MANUAL DE USUARIO
GISWATER 2

Versión 0.3 – Mayo 2017

ÍNDICE

INSTALACIÓN Y PUESTA EN MARCHA

0) Requisitos previos:

- Sistema operativo Windows 7 o superior

- Tener instalado programa QGIS **(version 2.14 LTR)**

- Disponer de acceso a una base de datos PostgreSQL (9.3 o superior) & PostGIS (2.1 o superior)

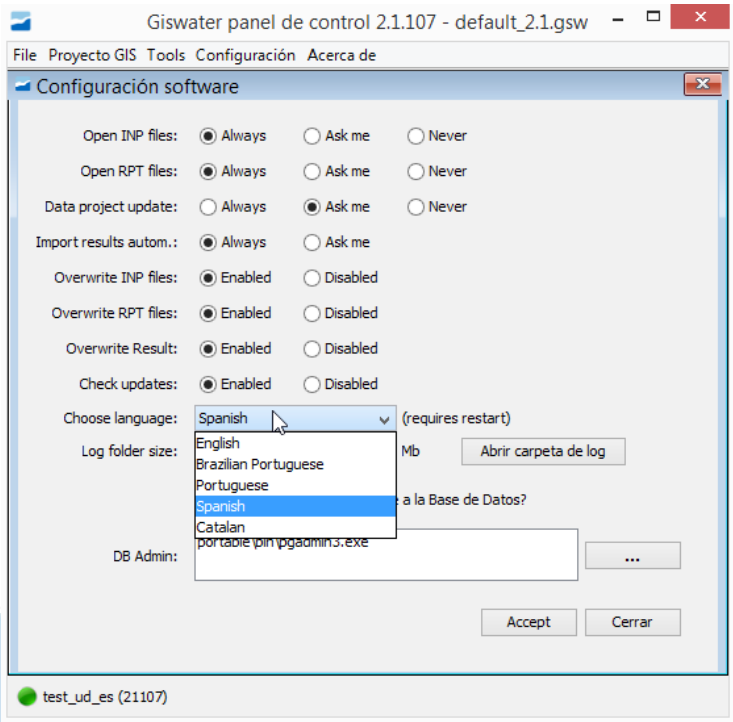
- Tener instalado maquina virtual java (JRE de Oracle) 1.8 o superior

1) Instalar Giswater :

Descargar Giswater 2, donde únicamente hay que descargar el instalable de la web (www.giswater.org).

Una vez instalado, configurar :

Opciones básicas en menu configuración



Los parámetros más importantes de la captura anterior son:

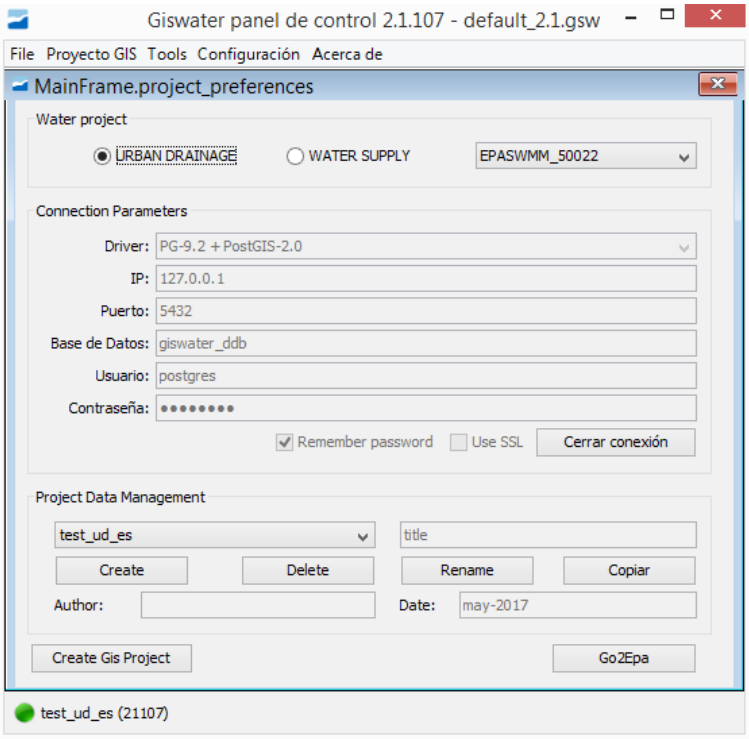
Language: Escoger el idioma del proyecto y de la interficie de usuario

Overbrite result: Permite almacenar más de un resultado en la base de datos (recomendamos enabled)

Check updates: Permite consultar nuevas versiones disponibles (recomendamos enabled)

Data project update: Permite actualizar bugs encontrados (recomendamos enabled)

Congfigurar conexión a base de datos (Connection parameters)

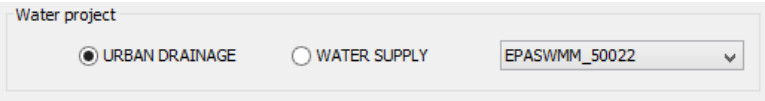


2) Creación de un proyecto Giswater

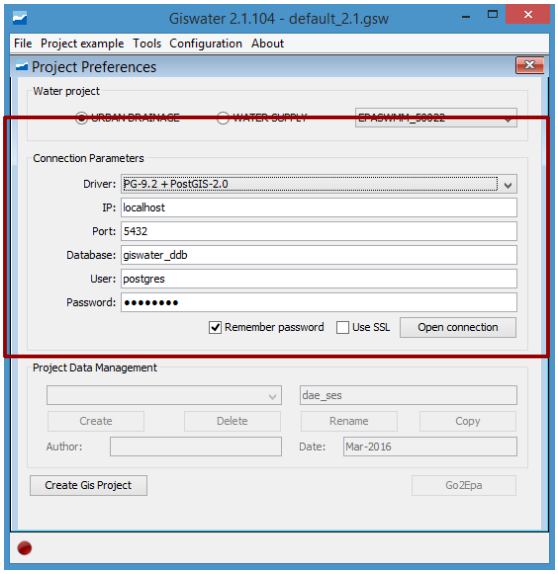
En estos momentos ya se está en condiciones de crear un esquema de trabajo con la plantilla predefinida de todas las tablas, vistas y funciones que actuan en la base de datos. Para ello solo debemos hacer:

1) Menú de *'Project Preferences'*

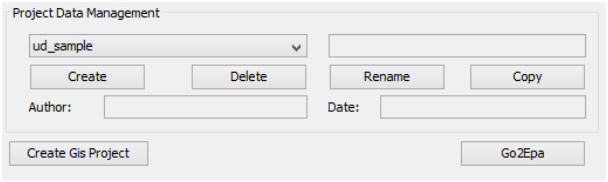
1.1) Escoger el tipo de proyecto (Urban Drainage o Water Suply)



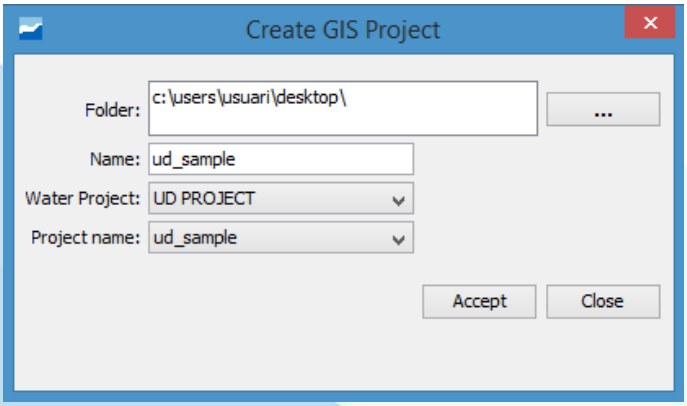
1.2) Configurar la conexión a la base de datos.



2) Menú *Project Data Management,*
Crear un nuevo esquema de plantilla de tablas y vistas, haciendo 'clic' en create Gis Project y luego definiendo en el formulario título, autor y el SRID



3) Crear proyecto de QGIS
Para finalizar, creamos un nuevo proyecto de GIS para visualizar y comenzar a trabajar con los datos del ejemplo. Desde el botón *'Create Gis Project'*, se accede al menú que se muestra a continuación y donde se configuran los siguientes parámetros: Ubicación del archivo, nombre del archivo, tipo de proyecto y el esquema de datos.
Una vez definidos todos estos parámetros, únicamente hay que darle al botón de aceptar y se nos creará nuestro primer proyecto de QGIS que 'ataca' a todas las tablas y vistas de la plantilla de datos creada en el apartado 1.2)



3) Configurar QGIS

Configurar el software QGIS - Crear una conexión de base de datos donde hay los proyectos de datos de esquema con el nombre de 'giswater'

- Para trabajar de forma cómoda y rápida con ráster, ampliar cache de QGIS (options network 1GB, 1 año)

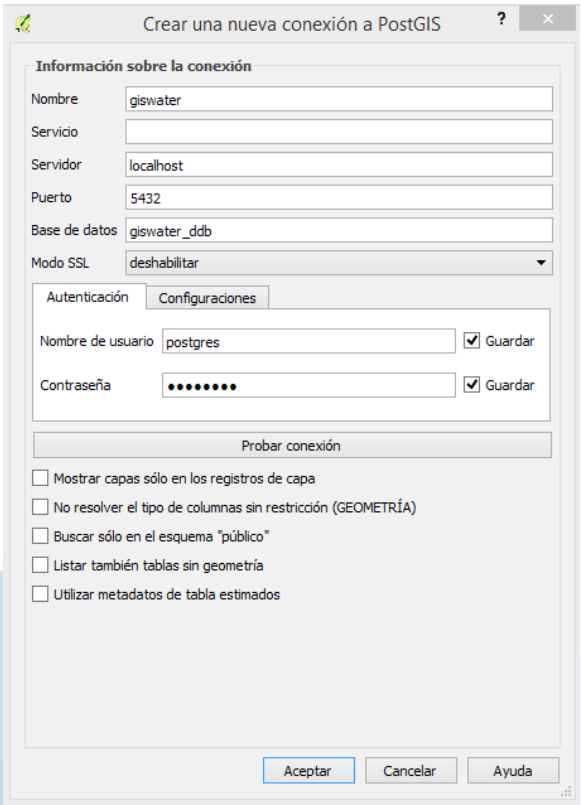
- Escoger abrir formulario si una única entidad es seleccionada

- Plugins recomendados para mejorar la experiencia de usuario de QGIS: plugin reloader, QAD, Table manager, Time manager

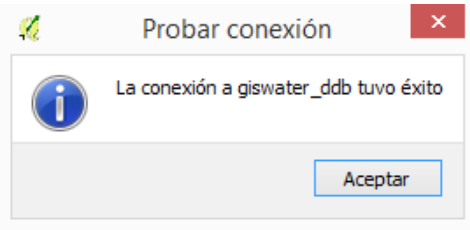
Configurar una connexión de QGIS

1. Iniciamos QGIS y pinchamos sobre el icono **Añadir capa PostGIS**

2.Hacemos clic sobre el botón **Nueva** y en ventana introducimos los parámetros de conexión.



3. Una vez introducidos, hacemos clic sobre el botón **Probar conexión**. Si todo es correcto obtendremos el siguiente mensaje:



4. Pinchamos sobre el botón **OK**. En este momento la información de conexión se guardará con el nombre en la lista de conexiones.

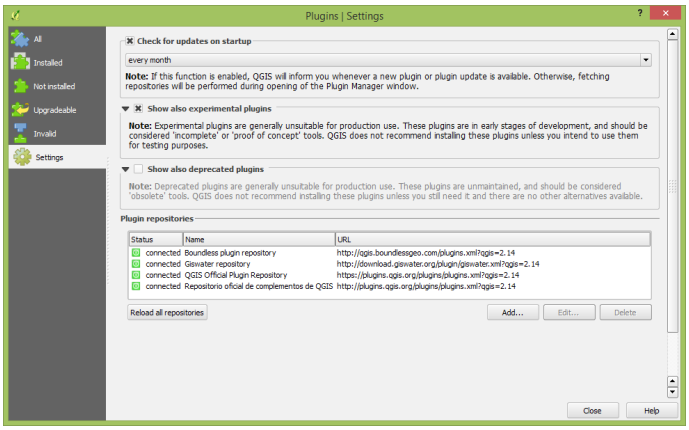
Muy importante: *Para que el plugin Giswater esté operativo necesita conectarse a la base de datos, y lo hace recuperando el nombre de usuario y password de la conexión. Es por ello fundamental que se queden activados los DOS checkbox de 'Guardar Nombre de Usuario' y 'Contraseña'. De lo contrario, el plugin no podrá acceder a la base de datos y no va a funcionar.*

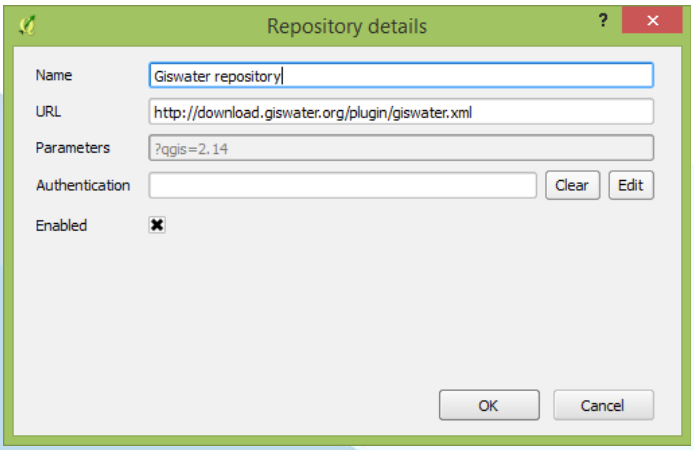
Plugin QGIS

Instalar y conectar el plugin con QGIS hay que configurar un nuevo repositorio y una vez añadido instalar el plugin giswater como cualquier otro plugin.

Lo pasos a seguir son los siguientes:
- Abrir QGIS y acceder al repositorio de plugins.

- Ir a la pestaña 'Configuración' y añadir nuevo repositorio 'https://download.giswater.org/plugin/giswater.xml' (consultar capturas de pantalla adjuntas).





- Por último, una vez configurado el nuevo repositorio, buscar el plugin Giswater en la pestaña 'Todos' e instalar.

Si no sale directamente en la barra de herramientas, hacer clic con el botón derecho del mouse sobre la barra de herramientas y añadirlo.

