Max Depth 20’, including a riser cone. For more detail see WSDOT Standard Plans (B-15.40).

**Manhole Type 3**

**Function:** Connect  |  **Function Type:** Access  |  **Component:** Manhole  
**Functional:** Same as Manhole.  
**Structural:** Cylindrical: Diameter 36 + inches. For installation depths of less than 8 feet. Can accommodate any size Pipe depending on the diameter of the structure. For more detail see WSDOT Standard Plans (B-15.60).
**Standardized Component Definitions**

**Manhole Type 4**

Function: Connect  |  Function Type: Access  |  Component: Manhole

Functional: Same as Manhole, but for access to a large diameter conveyance Pipe.

Structural: Cylindrical: 48” concrete Manhole risers, stacked to a max of 12’ on top of a 48” or greater conveyance Pipe. Utilizes the conveyance pipe as the base of the structure. For more detail see King County Roads Standards (Figure 7-010).

**Natural Drainage**

Function: Convey  |  Function Type: Open Conveyance

Functional: Conveys runoff through the landscape.

Structural: Non-engineered, non-constructed flow paths following existing land contours.

**Other Control**

Function: Control  |  Function Type: Flow Control and/or Water Quality

Functional: A stormwater management feature or best management practice (BMP) that provides Flow Control and/or Water Quality, but does not fit in one of the other Control Components.

Structural: Varies, see subtype for specific definition.

Component Types: Amended soils, bioretention cell, bioretention planter, bioretention Swale, bioretention with underdrain, dispersion, Infiltration trench, injection well, limited footprint, permeable pavement, rain garden, rainwater harvesting, vegetated roof

**Pipe**

Function: Convey  |  Function Type: Closed Conveyance

Functional: Conveys water.

Structural: A circular Closed Conveyance. Typically connected to structures at one or both ends.

Component Types: Tightline, Force Main, Underdrain, Stormwater Pipe
**Standardized Component Definitions**

**Pond/Vault†**

*Function: Control | Function Type: Water Quality and/or Flow Control*

**Functional:** A stormwater management feature that can provide Water Quality, Flow Control or Combined.

**Structural:** Can be excavated from the earth, created by berms, or have concrete walls. Ponds are typically open to the surface with one or more earthen sides and an earthen bottom. Vaults are typically rectangular and constructed of concrete.

*Component Types: Detention Pond/Vault, wetpond/wetvault, Infiltration Pond/Vault, stormwater treatment wetland, Combined Pond/Vault, filtration Pond/Vault, oil/water separator vault, dry well*

**Proprietary Device†**

*Function: Control | Function Type: Water Quality*

**Functional:** A stormwater management feature that provides Water Quality.

**Structural:** A patented stormwater device, structure varies.

*Component Types: Stormfilter basin, stormfilter vault, stormfilter pond, filterra stormceptor, others*

**Round Culvert**

*Function: Convey | Function Type: Closed Conveyance | Component: Culvert*

**Functional:** Conveys water from Open Conveyance to another Open Conveyance.

**Structural:** Sections of Stormwater Pipe that are used as a culvert. It may have one intermediate connecting structure along its length.

**Screw Pump**

*Function: Convey | Function Type: Closed Conveyance*

**Functional:** Conveys water from a lower elevation to a higher elevation along a specified length.

**Structural:** A mechanical device resembling a rotating corkscrew.

**Squash Culvert**

*Function: Convey | Function Type: Closed Conveyance | Component: Culvert*

**Functional:** Conveys water from Open Conveyance to another Open Conveyance.

**Structural:** Sections of Stormwater Pipe that are used as a Culvert, typically corrugated metal and are reshaped on site to reduce the overall height of the Pipe.
Standardized Component Definitions

**Stormwater Pipe**

*Function:* Convey  |  *Function Type:* Closed Conveyance  |  *Component:* Pipe

*Functional:* Conveys water.

*Structural:* A circular closed Conveyance. Typically connected to structures at one or both ends.

**Swale†**

*Function:* Control  |  *Function Type:* Water Quality

*Functional:* A stormwater management feature that provides Water Quality.

*Structural:* A linear feature, vegetated, and designed to spread water out over a large surface area.

*Component Types:* Basic biofiltration Swale, wet biofiltration Swale, continuous inflow biofiltration Swale, Infiltration Swale, compost amended bioswale

**Tank†**

*Function:* Control  |  *Function Type:* Water Quality and/or Flow Control

*Functional:* A stormwater management feature that can provide Water Quality, Flow Control or Combined.

*Structural:* A closed stormwater feature typically round or half-round section, constructed of metal or plastic (PVC, HDPE).

*Component Types:* Detention Tank, Infiltration Tank, Water Quality Tank, and Combined

**Tightline**

*Function:* Convey  |  *Function Type:* Closed Conveyance  |  *Component:* Pipe

*Functional:* Conveys water.

*Structural:* An enclosed structure that conveys water. Continuous length of Pipe, that typically conveys water down a steep slope, with no inlets or collection points in between.

**Trench Drain**

*Function:* Convey  |  *Function Type:* Open Conveyance

*Functional:* Collects and conveys runoff.

*Structural:* Has a grated top and a Pipe or box bottom, typically linear.
**Standardized Component Definitions**

**Underdrain**

**Function:** Convey  |  **Function Type:** Closed Conveyance  |  **Component:** Pipe

**Functional:** Collects and conveys water.

**Structural:** A circular closed Pipe that has perforated or slotted openings.

**Water Quality Pond/Vault**

**Function:** Control  |  **Function Type:** Flow Control  |  **Component:** Pond/Vault

**Functional:** A stormwater management feature that is designed to provide Water Quality.

**Structural:** See Pond/Vault definition.

**Water Quality Tank**

**Function:** Control  |  **Function Type:** Flow Control  |  **Component:** Pond/Vault

**Functional:** A stormwater management feature that is designed to provide Water Quality.

**Structural:** See Tank definition.