Configurar el plugin

- Edite el archivo de configuración (C:\Users\usuario\.qgis2\python\plugins\giswater\config\) y configure estas filas en el archivo:

Java_exe = C:\\Archivos de programa (x86) \\ Java \\ jre1.8.0_121 \\ bin \\ java.exe

(la ruta donde tiene su máquina JRE)

Giswater_jar = C:\\Archivos de programa\\Giswater\\2.0\\giswater.jar

(la ruta de su giswater.jar después de instalarlo y reemplazarlo)

Gsw_file = C:\\Users\\usuario\\Giswater\\config\\demo.gsw

(la ruta del archivo giswater.gsw, creada por la GUI de Java de Giswater. Puede crear una nueva usando el menú GUI de Giswater Opciones y después de guardar estas preferencias (archivo de menú / guardar las preferencias del proyecto)

Configurar proyecto

Utilice el botón de configuración para definir las características de su proyecto. Mantenga los valores predeterminados en excepción de:
- Ruta de carpetas para almacenar documentos
- Ruta de carpetas para almacenar archivos del evento

Información Adicional

Pd1: Puede encontrar información sobre tablas y campos en el catálogo de la base de datos. Puedes echar un vistazo a las capas db_cat (db_cat_table, db_cat_columns, db_cat_views)
Pd2: Código fuente: Java: https://github.com/Giswater/giswater; Plugin de QGIS: https://github.com/Giswater/giswater_qgis_plugin

NOTAS MUY IMPORTANTES

- El plugin solo será visible si el proyecto de QGIS cargado dispone de las capas que reconocen este proyecto como un proyecto de Giswater. Estas capas son la capa version y la capa junction. Por consiguiente, sin proyecto cargado

- En el caso de tener más de un proyecto de QGIS abierto, el comportamiento del plugin puede presentar inestabilidades. NO SE RECOMIENDA USAR EL PLUGIN COM MÁS DE UN PROYECTO DE QGIS ABIERTO

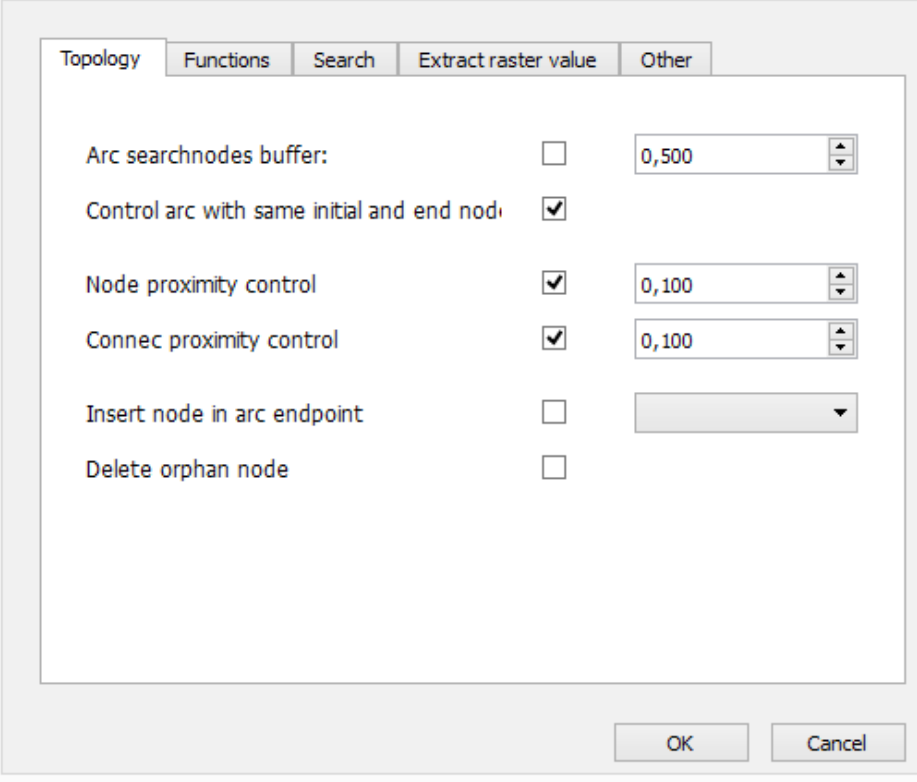
CONFIGURACIÓN DE ENTORNO DE TRABAJO

Config buttom

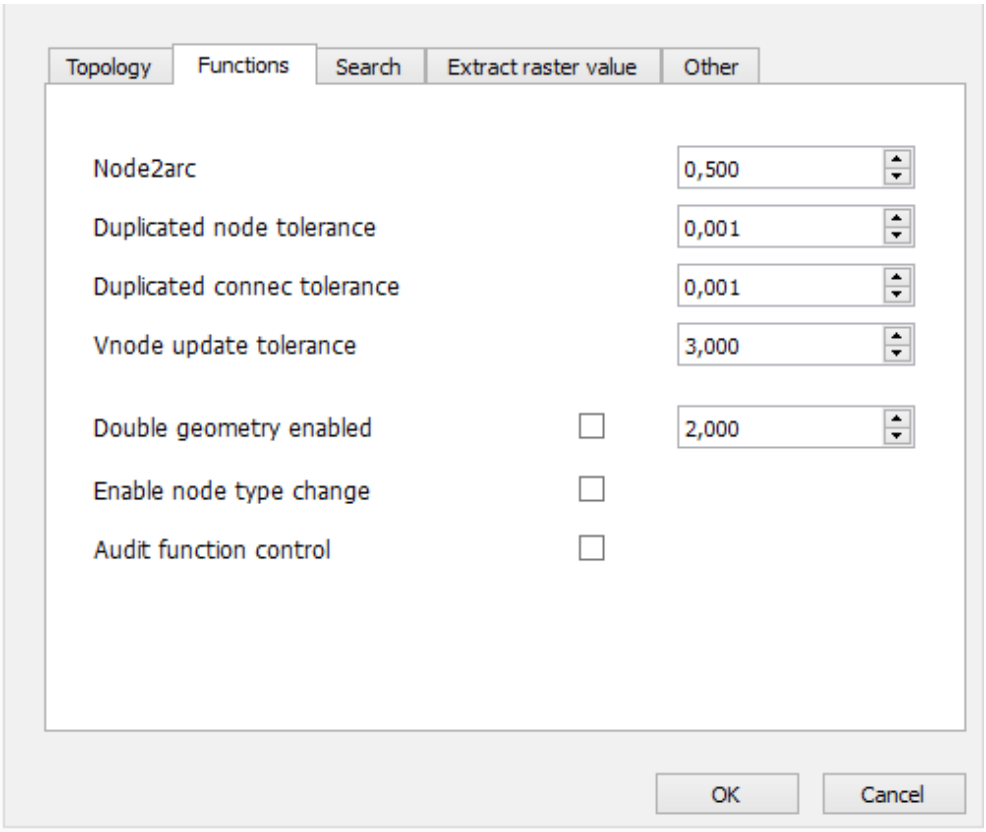
Antes de empezar a trabajar es importante tomar nota de las opciones de configuración que permite la herramienta. Estas opciones están disponibles en el botón de configuración y se organizan en diferentes apartados:

- Topología
- Funciones
- Busca
- Extraer valores de ráster
- Otros

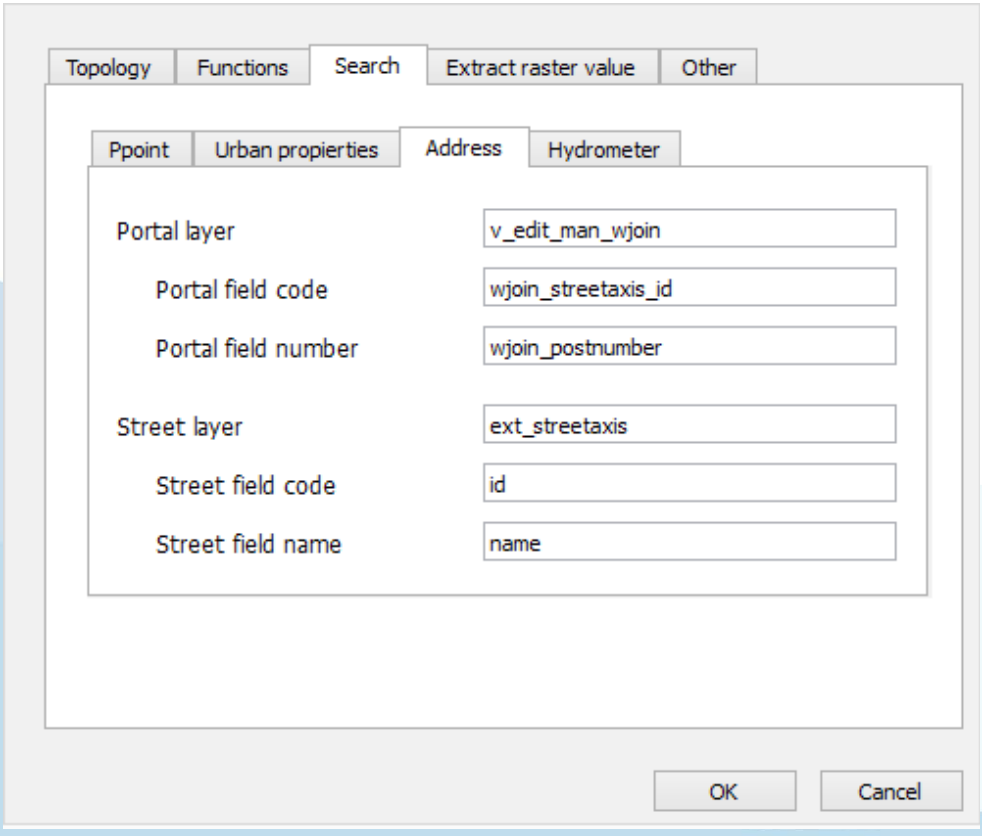
En la primera agrupación (disparadores automáticos de control topológico) se pueden definir de forma personalizada el comportamiento que queremos de las herramientas de topología. Activar o desactivar funcionalidades o configurar la tolerancia de las mismas.

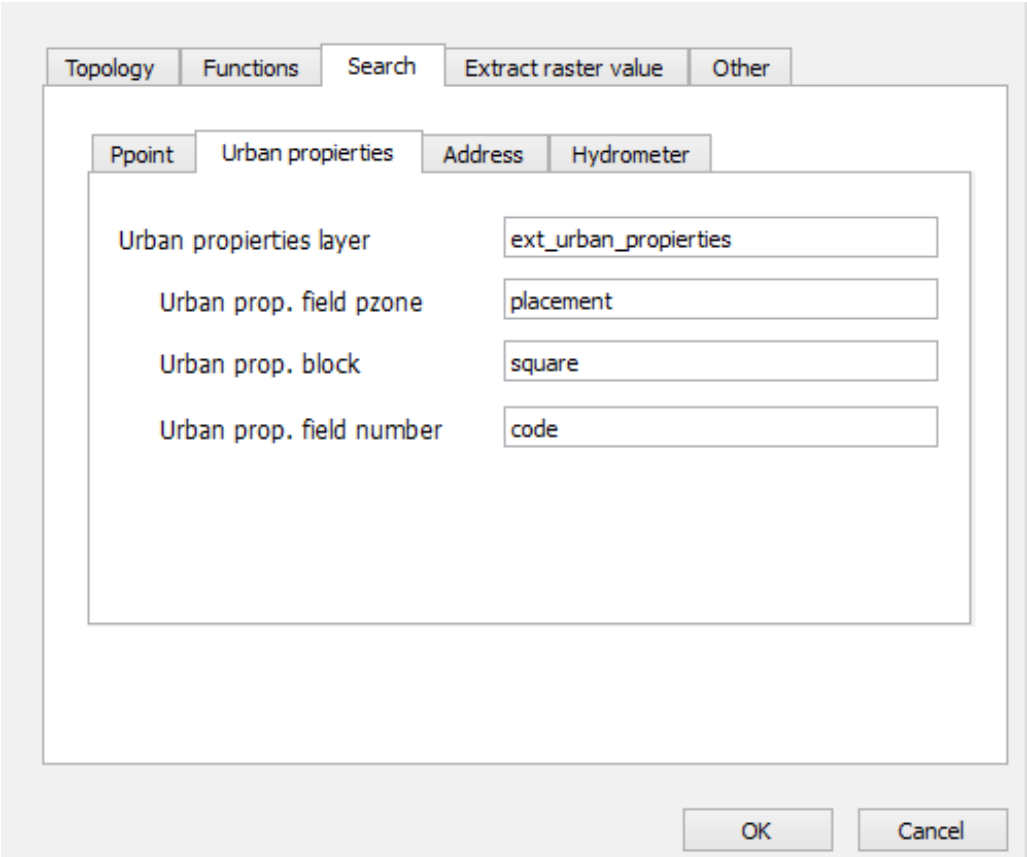


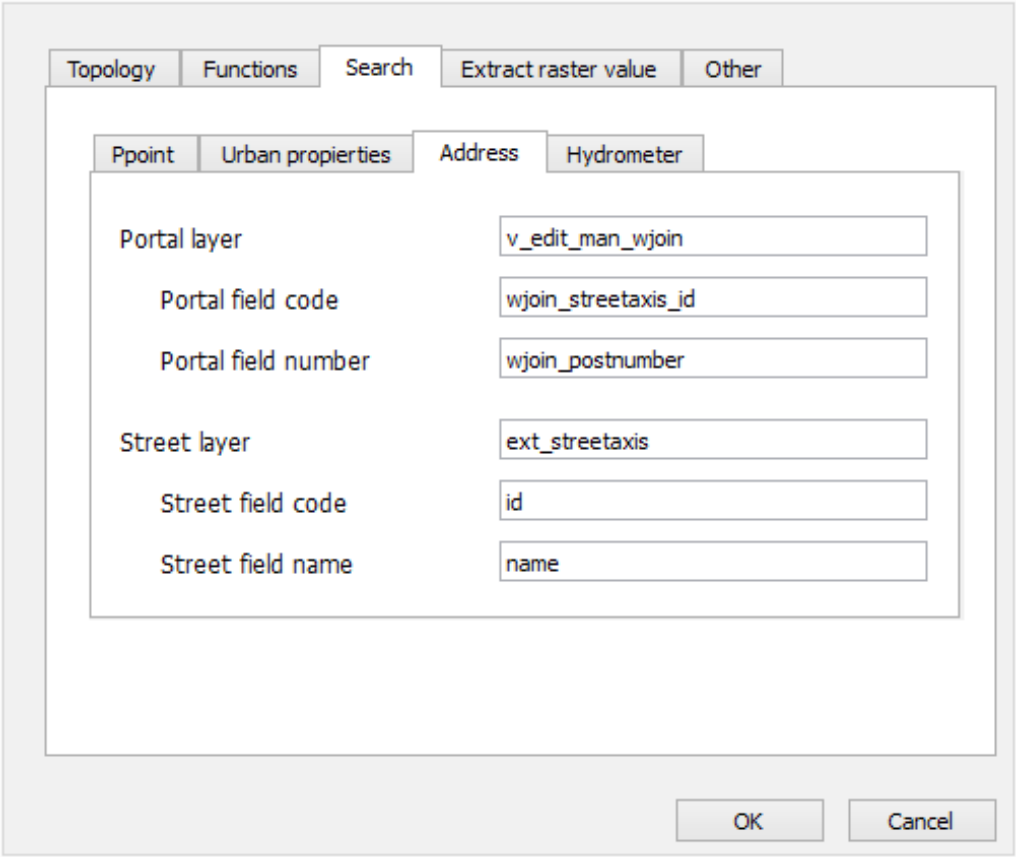
En la segunda agrupación (funciones a demanda de usuario) se pueden definir de forma personalizada el comportamiento que queremos de las funciones a demanda, básicamente definiendo tolerancias o valores por defecto.

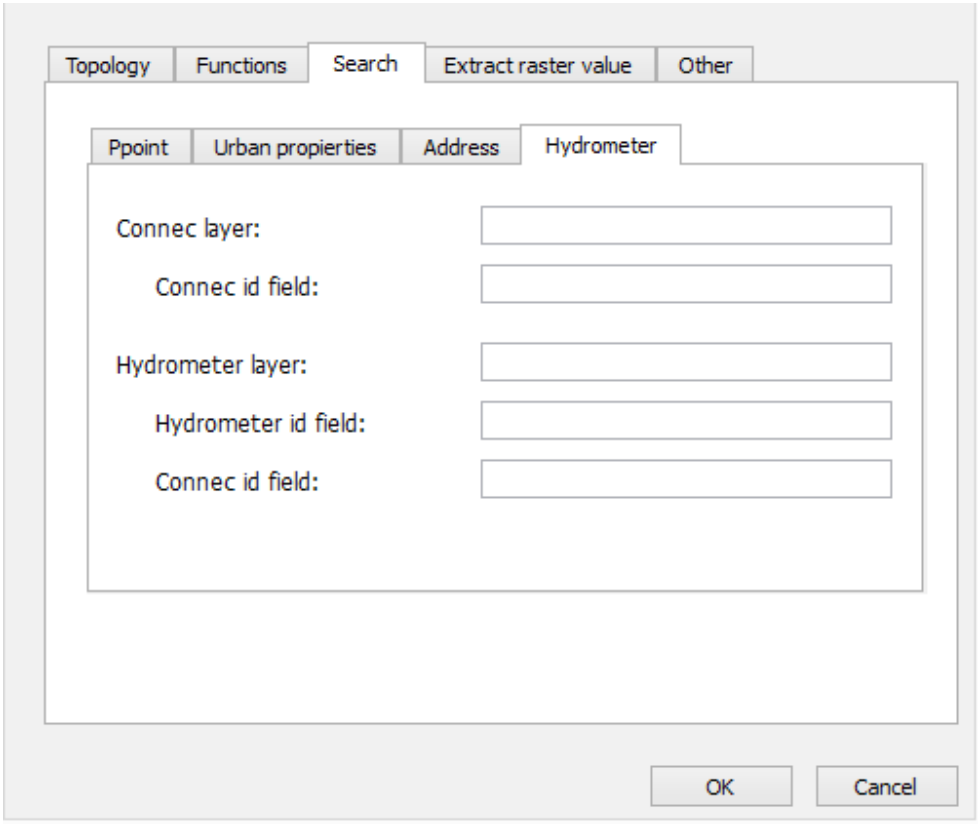


En la tercera agrupación (buscador) se pueden definir de forma personalizada el comportamiento que queremos de la herramienta de busca (por punto, por parcela catastral, por dirección o por hidrometros.

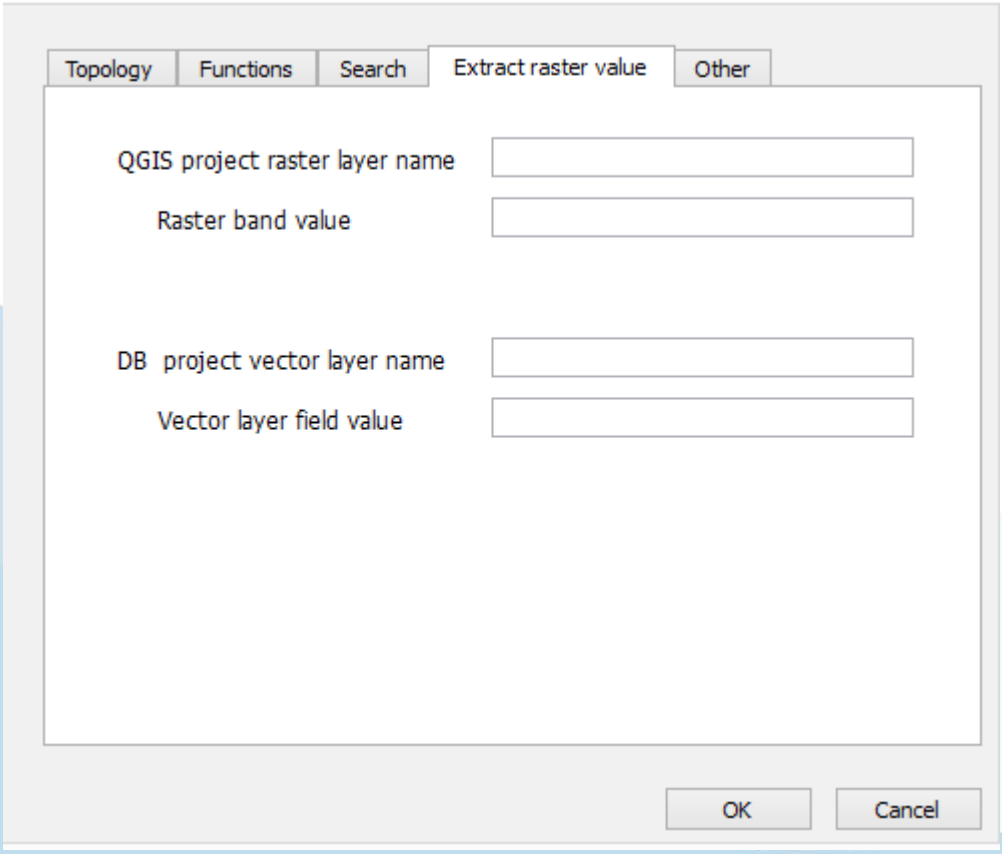



Topology
Functions
Search
Extract raster value
Other
Ppoint
Urban propierties
Address
Hydrometer
Urban propierties layer
ext_urban_propierties
Urban prop. field pzone
placement
Urban prop. block
square
Urban prop. field number
code
OK
Cancel


Topology
Functions
Search
Extract raster value
Other
Ppoint
Urban propierties
Address
Hydrometer
Portal layer
v_edit_man_wjoin
Portal field code
wjoin_streetaxis_id
Portal field number
wjoin_postnumber
Street layer
ext_streetaxis
Street field code
id
Street field name
name
OK
Cancel



En la cuarta agrupación (herramienta de extracción de valores de ráster) se pueden definir de forma personalizada el comportamiento que queremos de la herramienta



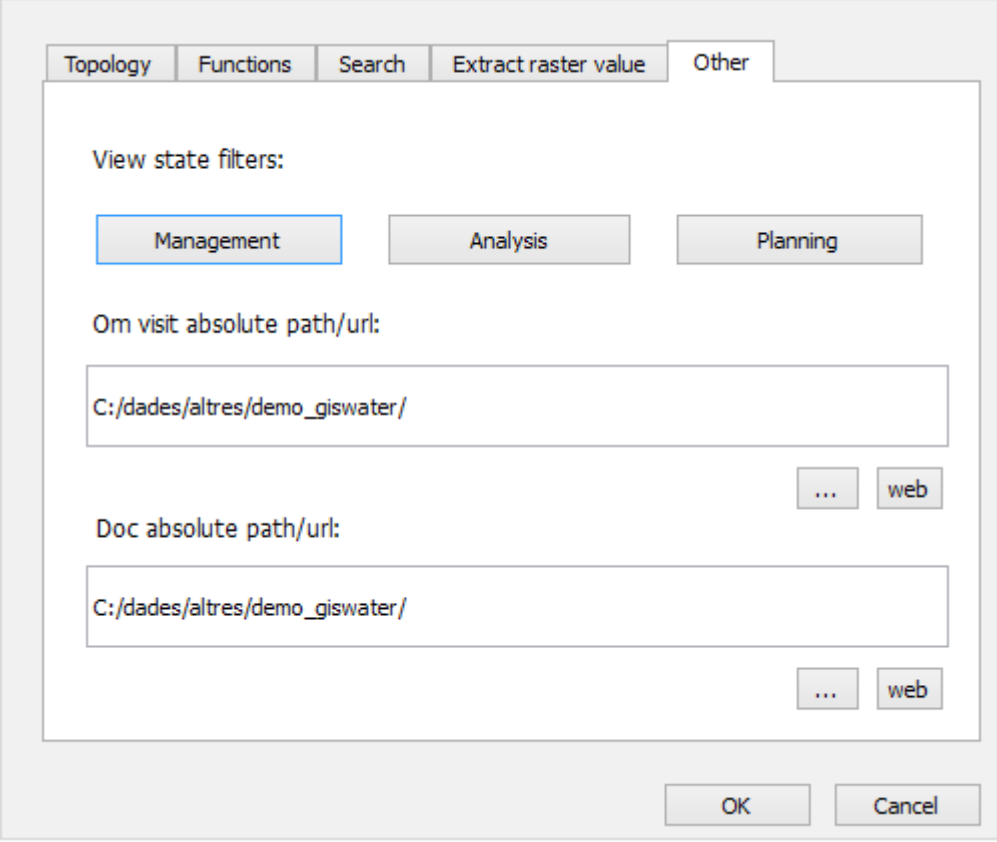
En la quinta agrupación (otros) se pueden definir de forma personalizada el comportamiento que queremos de diferentes herramientas como:

- Que tipo de estado para los elementos queremos que participen de las herramientas de gestión (connec2network)

- Que tipo de estado para los elementos queremos que participen de las herramientas de análisis (polígono de corte, aguas arriba, aguas abajo)

- Que tipo de estado para los elementos queremos que participen de las herramientas de planificación (valor patrimonial)

- Además podemos definir las rutas absolutas en las que vamos a tener documentos, links y demás, de manera que si en un entorno corporativo decidimos mover todo, solo se tendrá que configurar nuevamente para que 'apunten' en la dirección adecuada.



INTRODUCCIÓN A LAS TABLAS DE SISTEMA

Objectos existentes

IDENTIFICADOR DE PROYECTO (version)
TABLA DE TIPOS DE NODO (node_type)
TABLA DE TIPOS DE ARCO (arc_type)
TABLA DE TIPOS DE CONNEXIONES (connec_type)

Las tablas de sistema SON TABLAS QUE DEBEN SER MANIPULADAS POR PERSONAL EXPERTO puesto que alteraciones de los datos de las mismas pueden provocar que el sistema deje de funcionar. A tal efecto comentar que:

VERSION
Esta tabla es la MAS IMPORTANTE de nuestro proyecto Giswater. Se usa para multitud de tareas de sistema y se debe saber que en EL PROYECTO DE QGIS siempre debe existir UNA y SOLO UNA para que el plugin se active (en combinación con la capa junction).

A continuación se muestra el detalle de los campos de la tabla version:

wsoftware	varchar(16)	Identifies the water software compatible with the project
postgres	varchar(512)	Identifies the version of PostgreSQL where the project was created
postgis	varchar(512)	Identifies the version of Postgis where the project was created
id	int4	ID of version. Primary key.
giswater	varchar(16)	Identifies the version of giswater with the project was created
date	timestamp	Date of creation of the schema project
epsg	int4	EPSG of the project
language	varchar	Language version of plugin

NODE TYPE
La tabla nos caracteriza los diferentes tipos de nodo que puede tener nuestro proyecto. El tipo de nodos que el sistema permite - campo type, a partir de ahora '*system node type'* - NO ES MODIFICABLE NI AMPLIABLE. Lo que si se puede es disponer de tantos elementos de tipo de nodo queramos - campo id, a partir de ahora *'custom node type'* - con el mismo atributo de system node type, siempre que este atributo esté en el sistema.

Es importante conocer que:

- Cada *'system node type'* tiene un modelo de datos definido, diferente de los demás. Si se quieren crear nuevos registros de tipos de nodo, deberá antes analizar cual de los diferentes modelos de datos de los nodos de sistema se ajusta más al nuevo *'node custom type*' que queremos crear
- Para cada *'custom node type*' podemos definir un valor por defecto de tipo de elemento en el modelo hidráulico. Este valor por defecto es OBLIGATORIO, pero para cada elemento de red puede ser modificado en cualquier momento por los ingenieros hidráulicos
- El *'custom node type'* nos permite personalizar los nombres de los elementos en el idioma que queramos. Esto permite que aunque el sistema trabaja siempre con el

'system node type' esto va a ser siempre transparente para el usuario que nunca va a ver el *'system node type'* sino que siempre va a trabajar con el '*custom node type'*

A continuación se muestra el detalle de los campos de la tabla node_type

id	varchar(18)	Custom type of node defined by the user. The relation with type is n to 1
type	varchar(18)	Type of node. The data of this field is system data
epa_default	varchar(18)	Default's value of EPA software. The data of this field is system data
man_table	varchar(18)	Name of the table with additional information of feature (management information). The data of this field is system data
epa_table	varchar(18)	Name of the table with additional information of feature (hidraulic model). The data of this field is system data
event_table	varchar(18)	Name of the table with additional information of feature (operation information). The data of this field is system data

ARC TYPE

La tabla arc_type nos caracteriza los diferentes tipos de arco que puede tener nuestro proyecto. Para el caso de proyectos WS, no está siendo explotado, puesto que solo de sispone de un valor que es PIPE. En un futuro Giswater podría incorporar diferentes tipos de arcos si así fuera necesario.

Al igual que para el node_type, lo que si debemos conocer es que:

- Cada *'system arc type*' podria tener un modelo de datos definido, diferente de los demás.
- Para cada *'custom arc type'* podemos definir un valor por defecto de tipo de elemento en el modelo hidráulico. Este valor por defecto es OBLIGATORIO, pero para cada elemento de red puede ser modificado en cualquier momento por los ingenieros hidráulicos
- El *'custom arc type'* nos permite personalizar los nombres de los elementos en el idioma que queramos. Esto permite que aunque el sistema trabaja siempre con el '*system arc type*' esto va a ser siempre transparente para el usuario que nunca va a ver el '*system arc type'* sino que siempre va a trabajar con el *'custom arc type'*

A continuación se muestra el detalle de los campos de la tabla arc_type

id	varchar(18)	Custom type of arc defined by the user. The relation with type is n to 1.
type	varchar(18)	Type of arc. The data of this field is system data
epa_default	varchar(18)	Default's value of EPA software. The data of this field is system data
man_table	varchar(18)	Name of the table with additional information of feature (management information). The data of this field is system data
epa_table	varchar(18)	Name of the table with additional information of feature (hidraulic model). The data of this field is system data
event_table	varchar(18)	Name of the table with additional information of feature (operation information). The data of this field is system data

CONNEC TYPE

La tabla nos caracteriza los diferentes tipos de acometidas que puede tener nuestro proyecto. El tipo de acometidas que el sistema permite - campo type, a partir de ahora '*system connec type'* - NO ES MODIFICABLE NI AMPLIABLE. Lo que si se puede es disponer de tantos elementos de tipo de connec queramos - campo id, a partir de ahora *'custom connec type'* - con el mismo atributo de system node type, siempre que este atributo esté en el sistema.

Es importante conocer que:

- Cada *'system connec type'* tiene un modelo de datos definido, diferente de los demás. Si se quieren crear nuevos registros de tipos de nodo, deberá antes analizar cual de los diferentes modelos de datos de los nodos de sistema se ajusta más al nuevo *'node custom type*' que queremos crear
- Para cada *'custom connec type*' podemos definir un valor por defecto de tipo de elemento en el modelo hidráulico. Este valor por defecto es OBLIGATORIO, pero para cada elemento de red puede ser modificado en cualquier momento por los ingenieros hidráulicos
- El *'custom connec type'* nos permite personalizar los nombres de los elementos en el idioma que queramos. Esto permite que aunque el sistema trabaja siempre con el *'system connec type'* esto va a ser siempre transparente para el usuario que nunca va a ver el *'system connec type'* sino que siempre va a trabajar con el '*custom connec type'*

A continuación se muestra el detalle de los campos de la tabla connec_type

id	varchar(20)	ID of the connect type. Primary key (Custom node type)
type	varchar	System connec type
event_table	varchar	Table wiht information about events of element
man_table	varchar	Table wiht information about inventory data

GISWATER UD – INTRODUCCIÓN A LOS CATÁLOGOS

Objectos existentes:

CATALOGO DE MATERIAL DE NODOS (cat_mat_node)
CATALOGO DE NODOS (cat_node)
CATALOGO DE MATERIAL DE ARCOS (cat_mat_arc)
CATALOGO DE ARCOS (cat_arc)

CATALOGO DE MATERIALES DE ELEMENTO (cat_mat_element)
CATALOGO DE ELEMENTOS (cat_element)
CATALOGO DE ACOMETIDAS (cat_connec)
CATALOGO DE SUELOS (cat_soil)
CATALOGO DE CONSTRUCTORES (cat_builder)
CATALOGO DE EXPEDIENTES DE OBRAS (cat_work)
CATALOGO DE PROPIETARIOS (cat_owner)
CATALOGO DE PAVIMENTOS (cat_pavement)

CATALOGO DE REJAS DE IMBORNAL (cat_grate)
CATALOGO DE ELEMENTOS DE RED (cat_feature)
CATALOGO DE HIDROLOGÍA (cat_hydrology)

Nota: Es indispensable leer y entender el documento de catálogos de WS antes de empezar con este. La información de este catálogo simplemente matiza y modulo la disponible en el WS.

Como empezar a trabajar

Para UD es casi igual que WS, sólo hay que saber UNA cosa más. Tras estudiar la documentación de WS verá que hay un vínculo entre los elementos de catálogo y el tipo de nodo que son. Es decir una 'T' siempre será un JUNCTION, al igual que una valvula de catálogo siempre será un node_type VALVE.

Pues bien, para el caso de UD, la restricción del tipo nodo / tipo arco / tipo acometida no se hace en catálogo, sino que se hace en el elemento. Esto quiere decir que por ejemplo una condución de Ø40HOR no tiene por que ser siempre un CONDUCTO....podría ser un aliviadero

A efectos prácticos para el caso de UD significa que los campos '*node_type*', '*arc_type*', '*connec_type*' no existen en los catálogos de nodo, arco y connec, si no que residen en las propias tablas de arc / node / connec para etiquetar de forma individual a cada elemento.

Catalogos

Respecto a WS comentar que se modifican, aparecen nuevos o desaparecen diferentes catálogos con lo cual aquí van a ser mostrados los que se modifican o aparecen nuevos
Se modifican

CATALOGO DE MATERIAL DE NODOS (cat_mat_node)

id	varchar(30)	ID of node's material catalog. Primary key.
descript	varchar(512)	Field to store additional information about the material
link	varchar(512)	Field to store link to information related to the node's material catalog.
url	varchar(512)	Field to store URL or folder path with more information related to the node's material catalog.
picture	varchar(512)	Picture of a material.
node_id	Varchar(16)	Node identifier
node_type	Varchar(300)	Type of the node
the_geom	public.geometry	Geometry of node

CATALOGO DE NODOS (cat_node)

id	varchar(30)	ID of the node catalog. Primary key.
matcat_id	varchar(16)	ID of the related material type.
geom1	Numeric(12,2)	Full height of the node (ft or m).
geom2	Numeric(12,2)	Auxiliary parameters (width, side slopes, etc.)
geom3	Numeric(12,2)	Auxiliary parameters (width, side slopes, etc.)
value	Numeric(12,2)	Values for catalog
short_des	varchar(30)	Field to store additional information about the catalog.
descript	varchar(255)	Field to store additional information about the catalog.
link	varchar(512)	Field to store link to information related to the node catalog.
url	varchar(512)	Field to store URL or folder path with more information related to the node catalog.
picture	varchar(512)	Image that represents the catalog element
svg	varchar(50)	Symbology.
estimated_y	Numeric(12,2)	In case no data of depth of conduit this depth is used to estimate the budget.
cost_unit	Varchar(3)	Units measurements. (Only ml or ut. are allowed values). Sometimes the budget of an node could be treated as lineal price (using the depth as length to compute the cost)
cost	varchar(16)	(Price_compost.id) of full cost of conduit's subministration and installation
node_id	Varchar(16)	Node identifier
node_conserv	Varchar(16)	Node identifier of the duplicated node
the_geom	public.geometry	Geometry of node

CATALOGO DE MATERIAL DE ARCOS (cat_mat_arc)

id	varchar(30)	ID of arc's material catalog. Primary key.
descript	varchar(512)	Field to store additional information about the material
n	Numeric(12,4)	Roughness of the material.
link	varchar(512)	Field to store link to information related to the arc's material catalog.
url	varchar(512)	Field to store URL or folder path with more information related to the arc's material catalog.
picture	varchar(512)	Picture of a material.

CATALOGO DE ARCOS (cat_arc)

id	varchar(30)	ID of the arc catalog. Primary key.
matcat_id	varchar(16)	Material catalog identifier.
shape	varchar(16)	Cross-section shape.
tsect_id	varchar(16)	Transect identifier.
curve_id	varchar(16)	Curve identifier.
geom1	numeric(12,4),	Full height of the arc (ft or m).
geom2	numeric(12,4)	Auxiliary parameters (width, side slopes, etc.)
geom3	numeric(12,4)	Auxiliary parameters (width, side slopes, etc.)
geom4	numeric(12,4)	Auxiliary parameters (width, side slopes, etc.)
geom_r	varchar(20)	Real geometry of an arc.
short_des	varchar(16)	Field to store additional information about the catalog.
descript	varchar(255)	Field to store additional information about the catalog.
link	varchar(512)	Field to store link to information related to the arc catalog.
url	varchar(512)	Field to store URL or folder path with more information related to the arc catalog.
picture	varchar(512)	Picture of an arc.
svg	varchar(50)	Symbology.
z1	Numeric(12,2)	Distance from the bottom of the trench of conduit to the top of the conduit's protection material
z2	Numeric(12,2)	Distance from the top of the conduit to the top of the conduit's protection material
width	Numeric(12,2)	Maximum width of the conduit's section (by point of view of constructive issues). Often is the same value that (geom2 + 2*bulk)
area	Numeric(12,4)	Full area of the conduit's section
bulk	Numeric(12,2)	Bulk of the conduit. It consider the same bulk for all the walls of the conduit
cost_unit	Varchar(3)	Units measurements. (Only ml or ut. are allowed values). Sometimes the budget of an arc could be treated as unitary price (applied using length=1)
cost	varchar(16)	(Price_compost.id) of full cost of conduit's subministration and installation
m2bottom_cost	varchar(16)	(Price_compost.id) of full cost of bottom's trench arrangement
m3protec_cost	varchar(16)	(Price_compost.id) of full cost of conduit's proteccion material
estimated_depth	numeric(12,2)	In case no data of depth of conduit this depth is used to estimate the budget.
node_id	Varchar(16)	Node identifier
num_arcs	integer	Number of arcs joining the node
the_geom	public.geometry	Geometry of node
geom6	numeric	Auxiliary parameters (width, side slopes, etc.)
geom8	numeric	Auxiliary parameters (width, side slopes, etc.)
geom5	numeric	Auxiliary parameters (width, side slopes, etc.)
geom7	numeric	Auxiliary parameters (width, side slopes, etc.)

CATALOGO DE ACOMETIDAS (cat_connec)

id	varchar(30)	ID of the connect catalog. Primary key.
type	varchar(16)	Type of the connect.
matcat_id	varchar(16)	Material catalog identifier.
shape	varchar(16)	Cross-section shape.
tsect_id	varchar(16)	Transect identifier.
curve_id	varchar(16)	Curve identifier.
geom1	numeric(12,4),	Full height of the connect (ft or m).
geom2	numeric(12,4)	Auxiliary parameters (width, side slopes, etc.)
geom3	numeric(12,4)	Auxiliary parameters (width, side slopes, etc.)
geom4	numeric(12,4)	Auxiliary parameters (width, side slopes, etc.)
geom_r	varchar(20)	Real geometry of a connect.
short_des	varchar(16)	Field to store additional information about the catalog.
descript	varchar(255)	Field to store additional information about the catalog.
link	varchar(512)	Field to store link to information related to the connect catalog.
url	varchar(512)	Field to store URL or folder path with more information related to the connect catalog.
picture	varchar(512)	Image that represents the catalog element
svg	varchar(50)	Symbology.

Se muestran a continuación aquellos catálogos que no existen en WS

CATALOGO DE REJAS DE EMBORNAL (cat_grate)

id	varchar(30)	ID of the grate catalog. Primary key.
type	varchar(30)	Type of the grate.
matcat_id	varchar(16)	Material catalog identifier.
length	numeric(12,4),	Length of the grate.
width	numeric(12,4)	Width of the grate.
total_area	numeric(12,4)	Total area of the grate.
efective_area	numeric(12,4)	Effective area of the grate.
n_barr_l	numeric(12,4)	Number of length barrels
n_barr_w	numeric(12,4)	Number of width barrels
n_barr_diag	numeric(12,4)	Number of obliquous barrels
a_param	numeric(12,4)	A parameter. Needed if you like to simulate it
b_param	numeric(12,4)	B parameter. Needed if you like to simulate it
descript	varchar(255)	Field to store additional information about the catalog.
link	varchar(512)	Field to store link to information related to the grate catalog.
url	varchar(512)	Field to store URL or folder path with more information related to the grate catalog.
picture	varchar(512)	Image that represents the catalog element
svg	varchar(50)	Symbology.

CATALOGO DE ELEMENTOS DE RED (cat_feature)
Simplemente actúa como dominio de valores de campos featurecat_id

id	varchar	Feature identifier. Primary key

CATALOGO DE HIDROLOGÍA (cat_hydrology)

id	varchar(20)	Hydrology catalog identifier.
infiltration	varchar(20)	Infiltration parameter.
descript	varchar(255)	Field to store additional information about the feature.

GISWATER WS – INTRODUCCIÓN A LOS CATÁLOGOS

Objectos existentes

CATALOGO DE MATERIAL DE NODOS (cat_mat_node)
CATALOGO DE NODOS (cat_node)
CATALOGO DE MATERIAL DE ARCOS (cat_mat_arc)
CATALOGO DE ARCOS (cat_arc)
CATALOGO DE MATERIALES DE ELEMENTO (cat_mat_element)
CATALOGO DE ELEMENTOS (cat_element)
CATALOGO DE ACOMETIDAS (cat_connec)
CATALOGO DE SUELOS (cat_soil)
CATALOGO DE CONSTRUCTORES (cat_builder)
CATALOGO DE EXPEDIENTES DE OBRAS (cat_work)
CATALOGO DE PROPIETARIOS (cat_owner)
CATALOGO DE PAVIMENTOS (cat_pavement)
CATALOGO DE ZONAS DE PRESION (cat_press_zone)
CATALOGO DE RUGOSIDADES (inp_cat_roughness)

Descripción

Trabajar con catálogos es una de las principales características que tiene Giswater, y ello es posible porque nos encontramos en un entorno de base datos.

De hecho antes de empezar a trabajar con nuestro proyecto deberemos construir almenos los catálogos de arco y nodo para poder introducir un simple registro en las capas del conjunto de arco (1 en WS y 4 en UD) y del conjunto de nodo (unas 10 en WS y unas 7 en UD)

Su función es múltiple. Entre otras características nos permiten catalogar la información para estandarizar valores, poner valor económico en cada uno de los elementos de red o caracterizar la propiedades de los elementos para uso en el modelo hidráulico.

Es interesante conocer que existen cuatro tipologías de catálogos:

Elementos topológicos: Dado que la red está basada en topología arco-nodo los catálogos sobre los que pivotan estos elementos serán los más importantes de nuestra red (catalogo de nodos y catalogo de arcos)

Otros elementos de red: Los elementos que complementan nuestra red son connec o element (WS) y connec, gully, element (UD) quienes tienen sus correspondientes catálogos. Comentar que para el caso de gully el catálogo hace referencia a las rejas (cat_grate)

De gestión: Como complemento a los catálogos de red, existen otras tablas en la geodatabase que también actúan como catálogos, ya puedan ser suelos, constructores,

expedientes de obras, propietarios, pavimentos....

De modelo hidráulico: Necesarios para la construcción de un modelo hidráulico de calidad. En este sentido para UD tenemos el catálogo de hidrología, que permite realizar diferentes escenarios de simulación cambiando las condiciones de hidrológica urbana, así cómo para WS tenemos el catálogo de rugosidades, que permiten diferenciar rugosidades en función de la edad del material

Pre-dependencias

Antes de empezar a trabajar los catálogos se deben tener rellenadas las tablas de sistema que tipifican los diferentes elementos de nuestra red.

node_type (para el caso de catálogo de nodo)
arc_type (para el caso de catálogo de arco)
connec_type (para el caso de catálogo de conexiones)

Post-dependencias

Los catálogos generan muchas dependencias, de hecho deben llenarse antes de empezar a trabajar puesto que sus registros serán solicitados en muchas tablas de sistema.

Además, se debe comentar que los catálogos también tienen dependencias entre ellos. En este sentido antes de llenar los catálogos de arco y nodo se deben llenar los catálogos precedentes que son el de materiales de nodo y el de materiales de arco

Para empezar a trabajar

- Debemos tener rellenadas nuestras tablas de sistema (node_type, arc_type, connec_type) con el que vamos a conocer que tipos de elementos tenemos (o queremos tener) en nuestro inventario
- Debemos saber cuantos elementos diferentes (que dan lugar a catálogo queremos gestionar)

Detalle

*Nota: La información detallada en el presente apartado ha sido extraída 'tal cual' de las tablas de catálogo de la geodatabase ('db_cat_table' y 'db_cat_table_x_column') donde se detalla para c**ada tabla y para cada campo** una breve explicación del mismo*

CATALOGO DE MATERIALES DE TRAMO (cat_mat_arc)

id	varchar(30)	ID of arc's material catalog. Primary key.
descript	varchar(512)	Field to store additional information about the material
roughness	Numeric(12,4)	Roughness of the material.
link	varchar(512)	Field to store link to information related to the arc's material catalog.
url	varchar(512)	Field to store URL or folder path with more information related to the arc's material catalog.
picture	varchar(512)	Picture related to the material.

CATALOGO DE MATERIALES DE NODO (cat_mat_node)

id	varchar(30)	ID of node's material catalog. Primary key.
descript	varchar(512)	Field to store additional information about the material.
roughness	Numeric(12,4)	Roughness of the material.
link	varchar(512)	Field to store link to information related to the node's material catalog.
url	varchar(512)	Field to store URL or folder path with more information related to the node's material catalog.
picture	varchar(512)	Picture of a material.

CATALOGO DE TRAMOS (cat_arc)

id	varchar(30)	ID of the arc catalog. Primary key.
arctype_id	varchar(16)	Type of arc identifier related to the primary key of arc_type table.
matcat_id	varchar(30)	Material catalog identifier.
pnom	varchar(16)	Nominal pressure.
dnom	varchar(16)	Nominal diameter.
dint	Numeric(12,5)	Internal diameter of the arc
dext	Numeric(12,5)	Diameter exterior.
descript	varchar(512)	Field to store additional information about the catalog.
link	varchar(512)	Field to store link to information related to the arc catalog.
url	varchar(512)	Field to store URL or folder path with more information related to the arc catalog.
picture	varchar(512)	Picture of an arc.
svg	varchar(50)	Symbology.
z1	Numeric(12,2)	Distance from the bottom of the trench of conduit to the top of the conduit's protection material
z2	Numeric(12,2)	Distance from the top of the conduit to the top of the conduit's protection material
width	Numeric(12,2)	Maximum width of the conduit's section (by point of view of constructive issues). Often is the same value that (geom2 + 2*bulk)
area	Numeric(12,4)	Full area of the conduit's section
estimated_depth	Numeric(12,2)	In case no data of depth of conduit this depth is used to estimate the budget.
bulk	Numeric(12,2)	Bulk of the conduit. It consider the same bulk for all the walls of the conduit
cost_unit	Varchar(3)	Units measurements. (Only ml or ut. are allowed values). Sometimes the budget of an arc could be treated as unitary price (applied using length=1)
cost	varchar(16)	(Price_compost.id) of full cost of conduit's subministration and installation
m2bottom_cost	varchar(16)	(Price_compost.id) of full cost of bottom's trench arrangement
m3protec_cost	varchar(16)	(Price_compost.id) of full cost of conduit's proteccion material

CATALOGO DE NODOS (cat_node)

id	varchar(30)	ID of the node catalog. Primary key.
nodetype_id	varchar(16)	ID of the related node type.
matcat_id	varchar(30)	ID of the related material type.
pnom	varchar(16)	Nominal pressure.
dnom	varchar(16)	Nominal diameter.
dint	Numeric(12,5)	Internal diameter of the node
geometry	varchar(30)	Geometry of the node.
descript	varchar(512)	Field to store additional information about the catalog.
link	varchar(512)	Field to store link to information related to the node catalog.
url	varchar(512)	Field to store URL or folder path with more information related to the node catalog.
picture	varchar(512)	Picture of an arc.
svg	varchar(50)	Pictogram of the symbology.
estimated_depth	Numeric(12,2)	In case no data of depth of conduit this depth is used to estimate the budget.
cost_unit	Varchar(3)	Units measurements. (Only ml or ut. are allowed values). Sometimes the budget of an node could be treated as lineal price (using the depth as length to compute the cost)

CATALOGO DE MATERIALES DE ELEMENTO (cat_mat_element)

id	varchar(30)	ID of element's material catalog. Primary key.
descript	varchar(512)	Field to store additional information about the material.
link	varchar(512)	Field to store link to information related to the element's material catalog.
url	varchar(512)	Field to store URL or folder path with more information related to the element's material catalog.
picture	varchar(512)	Picture of the material.

CATALOGO DE ELEMENTOS (cat_element)

id	varchar(30)	ID of the element catalog. Primary key.
elementtype_id	varchar(30)	Element type identifier.
matcat_id	varchar(30)	Material catalog identifier.
geometry	varchar(30)	Geometry of the element.
descript	varchar(512)	Field to store additional information about the catalog.
link	varchar(512)	Field to store link to information related to the element catalog.
url	varchar(512)	Field to store URL or folder path with more information related to the element catalog.
picture	varchar(512)	Picture of the element.
svg	varchar(50)	Pictogram of the symbology.

CATALOGO DE ACOMETIDAS (cat_connec)

type	varchar(16)	Type of the connect.
id	varchar(30)	ID of the connect catalog. Primary key.
matcat_id	varchar(16)	Material catalog identifier.
pnom	varchar(16)	Nominal pressure.
dnom	varchar(16)	Nominal diameter.
geometry	varchar(30)	Geometry of the connect.
descript	varchar(512)	Field to store additional information about the catalog.
link	varchar(512)	Field to store link to information related to the connect catalog.
url	varchar(512)	Field to store URL or folder path with more information related to the connect catalog.
picture	varchar(512)	Picture of the connect.
svg	varchar(50)	Pictogram of the symbology.

CATALOGO DE SUELOS (cat_soil)

id	varchar(30)	ID of the soil. Primary key.
descript	varchar(512)	Description of a soil type. Additional information
link	varchar(512)	Field to store link to information related to the soil catalog.
url	varchar(512)	Field to store URL or folder path with more information related to the soil catalog.
picture	varchar(512)	Picture of the soil
y_param	Numeric(5,2)	Slope of the wall of the trench. On the expression (a:y_param) 'a' is the horitzontal distance and y_param is the vertical distance of the slope of the trench.

CATALOGO DE CONSTRUCTORES (cat_builder)

id	varchar(30)	ID of the builder. Primary key.
descript	varchar(512)	Description of the builder. Additional information
link	varchar(512)	Field to store link to information related to the builder catalog.
url	varchar(512)	Field to store URL or folder path with more information related to the builder catalog.
picture	varchar(512)	Picture of the builder.

CATALOGO DE EXPEDIENTES DE OBRAS (cat_work)

id	varchar(30)	ID of the work. Primary key.
descript	varchar(512)	Description of the construction work. Additional information
link	varchar(512)	Field to store link to information related to the work catalog.
picture	varchar(512)	Picture of the construction work.

CATALOGO DE PROPIETARIOS (cat_owner)

id	varchar(30)	ID of the owner. Primary key.
descript	varchar(512)	Description of the owner.
link	varchar(512)	Field to store link to information related to the owner catalog.
picture	varchar(512)	Picture of the owner.

CATALOGO DE PAVIMENTOS (cat_pavement)

id	Varchar(16)	ID of the pavement. Primary key.
descript	text	Description of the pavement. Additional information
link	varchar(512)	Field to store link to information related to the pavement.
picture	varchar(512)	Picture of the pavement.
thickness	Numeric(12,2)	Value of pavement thickness.
m2_cost	Varchar(16)	(Price_compost.id) of the full cost of pavement demolition and reconstruction.

CATALOGO DE ZONAS DE PRESIÓN (cat_press_zone)

id	Varchar(18)	ID of the press zone. Primary key.
descript	text	Description of the pressure zone. Additional information
link	Varchar(512)	Field to store link to information related to the pressure zone.
picture	Varchar(512)	Picture of the pressure zone.

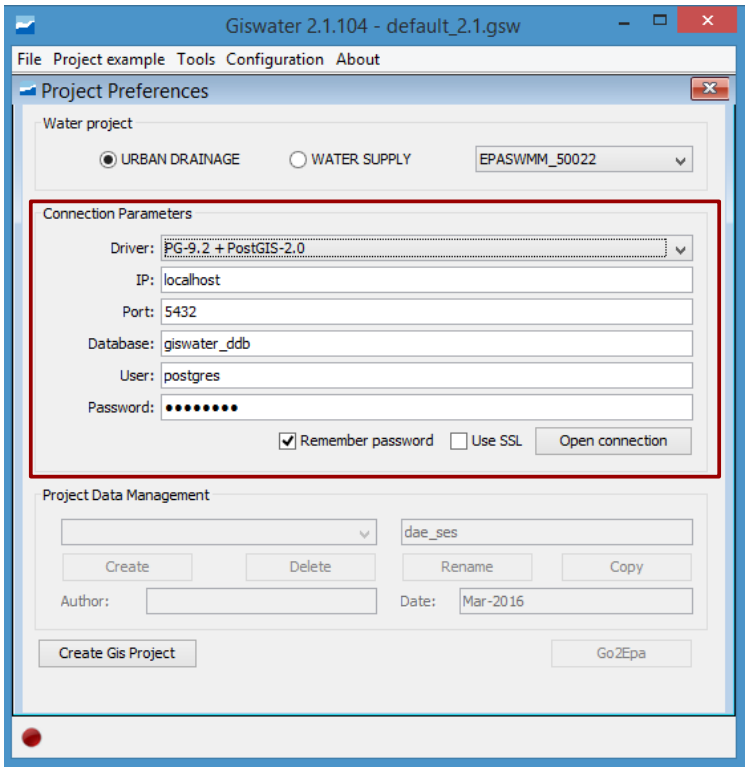
CATALOGO DE RUGOSIDADES (inp_cat_roughness)

id	varchar	Cat mat roughness identifier.
matcat_id	varchar	Material catalog identifier.
descript	text	Description
roughness	numeric	Roughness of the material.
period_id	varchar	Period identifier.
start_age	int4	Start date
end_age	int4	End date

CREACIÓN DEL PROYECTO SAMPLE

Para facilitar al usuario los primeros pasos con Giswater y tener un modelo de datos completo que sirva como fuente de consulta, Giswater incorpora dos esquemas de ejemplo, tanto para drenaje urbano 'ud_sample', como para redes de abastecimiento 'ws_sample'.

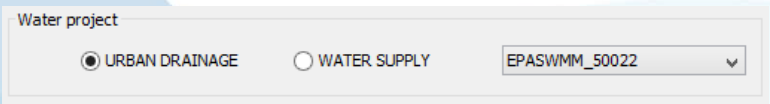
Tener un primer modelo de datos completo, a parte de servir como fuente de consulta para ver como se estructuran los datos dentro de cada una de las tabla, permitirá al usuario iniciarse con el plugin Giswater y practicar con todas las funcionalidades que contiene.



Como requisitos previos a la creación del proyecto de ejemplo, desde el menú de *'Project Preferences'* se debe de configurar la conexión a la base de datos.

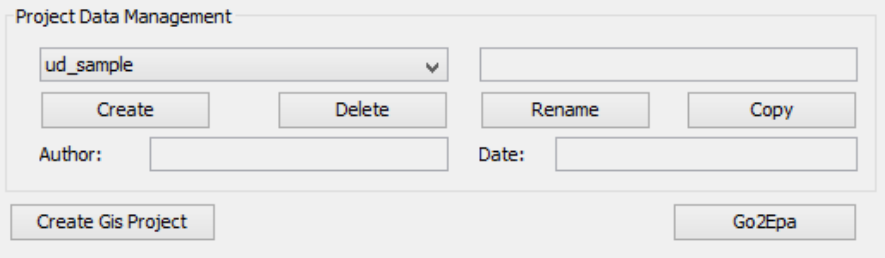
A continuación se definen los pasos a seguir para la creación de nuestro primer proyecto de ejemplo:

En primer lugar definir el tipo de proyecto el cual se quiere trabajar, URBAN DRAINAGE o bien WATER SUPPLY.



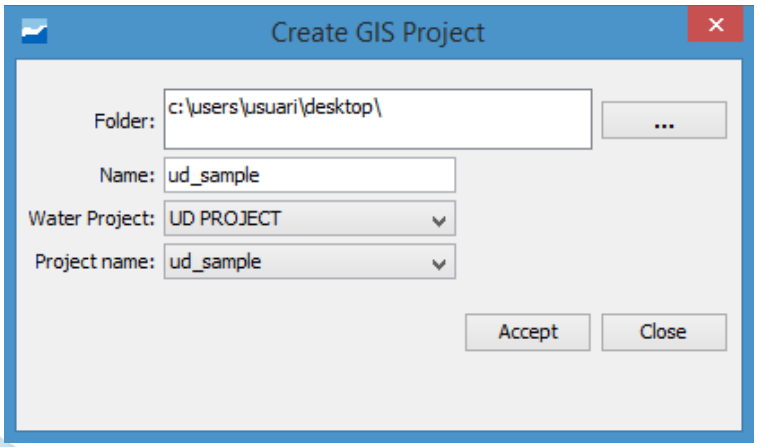
Seguidamente y con la conexión a la base de datos abierta, accedemos des de la barra de menú superior a *Project example,* para escoger el tipo de ejemplo a crear.

Al crear el ejemplo, automáticamente en *Project Data Management* aparecerá un nuevo esquema con los datos del ejemplo que se haya seleccionado, en el caso de haber creado el ejemplo de drenaje urbano, aparecerá un nuevo esquema con el nombre *'ud_sample',* si el ejemplo creado es de red de abastecimiento, el esquema creado se nombrará *'ws_sample'.*



Para finalizar, creamos un nuevo proyecto de GIS para visualizar y comenzar a trabajar con los datos del ejemplo. Desde el botón *'Create Gis Project',* se accede al menú que se muestra a continuación y donde se configuran los siguientes parámetros: Ubicación del archivo, nombre del archivo, tipo de proyecto y el esquema de datos.

Una vez definidos todos estos parámetros, únicamente hay que darle al botón de aceptar y se nos creará nuestro primer proyecto sample.



EXPORTACIÓN – IMPORTACIÓN DE MODELO HIDRÁULICO

El proceso de exportación-importación a modelo hidráulico se realiza casi exactamente igual que en la versión 1.1 de Giswater (el driver se mantiene intacto) pero se han introducido las siguientes mejoras:

1) Se puede seleccionar enviar a modelo los elementos en función de su estado (STATE) en servicio, obsoleto, planificado, con la única condición que tengan coherencia hidráulica, es decir si en un sector solo tengo un deposito (state=en servicio) y mando a modelo hidráulico solo los planificados.....no va a poder ser...

2) Para el caso de proyectos WS es posible configurar la rugosidad en función de la edad de la tuberia. Para ello se debe usar la tabla inp_cat_roughness y se debe asignar una edad al elemento. En caso de no asignar fecha de construcción al elemento este se considerará nuevo a efectos de tomar valor de rugosidad.

3) Para el caso de WS aparecen unos elementos nuevos a los que hemos bautizado como nodarcos. Los nodarcos son aquellos elementos que en la gestión de inventario son nodos reguladores de flujo, como puede ser el caso de válvulas o bombas, pero que en modelo hidráulico deben ser arcos, puesto que un regulador de flujo de forma conceptual siempre es un elemento 'arco' que regula flujo entre dos nodos diferentes.

Giswater resuelve esta dualidad con los elementos 'nodarco' que son definidos a demanda de usuario en la tabla de sistema (node_type) que tiene como principales propiedades:

Todos aquellos elementos que sean etiquetados como SHORTIPE / VALVE / PUMP (nodarcos) y que por consiguiente su información de modelo se almacene en las tablas

- inp_shortpipe
- inp_valve
- inp_pump

serán nodos explotados a arcos, pero DEBIENDO CUMPLIR TODOS ELLOS que tienen 1 o 2 arcos extremales (no serán validos CERO o MÁS DE DOS arcos)

EN EL PROCESO DE TRANSFORMACIÓN de NODO para ARCO:

- Se genera una nueva geometría tipo ARCO de 0,5 metros o menos (sufijo _n2a)
- Se generan dos nuevos nodos tipo JUNCTION (sufijos n2a1 y n2a2)
- Se 'recortan' las geometrías arco de los arcos existentes para dar cabida al nuevo arco

Los atributos de los elementos JUNCTION se HEREDAN del nodo padre
Los atributos de los elementos ARCO se heredan de uno de los dos arcos extremales (material, diámetro, etc...)

La nueva topología de red es almacenada en las tablas

- temp_arc
- temp_node

Se exporta al modelo hidráulico la información de las tablas inp con la geometría de las temp
Se importan los resultados mapeando contra las geometrías de las tablas temp

NOTAS para la versión 2.1

- NO EXISTE LLAVE FORÁNEA entre NODE_ID, ARC_ID de las tablas de resultados y los ARC_ID & NODE_ID de las tablas temporales lo que conlleva que:

- En cada proceso de generación de exportación todos los registros de temp_arc & temp_node son borrados, no así los resultados asociados a ellos puesto que no tienen FK

- El único vinculo para mapear resultados es tener el mismo arc_id & node_id, de manera que si se pierden, no se mostraran.

NOTAS para la versión 2.2

- Se añade de nuevo la llave foranea entre node_id, arc_id en las tablas de resultado

DETERMINANDO EL VALOR PATRIMONIAL

Existen diversos campos de los catálogos previstos para ello, de manera que lo primero que hay que hacer es proceder al llenado de los mismos:

CAT_ARC
- z1,
- z2,
- width,
- area,
- estimated_depth,
- bulk (cuidado UD (m) WS (mm)),
- cost_unit,
- cost,
- m2bottom_cost,
- m3protec_cost

CAT_PAVEMENT
- thickness,
- m2_cost

CAT_SOIL
- y_param,
- b,
- trenchlining,
- m3exc_cost,
- m3fill_cost,
- m3excess_cost,
- m2trenchl_cost,

CAT_NODE
- estimated_y,
- cost_unit,
- cost,

NOTA: ABSOLUTAMENTE OBLIGADO PONER TODOS LOS VALORES!!!!!!!!

Una vez realizado este trabajo solo nos quedará vincular los elementos con sus catálogos

ARC con
- catarc (arc.catarc_id)
- catpav (plan_arc_x_pavement)
- catsoil (arc.soilcat_id)

NODE con
- catnode (node.catnode_id)

MODELO MATEMÁTICO EN TIEMPO REAL (RTC) PARA WS

Giswater 2.0 está preparado para simular datos de caudales para WS en tiempo real, lo cual permite calibrar con datos reales los resultados del modelo obtenidos. A tal efecto, el workflow de trabajo de datos reales de red de agua potable es el siguiente:

Para mostrar en GIS:
Se consultan y están disponibles todos los datos de campo del SCADA (caudal & presiones) de los DMC usando rtc_scada_value

Se consultan y están disponibles la información del banco de dados comercial de consumos mensuales de hidrómetros usando rtc_hydrometer_value

Para hacer calculo EPANET:
En la tabla de ext_cat_period se definen y almacenan los diferentes periodos de los cuales se podrá hacer una consulta agregada de todos los datos del SCADA y de HYDROMETER

Con información de un periodo concreto definida en rtc_period, se registran en la tabla ext_rtc_dma_period los valores para los diferentes DMA, consiguiendo tener para un periodo dado:

- Caudales de contorno (diferencia entre los caudales entrantes y salientes medidos por los macromedidores) máximos mínimos y medios
- Caudal total mensual.

Estos datos se comparan con los valores agregados de todos los consumidores dentro de la DMA por un periodo de tiempo dado (cat_period) y se comparan con los anteriores para establecer el coeficiente de perdidas. En base al coeficiente de perdidas y los factores de máximo / mínimo en base a los valores de ext_rtc_dma_period ya se puede enviar a EPANET los valores compensados:

Nota: La agregación de los valores de caudal para cada hidrómetro se hace de la siguiente manera:

1- Se toma la lectura del valor total de hidrómetro del periodo seleccionado
2- Se le aplica el coeficiente de perdidas que esté consignado en la DMA
3- Se le aplica el coeficiente de máximo/mínimo, según haya sido escogido por el usuario
4- Se agregan los diferentes valores de hidrómetros de un solo connec
5- Se agregan los diferentes valores de todos los connec para un solo arc
6- Se procede a la división al 50% de los valores de caudal para un arc dado entre sus nodos extremales
7- Se procede al sumatorio de todos los valores que recibe cada node procedente de sus diferentes arcos
8- Se envía al modelo hidráulico la información, sobrescribiendo los valores estimados que los nodos tengan. En caso que un nodo tenga valor estimado, pero no tenga valor real, el modelo se realizará con el valor estimado

CAPAS NECESARIAS PARA RTC

Hidrómetros:
rtc_hydrometer: tabla con los hidrómetros insertados de comercial
rtc_hydrometer_x_connec: tabla con la relación de hidrómetros y connec

Scada:
ext_rtc_scada: Tabla con todos SCADAS registrados
rtc_scada_node: Relación de scada con node

Calculo rtc
ext_cat_period: Catalogo de periodos.
IMPORTANTE: deben coincidir los periodos de SCADA con COMERCIAL

ext_rtc_hydrometer_x_data Valores de los hidrómetros usados par el calculo del tiempo real
IMPORTANTE: deben coincidir los periodos de SCADA con COMERCIAL

ext_rtc_dma_period Valores totales de dma por periodo.
IMPORTANTE: deben coincidir los periodos de SCADA con COMERCIAL
IMPORTANTE: Los valores mínimo, máximo, medio se refieren al intervalo de medición (5minutos, 10 minutos..., el que sea) opero el mismo para los tres. Estos valores nos permitirán después calcular los valores máximos, mínimos y perdidas.
Por otro lado el valor total de periodo nos permitirá comparar con el valor total del periodo de los hidrómetros y establecer el coeficiente de perdidas para la dma.

rtc_options : Opciones del calculo rtc....
* Estimated values (uno o más valores estimados en cada nodo de red (EPANET as usual)
* Real values (valores reales de campo, hidrómetros, calibrados con los datos de las DMA

Si selecciona Real values, el usuario podrá:

seleccionar el periodo con el que quiere realizar la simulación de entre los registros existentes en rtc_dma_parameters

seleccionar valores máximos, mínimos o medios de ese periodo para enviar a EPANET

CUIDADO: Los caudales no nulos de demandas estimadas que no sean sobre-escritos por caudales reales, también seran enviados...

CAPAS NECESARIAS PARA MAPEO DE VALORES EN TIEMPO REAL DE SCADA

ext_rtc_hydrometer_x_value	muestra valor actual de hidrómetros (para lectura remota)
ext_rtc_scada_x_value	muestra valor actual de scada

CAPAS A TITULO INFORMATIVO

ext_cat_scada:	Catalogo scada, optativa
rtc_scada_x_dma:	Scada x dma con signo de caudal, optativa
rtc_scada_x_sector:	Scada x sector con signo de caudal, optativa
ext_rtc_scada_x_data:	Valores scada para tener histórico, (deprecated)

HERRAMIENTA DE POLÍGONO DE CORTE

La funcionalidad de polígono de corte (ES), tancament (CA) o mincut (EN) es seguramente una de las funcionalidades más importantes que un gestor de redes de agua potable necesita para su operativa en el día a día de funcionamiento. Sirva este documento para explicar técnicamente como se desarrolla la lógica de trabajo interna de la bbdd.

En primer lugar, el usuario debe configurar DOS ASPECTOS PREVIOS

- 1) Cuales son las etiquetas 'state' que intervienen en el polígono de corte. La etiqueta 'state' es un campo que está presente en todos los elementos geo, y que permite disponer información sobre el estado del elemento. El rango de valores creado y mantenido por el usuario, que va a tener cómo objetivo principal disponer de valores cómo EN SERVICIO / PLANIFICADO / OBSOLETO / A RECONSTRUIR / BAJA.
El uso de estas etiquetas permite que las herramientas de 'modelo hidráulico' 'gestión' o 'análisis' sean configuradas con que tipos de valores se quiere operar. Aplicado a polígono de corte podemos operar los valores que queramos siempre, para ello debemos llenar la tabla: **anl_selector_state.** El usuario de QGIS puede usar botón de configuración de plugin para ello.

- 2) También se debe definir el tipo de válvulas que participaran en el polígono de corte, usando la tipología de node_type.id en la tabla: **man_selector_valve.** El usuario de QGIS puede usar la ToC de QGIS o el boton de configuración (v2.2) de plugin para ello.

Una vez configurados los elementos previos, el polígono de corte consta de un algoritmo de dos partes:

1) Identificar las válvulas a cerrar desde un punto dado con dos funciones:
Inicial: *gw_fct_mincut(element_id_arg character varying, type_element_arg character varying*) donde element_id es el id del elemento arco o nodo seleccionado y type_element es tipo arco o tipo nodo
Recursiva: *gw_fct_mincut_recursive (node_id_arg character varying)* llamada por la inicial y n veces por ella misma para propagar el análisis en caso que sea necesario.
El usuario dispone del *boton mincut analysis* del plugin para ello donde de manera gráfica desde el entorno de QGIS selecciona un arco o un nodo con el cursor.

2) Indentificar tramos de red desconectados del sistema con válvulas cerradas (producto de función 1) o producto de modificaciones de usuario)
Consiste en propagar desde los depósitos los caudales para identificar los sectores de red desabastecidos, algoritmo que también consta de dos funciones:
Inicial: *gw_fct_valveanalytics()*
Recursiva: *gw_fct_valveanalytics_recursive(node_id_arg character varying)* llamada por la inicial y n veces por ella misma para propagar el análisis en caso que sea necesario.
El usuario dispone del *boton valve analytics* del plugin para ello donde simplemente pulsando el botón se ejecuta la función de propagación.

El resultado del último análisis efectuado está disponible en las tablas:

anl_mincut_node
anl_mincut_arc
anl_mincut_polygon
anl_mincut_valve
Se pueden apreciar los connec y los hidrometros afectados en:
v_anl_mincut_connec
v_anl_mincut_hydrometer

También comentar, que TODOS los resultados de mincut se van almacenando en las tablas anl_mincut_result_ donde podemos encontrar:

anl_mincut_result_cat: Catálogo de resultados de mincut
anl_mincut_result_arc: Histórico de arcos afectados
anl_mincut_result_node: Histórico de nodos afectados
anl_mincut_result_polygon: Histórico de polígonos realizados
anl_mincut_result_connec: Histórico de conexiones afectadas
anl_mincut_result_hydrometer: Histórico de hidrometros afectados
anl_mincut_result_valve: Histórico de válvulas que han participado del corte

Estos resultados pueden verse filtrados mediante las vistas: *v_mincut_result_** & *v_mincut_result_*_compare_* usando las tablas de filtro **anl_mincut_result_selector** y **anl_mincut_result_selector_compare** para ello

Alerta:

Si las entidades que participan en el polígono de corte no tiene coherencia topológica (imaginar un arco sin nodos extremales) generará un error que debemos corregir.
Es posible un arco sin nodos extremales con las reglas topológicas de Giswater? Si es posible si usamos la estrategia 'state' in asignamos a un arco el estado 'EN SERVICIO' a los nodos extremales les asignamos 'PLANIFICADOS' y encima luego configuramos la herramienta de polígono de corte solo con los EN SERVICIO. Como es previsible, la herramienta colapsará debido a esta incoherencia.

ANEJOS

ANEJO 1 – Conceptos básicos

ANEJO 2 – Detalle de la ToC del proyecto de QGIS

ANEJO 3 – Detalle de acciones de barra herramientas

ANEJO 4 – Detalle de modelo de datos lógico

ANEJO 5 – Diccionario de la geodatabase (EN)

ANEJO 6 – Plugins de QGIS recomendados

GISWATER – REGLAS BÁSICAS

INTRODUCCIÓN

- Los sectores de gestión e hidráulico son imprescindibles para empezar a trabajar puesto que TODO elemento de red debe estar asociado a uno de ellos
- El proyecto se estructura en base a catálogos, con lo cual para empezar a trabajar debemos tener al menos un registro en los catálogos de sistema
- Existen numerosas cosas que son configurables, entre las que destacan (snapping para geoprocesos, diseño de formularios…..)

- Existe un catálogo de tablas, vistas y campos donde se puede consultar información acerca de que es ese elemento

IDEAS CLAVE

- El proyecto tiene unas dependencias muy fuertes entre BBDD-QGIS con un plugin que obliga a tener una ToC determinada en el proyecto para trabajar.
- Los arcos siempre deben contener elementos nodo en sus extremos, ya que el comportamiento de la red se basa en la topología arco-nodo.
- La inserción de elementos de red se realiza a través de la agrupación de Features, una vez insertado este/estos aparecerán automáticamente en las tablas del modelo hidráulico donde se podrán definir los parámetros y características específicas.
- Para realizar una simulación, los elementos deben tener coherencia con las condiciones de contorno exigidas por el modelo. Esto significa que en el conjunto de los sectores exportados al modelo debe haber mínimo un nodo de una entrada de flujo y un nodo de salida de flujo, tanto de ud como para ws.

- Por norma general todos los elementos de la red deben estar identificados para realizar un buen catálogo, si no es así, está la opción de crear un elemento 'desconocido' en el catálogo (con datos inventados), para no tener errores a la hora de realizar la simulación hidráulica de la infraestructura.

CONFIGURACIÓN

Multitud de funcionalidades pueden ser configurables, como:

- Comportamiento de la topología arco-nodo
- Funciones de detección de errores
- Herramienta de búsqueda (capas y campos que participan en las diferentes opciones)
- Extracción de valor de ráster
- Rutas absolutas para gestión documental y de eventos de campo
- Diseño de formularios
- Busqueda
- Importación de csv
- Tipo de elementos que participan en las herramientas de construcción de red, análisis y planenamiento (en servició, obsoleto, planificado…)

CUIDADO CON

- En las tablas de sistema (TOC system-i18n) son traducibles solo los campos id y ‘comment’. El resto son valores que se usan en el código. Cualquier modificación fuera de los campos comentados no está permitida. Las tablas son node_type, arc_type, connec_type, element_type y doc_type.
- Se pueden crear nuevos registros en estas tablas, pero siempre deberán pertenecer a un tipo existente. Por ejemplo, podemos crear un nuevo tipo de nodo, con el nombre que queramos, pero el type deberá ser uno de los del sistema (junction, manhole….)
- Eliminar capas del proyecto de QGIS. Existen muchísimos vínculos entre capas, así como el plugin necesita de muchas de ellas para trabajar. Recomendamos no borrar ninguna de ellas. En caso de hacerlo, se puede recuperar un proyecto original.

- Al insertar un nuevo elemento, esté captará automáticamente el sector y dma al que pertenece si está dentro de él, por el contrario se deberá introducir manualmente a que sector y dma pertenece el elemento.

OTROS CONCEPTOS

- Futuras versiones de Giswater trabajarán ya con URN integer, con lo cual se recomienda encarecidamente que se aplique esta estrategia de identificación en los nuevos proyectos. URN significa Uniform Resource Name, y quiere decir que todos los elementos topológicos (node,arc, connec, gully) y no topológicos (element, samplepoint, etc..) deben disponer de un identificador UNICO no repetido en todo el sistema.

GISWATER – ToC OF QGIS PROJECT

ASSETS INVENTORY

Es la agrupación donde se encuentran los activos de la infraestructura. Están agrupados por:

- Catálogos
- Sectores (gestión-dma e hidráulico-sector)
- Elementos tipo nodo
- Elementos tipo arco
- Acometidas
- Sumideros (para el caso de UD)
- vnode / link
- otros geo (puntos de muestreo, piscinas...)
- otros no geo **(**documentos y elementos asociados**)**

NETWORK ANALYSIS

Es la agrupación donde se visualizan los resultados de los procesos de análisis (topology tool box, mincut, flowtrace o flow exit)

- Topología de red: Agrupación de capas detectar errores e incoherencias topológicas de la infraestructurapara (nodos duplicados, nodos sin arco de salida, arcos sin nodo en sus extremos, etc...)
- Trazabilidad de red: Agrupación de capas donde se muestran los elementos aguas arriba o agua abajo, seleccionados por la herramienta que incorpora el plugin.

SWMM/EPANET ANALYSIS

Es la agrupación donde se encuentran los activos para la gestión hidráulica de la infraestructura.

- Data (estructura de agrupaciones simulando la ToC de SWMM/EPANET para introducir la características específicas para la simulación del modelo hidráulico)
  - Climatología: Definición de las características climatológicas (temperatura, nieve, evaporación, etc...)
  - Hidrología: Definición de las características hidrológicas de la zona de estudio **(**pluviómetros, subcuencas, etc...**)**
  - Hidráulica: Definición de les elementos hidráulicos de la red (nodo y arco), así como las características específicas de cada uno.
  - Calidad: Definición de los parámetros para la simulación de la calidad del agua.
  - Curvas y series temporales: Definición de curvas para establecer relación entre dos cantidades (almacenamiento, bombas, etc...), así como las series temporales para determinar las propiedades de algunos objetos que varían con el tiempo (lluvia, niveles en los nudos de descarga, evaporación, etc...)
  - Patrones de tiempo: Definición del comportamiento del flujo externo en función del tiempo, pueden ser (mensuales, diarios, horarios y de fin de semana)
  - Controles: Definición de las reglas de control de la infraestructura en función del estado de los elementos.
- Result (agrupación de capas y tablas que muestran los resultados de la simulación)
- Compare **(**resultados de una segunda simulación para poder-la comparar con la anterior**)**

OPERATIONS & MAINTENANCE

Es la agrupación donde se encuentran las tablas para la gestión de eventos de la infraestructura. Està basado en el concepto visita-evento-fotografia, i en que los eventos son parametrizables, de manera que cualquier aspecto que se quiera reflejar en las operaciones de gestión es posible de hacer.

ASSET MANAGEMENT

Es la agrupación donde se encuentran las tablas para la gestión económica de la infraestructura (tanto para actuaciones planificadas como para valorar los elementos existentes de la red)

SYSTEM

Es la agrupación donde se encuentran las tablas de sistema auxiliares. Están agrupadas por:

- SWMM/EPANET: Tablas de sistema con los valores auxiliares del modelo hidráulico
- ASSETS Tablas de sistema de gestión de planeamiento
- DOMAIN VALUE: Tablas de dominios de valores para la gestión.
- SYTEM: Agrupación de tablas para la traducción e internacionalización del modelo de datos. Tablas sistema
- BD CATALOG: Agrupación de tablas con la definición de los elementos del modelo de datos (tablas, vistas y columnas)

BASEMAP

Agrupación donde se incorporan los elementos de cartografía, así como las tablas de ejes de calle y edificaciones para realizar búsquedas con la herramienta que incorpora el plugin.

GISWATER – QGIS PLUGIN BUTTON'S BARS

MANAGEMENT BAR

Elemento	Descrpición	Requisitos
Parte tramo	Herramienta que permite introducir un elemento tipo nodo en medio de un elemento arco, partiendo a este, y creando un nuevo arco heredando las propiedades del anterior.	El nodo debe estar desconectado. Solo se puede realizar de uno en uno.
Junta tramo	El nodo debe estar conectado únicamente con dos ARCOS y además estos deben tener EL MISMO CATALOGO DE ARCO. La selección solo es posible de uno en uno.	Si el elemento tipo nodo tiene 't' el campo undelete, este no podrá ser borrado.
Raster2vector	Extrae el valor de una banda de un raster para integrarlo en un campo numerico de una capa vectorial.	Se deben haber configurado cuales capas, bandas y campos participan en este proceso. (usar boton configuración)
Herramientas topologia	Permite realizar análisis sobre la calidad topológica de los datos.	
Connexión acometidas	Permite asignar de forma automática acometidas al tramo más cercano. Después de hacer click, left button, selección uno a uno o por ventana. Right button, selección previa.	Tener como mínimo un registro en la tabla man_selector_state. En otras palabras, haber sel.leccionado que valores de 'state' para elementos elementos arco intervienen en el proceso. (usar boton configuración)
Importar CSV	Permite importar un csv a una tabla determinada. La estructura de campos del csv debe ser EXACTAMENTE IGUAL que la de la tabla (numero y tipo de campos)	Las tablas elegibles deben estar dadas de alta en la tabla config_csv_import (Usar consola SQL para llenar la tabla).
go2epa expres	Ejecuta GISWATER de modo directo, con los valores que este tenga definidos	Haber hecho una simulación completa con Giswater abierto y haber guardado el proyecto
Selector resultados	Permite escoger los resultados que pueden ser mostrados en el proyecto de QGIS. Comentar que son seleccionables dos resultados. Al primero se le llama result, i al segundo compare. Esto permite tener dos juegos completos de resultados y poder hacer comparativas	Tener un mínimo de una o más simulaciones en el catálogo de resultados. Haber realizado almenos una simulación con Giswater.
Poligono de corte	Realiza una propuesta de valvulas a cerra y red que queda cerrada en base a una selección de usuario sobre un elemento arco o un elemento nodo.	Tener como mínimo un registro en la tabla anl_selector_state. En otras palabras, haber sel.leccionado que valores de 'state' para elementos arco,nodo intervienen en el proceso. (usar boton configuración)
Anàlisis de valvulas	Permite modificar la propuesta de valvulas a cerrar de la herramienta mincut. Para ello se debe recurrir a la modificación del campo mincut_anl de la tabla valve. ('f' significa cerrada y 't' abierta). Una vez se hayan modificado manualmente estos registros se puede ejecutar esta función y comprobar como varia el poligono de corte.	Haber introducido algun cambio en el estado de las valvulas, sinó el resultado será el mismo que el de poligono de corte.
Aguas arriba	Selecciona todos los elementos arco-nodo y acometidas que se encuentran aguas arriba del punto dado.	Tener como mínimo un registro en la tabla anl_selector_state. En otras palabras, haber sel.leccionado que valores de 'state' para elementos arco,nodo intervienen en el proceso. (usar boton configuración)
Aguas abajo	Selecciona todos los elementos arco-nodo en el camino hacia el nodo de desguace de la red.	Tener como mínimo un registro en la tabla anl_selector_state. En otras palabras, haber sel.leccionado que valores de 'state' para elementos arco,nodo intervienen en el proceso. (usar boton configuración)
Configuración	Asistente de configuración para el comportamiento del plugin.	

EDIT BAR

Elemento	Descrpición	Requisitos
Busqueda	Herramienta compleja de busqueda. Puede buscar por callejero, por abonado, por acometida o por elemento puntual cualquiera. Se deben tener configurado previamente todos los valores (*)	Tener configurado adecuadamente las capas de busca (usar boton configuración)
Añadir elemento	Permite añadir elementos no geo a entidades geo. Se deben seleccionar previamente las entidades a las que se quiere agregar un elemento. Permite agregar documentos nuevos o existentes.	Tener como mínimo un registro en el catálogo de elementos
Añadir documento	Permite agregar documentos a entidades geo. Se deben seleccionar previamente las entidades a las que se quiere agregar un documento. Permite agregar documentos nuevos o existentes.	Tener como mínimo un registro en el catálogo de documentos
Giswater	Abre el programa Giswater que actua de driver con los modelos hidráulicos. Permite crear nuevos proyectos QGIS, nuevos esquemas de trabajo, todo el potencial de Giswater en un click desde QGIS.	Se debe tener configurado en el config.propierties del plugin las rutas del ejecutable de JAVA y de la JRE

Water Supply Giswater 2.x data model

Documents

Document table used by the document management module

O&M

Operation & management tables used to integrate information from other collecting data systems

Kernel

Tables acting as core tables. These are topology tables (node/arc/connec/element) with catalogs, sector and dma tables.

Add info

Tables used to store add info of features

Llegend

Other Tables

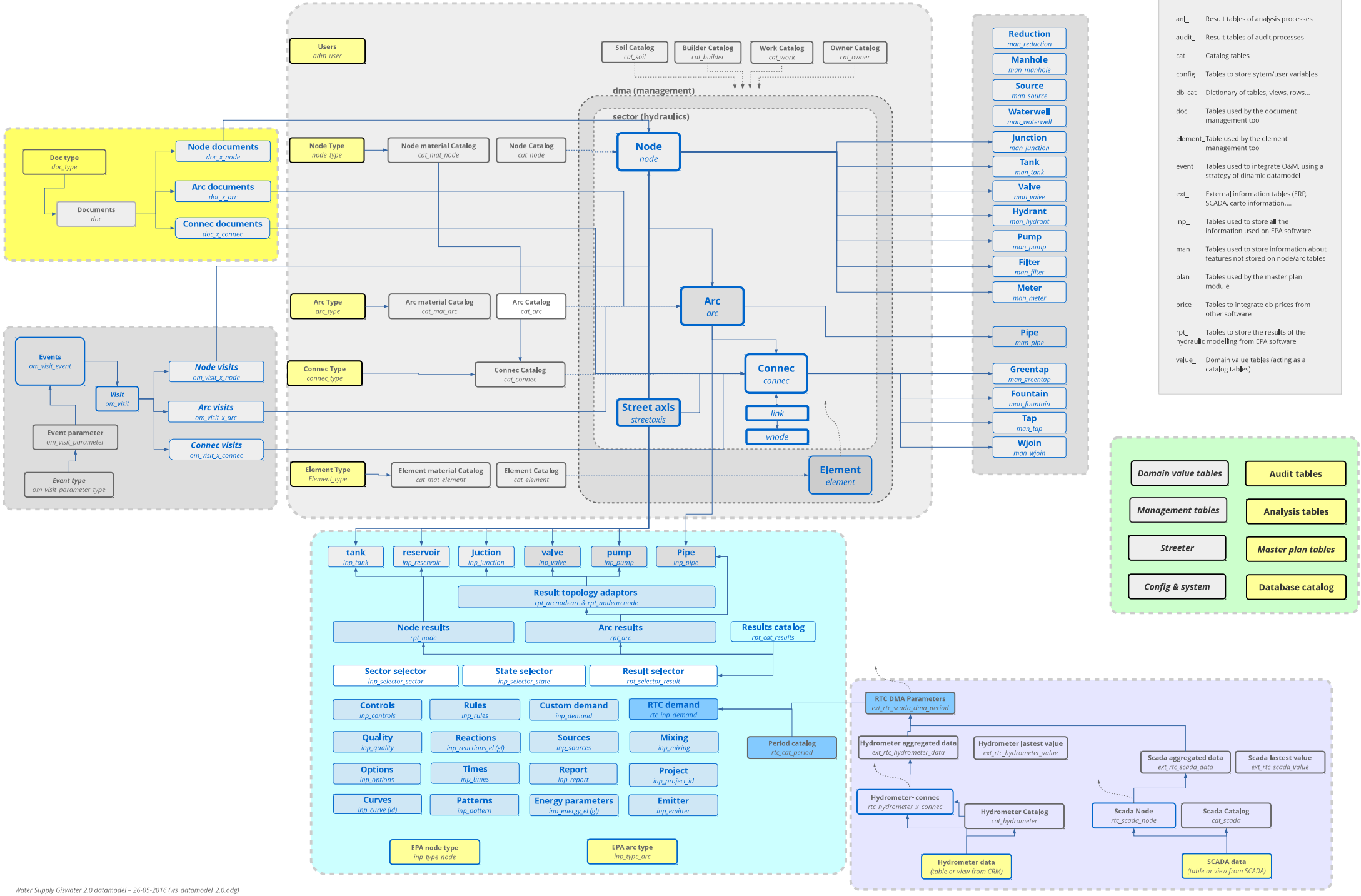
Hydraulic model

Tables to store all data hydraulic model needs. Input data and result data to enable the full comunication with the EPA software

Real Time

Tables to enable the real time integration data from SCADA, CRM or any database the system needs.

Water Supply Giswater 2.x data model



Nomenclator issues

anl_	Result tables of analysis processes
audit_	Result tables of audit processes
cat_	Catalog tables
config	Tables to store sytem/user variables
db_cat	Dictionary of tables, views, rows...
doc_	Tables used by the document management tool
element_	Table used by the element management tool
event	Tables used to integrate O&M, using a strategy of dinamic datamodel
ext_	External information tables (ERP, SCADA, carto information....
Inp_	Tables used to store all the information used on EPA software
man	Tables used to store information about features not stored on node/arc tables
plan	Tables used by the master plan module
price	Tables to integrate db prices from other software
rpt_	Tables to store the results of the hydraulic modelling from EPA software
value_	Domain value tables (acting as a catalog tables)

Domain value tables	Audit tables
Management tables	Analysis tables
Streeter	*Master plan tables*
Config & system	Database catalog

Urban Drainage & Sewerage Giswater 2.x data model

Documents

Document table used by the document management module

O&M

Operation & management tables used to integrate information from other collecting data systems

Kernel

Tables acting as core tables. These are topology tables (node/arc/connec/gully/element) with catalogs, sector, dma tables.

Add info

Tables used to store add info of features

Llegend

Other Tables

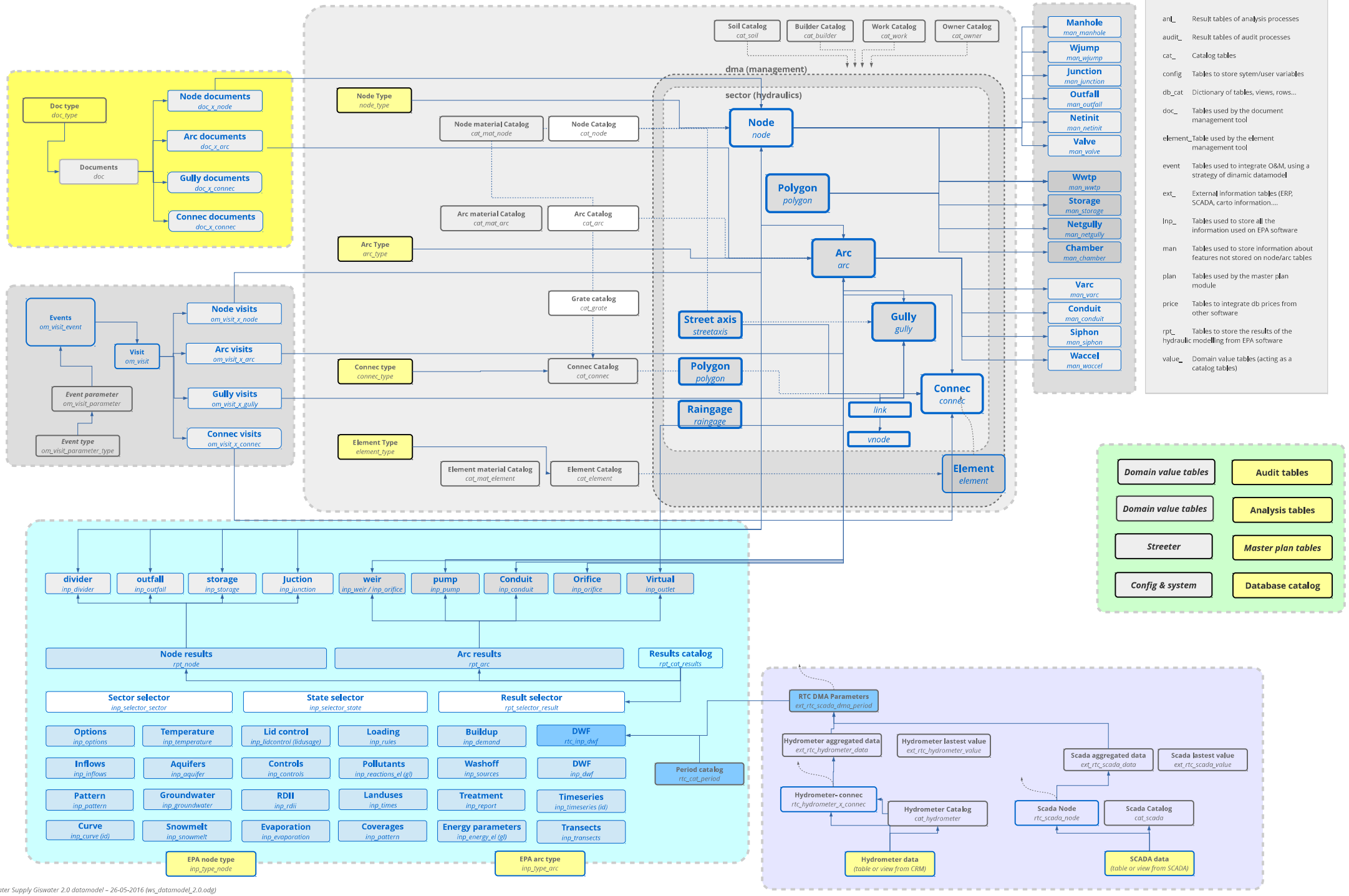
Hydraulic model

Tables to store all data hydraulic model needs. Input data and result data to enable the full comunication with the EPA software

Real Time

Tables to enable the real time integration data from SCADA, CRM or any database the system needs.

Urban Drainage & Sewerage Giswater 2.x data model



Nomenclator issues

anl_	Result tables of analysis processes
audit_	Result tables of audit processes
cat_	Catalog tables
config	Tables to store sytem/user variables
db_cat	Dictionary of tables, views, rows...
doc_	Tables used by the document management tool
element_	Table used by the element management tool
event	Tables used to integrate O&M, using a strategy of dinamic datamodel
ext_	External information tables (ERP, SCADA, carto information....
Inp_	Tables used to store all the information used on EPA software
man	Tables used to store information about features not stored on node/arc tables
plan	Tables used by the master plan module
price	Tables to integrate db prices from other software
rpt_	Tables to store the results of the hydraulic modelling from EPA software
value_	Domain value tables (acting as a catalog tables)

WS – TABLE		
id	**context**	**description**
ext_streetaxis	external table	Table of streetaxis.
ext_urban_propierties	external table	Table of urban properties.
ext_cat_period	external table	Catalog of time periods.
ext_cat_scada	external catalog	Catalog of scada receivers.
ext_rtc_scada	external table	Table of scada receivers.
ext_rtc_scada_x_value	external table	Values obtained from scada receivers.
ext_rtc_scada_x_data	external table	Agregated data obtained from scada receivers.
ext_rtc_scada_dma_period	external table	Data from scada related to date and dma.
ext_cat_hydrometer	external catalog	Catalog of hydrometers receivers.
ext_rtc_hydrometer	external table	Table of hydrometer receivers.
ext_rtc_hydrometer_x_value	external table	Values obtained from hydrometer receivers.
ext_rtc_hydrometer_x_data	external table	Agregated data obtained from hydrometer receivers.
arc_type	system structure	Contains the types of arcs.
node_type	system structure	Contains the types of nodes.
element_type	system structure	Contains the types of elements.
cat_mat_arc	catalog	Catalog of arc's material.
cat_mat_node	catalog	Catalog of node's material.
cat_arc	catalog	Catalog of arcs.
cat_node	catalog	Catalog of nodes.
cat_mat_element	catalog	Catalog of element's material.
cat_element	catalog	Catalog of elements.
cat_connec	catalog	Catalog of connections.
cat_soil	catalog	Catalog of soil types.
cat_builder	catalog	Catalog of constructors
cat_work	catalog	Catalog of construction works.
cat_owner	catalog	Catalog of owners.
cat_pavement	catalog	Catalog of pavements.
cat_press_zone	catalog	Catalog of press zone.
man_type_category	value domain (type)	Domain data with types of management
man_type_fluid	value domain (type)	Domain data with types of fluid management
man_type_location	value domain (type)	Domain data with types of location management
connec_type	value domain (type)	Domain data with connects types
sector	GIS feature	Table of spatial objects representing sectors.
node	GIS feature	Table of spatial objects representing nodes.
arc	GIS feature	Table of spatial objects representing arcs.
dma	GIS feature	Table of spatial objects representing District Meter Area.
connec	GIS feature	Table of spatial objects representing connects.
vnode	GIS feature	Table of spatial objects representing vnodes.
link	GIS feature	Table of spatial objects representing links.
man_junction	Additional info of GIS feature	Additional information for junction management
man_tank	Additional info of GIS feature	Additional information for tank management
man_hydrant	Additional info of GIS feature	Additional information for hydrant management
man_valve	Additional info of GIS feature	Additional information for valve management
man_pump	Additional info of GIS feature	Additional information for pump management
man_filter	Additional info of GIS feature	Additional information for filter management
man_meter	Additional info of GIS feature	Additional information for measure instrument management
man_pipe	Additional info of GIS feature	Additional information for pipe management
element	GIS feature	Contains the elements
element_x_arc	GIS feature	Contains the elements related to arc.

WS – TABLE		
id	**context**	**description**
element_x_node	GIS feature	Contains the elements related to nodes
element_x_connec	GIS feature	Contains the elements related to connects
value_state	value domain (value)	Domain data with value describing the state
value_verified	value domain (value)	Domain data with value describing the verification status.
value_yesno	value domain (value)	Domain data with values yes/no
man_selector_valve	Selector	Selector to control the type of valves that will participate to the mincut analysis
inp_backdrop	Hydraulic input data	Identifies a backdrop image and dimensions for the network EPANET map.
inp_controls	Hydraulic input data	Defines simple controls that modify links based on a single condition.
inp_curve	Hydraulic input data	Defines data curves and their X,Y points.
inp_curve_id	Hydraulic input data	Curve catalog.
inp_emitter	Hydraulic input data	Defines junctions modeled as emitters (sprinklers or orifices).
inp_energy_el	Hydraulic input data	Defines parameters used to compute pumping energy and cost (by specified pump)
inp_energy_gl	Hydraulic input data	Defines global parameters -for all pumps- used to compute pumping energy and cost.
inp_junction	Hydraulic input data	Defines junction nodes contained in the network.
inp_label	Hydraulic input data	Assigns coordinates to map labels on EPANET user inferface.
inp_mixing	Hydraulic input data	Identifies the model that governs mixing within storage tanks.
inp_options	Hydraulic input data	Contains the general information about the simulation options
inp_pattern	Hydraulic input data	Defines time patterns.
inp_pipe	Hydraulic input data	Defines all pipe links contained in the network.
inp_pump	Hydraulic input data	Defines all pump links contained in the network.
inp_quality	Hydraulic input data	Describes the contents of the output report produced from a simulation.
inp_reactions_el	Hydraulic input data	Defines individual parameters -specific for each element- related to chemical reactions occurring in the network.
inp_reactions_gl	Hydraulic input data	Defines global parameters -for all elements- related to chemical reactions occurring in the network.
inp_report	Hydraulic input data	Contains the information about output simulation report
inp_reservoir	Hydraulic input data	Defines all reservoir nodes contained in the network.
inp_rules	Hydraulic input data	Defines rule-based controls that modify links based on a combination of conditions.
inp_source	Hydraulic input data	Defines locations of water quality sources.
inp_tags	Hydraulic input data	Associates category labels (tags) with specific nodes and links on EPANET user inferface.
inp_tank	Hydraulic input data	Defines all tank nodes contained in the network.
inp_arc_type	Hydraulic input data	Domain data with arc's geometry
inp_node_type	Hydraulic input data	Domain data with node's geometry
inp_typevalue_energy	Hydraulic input data	Domain data with energy type
inp_typevalue_pump	Hydraulic input data	Domain data with pump's operation
inp_typevalue_reactions_gl	Hydraulic input data	Domain data with reaction type
inp_typevalue_source	Hydraulic input data	Domain data with source type
inp_typevalue_valve	Hydraulic input data	Domain data with valve type
inp_value_ampm	Hydraulic input data	Domain data with time AM/PM
inp_value_curve	Hydraulic input data	Domain data with curve type
inp_value_mixing	Hydraulic input data	Domain data with mixing type
inp_value_noneall	Hydraulic input data	Domain data with values none/all
inp_value_opti_headloss	Hydraulic input data	Domain data with options of curve losses
inp_value_opti_hyd	Hydraulic input data	Domain data with options of curve losses
inp_value_opti_qual	Hydraulic input data	Domain data with options used to calculate the water quality
inp_value_opti_unbal	Hydraulic input data	Domain data with options used in case of calculation failure
inp_value_opti_units	Hydraulic input data	Domain data with unit measure type
inp_value_param_energy	Hydraulic input data	Domain data with parameters type used to calculate energy
inp_value_reactions_gl	Hydraulic input data	Domain data used to determine the general coefficiency of reaction
inp_value_yesno	Hydraulic input data	Domain data with values yes/no
inp_value_yesnofull	Hydraulic input data	Domain data with values yes/no/all

WS – TABLE		
id	**context**	**description**
inp_value_plan	Hydraulic input data	Domain data with values of plan
inp_valve	Hydraulic input data	Defines all control valve links contained in the network.
inp_giswater_config	Hydraulic input data	Configuration table to link QGIS and Giswater
rpt_selector_compare	Selector	Selector of an alternative result (to compare with other results)
rpt_arc	Hydraulic result data	Contains the results of arc elements
rpt_energy_usage	Hydraulic result data	Contains the results of the table of energy usage
rpt_hydraulic_status	Hydraulic result data	Contains the information about the state of the results
rpt_node	Hydraulic result data	Contains the results of node elements
rpt_cat_result	Hydraulic result data	Contains the information about the results
inp_selector_sector	Selector	Sector's selector. Contains the sectors of the selected network
inp_selector_state	Selector	State's selector. Contains the diferents states that will be exported to the model
inp_shortpipe	Hydraulic input data	Contains information about short pipes (nodes on GIS features, arc on model as shutoff valve, flowmeteror check valve
inp_value_status_pipe	Hydraulic input data	Value domain of the pipe status
inp_value_status_pump	Hydraulic input data	Value domain of the pump status
inp_value_status_valve	Hydraulic input data	Value domain of the valve status
inp_value_times	Hydraulic input data	Value domain of times
temp_node	Hydraulic input data	Temporary table of nodes with results from the hydraulic model
temp_arc	Hydraulic input data	Temporary table of arcs with results from the hydraulic model
doc_type	Document management	Contains the document's types.
cat_tag	Document management catalog	Catalog of tags. It's like a stuctured list of document classification
doc	Document management	Contains URL or folder path where the documents are.
doc_x_node	Document management	Contains the information of document related to nodes.
doc_x_arc	Document management	Contains the information of document related to arcs.
doc_x_connec	Document management	Contains the information of document related to connects.
rtc_options	Real time control	Options for real time control
rtc_scada_node	Real time control	Contains the information to link SCADA with nodes
rtc_scada_dma	Real time control	Contains the information to link SCADA with dma.
rtc_scada_x_sector	Real time control	Contains the information to link SCADA with sector.
rtc_value_opti_coef	Real time control	Value domain for options of real time control
rtc_value_opti_status	Real time control	Value domain for options of real time control
rtc_hydrometer_x_connec	Real time control	Contains the information to link connec with hydrometer
plan_psector	masterplan	Table of plan sector.
plan_arc_x_psector	masterplan	Table of arcs related to plan sectors.
plan_node_x_psector	masterplan	Table of nodes related to plan sectors.
plan_other_x_psector	masterplan	Table of other objects related to plan sectors.
plan_arc_x_pavement	masterplan	Table to relate arcs to pavements
plan_value_ps_priority	masterplan	Domain value table of levels of priority related to psectors
plan_selector_economic	masterplan	Table of economic selectors.
plan_selector_psector	masterplan	Table of plan sector selectors.
price_simple	masterplan	Table of simple price.
price_compost	masterplan	Table of compound prices
price_compost_value	masterplan	Table to relate simple prices to compound prices
price_value_unit	masterplan	View for code
anl_mincut_polygon	Analysis	Table with the results of mincut analysis (poligon)
anl_mincut_node	Analysis	Table with the results of mincut analysis (node)
anl_mincut_arc	Analysis	Table with the results of mincut analysis (arc)
anl_mincut_valve	Analysis	Table with the results of mincut analysis (valve)
anl_valveanaytics_connec	Analysis	Table with the results of mincut analysis (connec)
version	utils	Table to control de version of the software used on the project.

WS – TABLE		
id	**context**	**description**
config	utils	Table to define diferent configuration parameters related to the GIS USER interface.
config_csv_import	utils	Table to define the tables enabled for csv import tool
db_cat_table	utils	Table with the information of tables of the project
v_audit_schema_column		
db_cat_view	utils	Table with the information of views of the project
db_cat_columns	utils	Table with the information of columns of the project
db_cat_clientlayer	utils	Table with the information of GIS layers of the project
anl_node_orphan	utils	Table with the results of the topology process of node orphan function
anl_node_sink	utils	Table with the results of the topology process of node sink function
anl_node_duplicated	utils	Table with the results of the topology process of node duplicated function
anl_arc_same_startend	utils	Table with the results of the topology process of arcs with same node initial and end function
audit_cat_error	utils	Catalog of errors
audit_cat_function	utils	Catalog of functions
audit_function_actions	utils	Table to store information about traceability of user actions with functions
anl_connec_duplicated	Analysis	Table of duplicated connecs
anl_mincut_result_cat_state	Analysis	Table of states of minimum cut results catalog.
ext_postnumber	external table	Table of entrance numbers.
config_search_plus	utils	Table to define the configuration of search plus tool
point	GIS feature	Table of spatial objects representing points.
anl_mincut_result_hydrometer	Analysis	Table of minimum cut analysis related to hydrometers.
inp_project_id	Hydraulic input data	Table with information of the project
config_extract_raster_value	utils	Table to define the configuration of extracting values from raster
config_ui_forms	utils	Table to define the configuration of forms.
anl_mincut_result_cat	Analysis	Catalog of minimum cut analysis results.
anl_mincut_result_cat_type	Analysis	Table of types of minimum cut results catalog.
anl_mincut_result_arc	Analysis	Table of minimum cut analysis related to arcs.
anl_mincut_result_polygon	Analysis	Table of minimum cut analysis related to polygons.
anl_mincut_result_connec	Analysis	Table of minimum cut analysis related to connecs.
rtc_scada_x_dma	Real time control	Contains the information to link SCADA with dma
rtc_hydrometer	Real time control	Contains the information to link SCADA with hydrometers
presszone	GIS feature	Table of spatial objects representing Pressure zones
point_type	value domain (type)	Domain data with connects types
anl_mincut_result_valve	Analysis	Table of minimum cut analysis related to valve.
anl_mincut_result_node	Analysis	Table of minimum cut analysis related to nodes.
anl_mincut_result_selector	Analysis	Table of minimum cut analysis related to selector.
inp_demand	Hydraulic input data	Replace to junction feature for defining multiple water demands at junction nodes. WARNING: If this junction values are used the value of junction is ignored.
ext_type_street	external table	Catalog of street types.
om_visit	O&M information	Table of all visits that took place.
anl_arc_no_startend_node	Analysis	Table with the results of the topology process of arcs with no nodes on start and/or end function
om_visit_event	O&M information	Table of events that took place during the visit.
om_visit_parameter	O&M information	Catalog of parameters related to event types.
om_visit_parameter_type	O&M information	Catalog of types of events.
om_visit_x_arc	O&M information	Table of visits related to arc.
om_visit_x_connec	O&M information	Table of visits related to connec.
om_visit_x_gully	O&M information	Table of visits related to gully.
om_visit_x_node	O&M information	Table of visits related to node.
anl_selector_state	Analysis	Domain data with value describing the state for analysis.
config_py_tables	utils	Table with layers which are necessary to the correct functioning of the plugin

WS – TABLE		
id	**context**	**description**
om_visit_value_position	O&M information	Catalog of event's location.
plan_selector_state	masterplan	Domain data with value describing the state for masterplan
pond	GIS feature	Table of spatial objects representing ponds.
pool	GIS feature	Table of spatial objects representing pools.
samplepoint	GIS feature	Table of spatial objects representing sample points.
man_fountain	Additional info of GIS feature	Additional information for fountain management
man_greentap	Additional info of GIS feature	Additional information for greentap management
man_manhole	Additional info of GIS feature	Additional information for manhole management
man_reduction	Additional info of GIS feature	Additional information for reduction management
man_selector_state	Additional info of GIS feature	Additional information for selector state management
man_source	Additional info of GIS feature	Additional information for source management
man_tap	Additional info of GIS feature	Additional information for water tap management
man_waterwell	Additional info of GIS feature	Additional information for waterwell management
man_wjoin	Additional info of GIS feature	Additional information for wjoin management
config_param_bool	utils	Configuration- stash for boolean parameters.
config_param_float	utils	Configuration- stash for float parameters.
config_param_int	utils	Configuration- stash for integer parameters.
config_param_text	utils	Configuration- stash for text parameters.
v_edit_node	GIS feature	Shows editable information about nodes.
v_edit_arc	GIS feature	Shows editable information about arcs.
v_edit _link	GIS feature	Shows editable information about links.
v_edit_valve	GIS feature	Shows editable information about valves.
v_edit_inp_junction	Hydraulic feature	Shows editable information about node type junction
audit_schema_data_integrity	utils	Result of data integrity audit
v_edit_inp_pipe	Hydraulic feature	Shows editable information about arc type pipe
v_edit_inp_pump	Hydraulic feature	Shows editable information about node type pump
v_edit_inp_reservoir	Hydraulic feature	Shows editable information about node type reservoir
v_edit_inp_tank	Hydraulic feature	Shows editable information about node type tank
v_audit_schema_foreign_column		
v_edit_inp_valve	Hydraulic feature	Shows editable information about node type valve
v_edit_inp_shortpipe	Hydraulic input data	Shows editable information about editable features of shortpipe.
v_arc	Hydraulic input data	Shows the arc data.
v_node	Hydraulic input data	Shows the node data.
v_arc_x_node1	GIS feature	Shows the relation between arc and node 1.
v_arc_x_node2	GIS feature	Shows the relation between arc and node 2.
v_arc_x_node	GIS feature	Shows the relation between arc and nodes.
v_ui_element_x_node	Additional info of GIS feature	Contains the elements related to node. User Interface view.
v_ui_element_x_arc	Additional info of GIS feature	Contains the elements related to arc. User Interface view.
v_ui_element_x_connec	Additional info of GIS feature	Contains the elements related to connec. User Interface view.
v_inp_curve	Hydraulic input data	Shows the information about definition of the curve
v_inp_demand	Hydraulic input data	Shows the information about node's demand
v_inp_emiter	Hydraulic input data	Shows the information about transmitters
v_inp_energy_el	Hydraulic input data	Shows the information about energy elements
v_inp_junction	Hydraulic input data	Shows the information about node type junction
v_inp_mixing	Hydraulic input data	Shows the information about mixing type inside tanks
v_inp_options	Hydraulic input data	Shows the general information with the simulation options
v_inp_pipe	Hydraulic input data	Shows theinformation about arc type pipe
v_inp_pump	Hydraulic input data	Shows the information about node type pump
v_inp_report	Hydraulic input data	Shows the information about the output simulation report.

WS – TABLE		
id	**context**	**description**
v_inp_reservoir	Hydraulic input data	Shows the information about node type reservoir
v_inp_rules	Hydraulic input data	Shows the information about the control rules.
v_inp_shortpipe	Hydraulic input data	Shows information about shortpipes.
v_inp_source	Hydraulic input data	Shows the information about contamination sources
v_inp_status	Hydraulic input data	Shows the information about the pipelines' state
v_inp_tank	Hydraulic input data	Shows the information about node type tank
v_inp_times	Hydraulic input data	Shows the information about weather parameters
v_inp_valve_cu	Hydraulic input data	Shows the information about the valves regulated by the curve
v_inp_valve_fl	Hydraulic input data	Shows the information about the valves regulated by the flow
v_rpt_arc	Hydraulic result data	Shows the results of the arcs simulation
v_inp_valve_lc	Hydraulic input data	Shows the information about the valves regulated by the coefficiency of losses
v_inp_valve_pr	Hydraulic input data	Shows the information about the valves regulated by the pressure
v_inp_vertice	Hydraulic input data	Shows the information about the pipelines' vertexes geometry
v_rpt_energy_usage	Hydraulic result data	Shows the results of the energy usage
v_rpt_hydraulic_status	Hydraulic result data	Shows the results of hydraulic status
v_rpt_node	Hydraulic result data	Shows the results of the nodes simulation
v_rpt_comp_arc	Hydraulic result data	Shows the results of the alternative result (to compare on QGIS project) related to arc information
v_rpt_comp_energy_usage	Hydraulic result data	Shows the results of the alternative result (to compare on QGIS project) related to energy usagee
v_rpt_comp_hydraulic_status	Hydraulic result data	Shows the results of the alternative result (to compare on QGIS project) related to hydraulic stataus
v_rpt_comp_node	Hydraulic result data	Shows the results of the alternative result (to compare on QGIS project) related to node
v_ui_doc_x_node	Document management	Shows the information of document related to nodes. User Interface view.
v_ui_doc_x_arc	Document management	Shows the information of document related to arcs. User Interface view.
v_ui_doc_x_connec	Document management	Shows the information of document related to connects. User Interface view.
v_ui_scada_x_node	Real time control	Shows the scada data related to the node User interface table.
v_ui_hydrometer_x_connec	Real time control	Shows the hydrometer data related to connects User interface table.
v_price_compost	masterplan	View for code
v_price_x_catsoil1	masterplan	View for code
v_price_x_catsoil2	masterplan	View for code
v_price_x_catsoil3	masterplan	View for code
v_price_x_catsoil4	masterplan	View for code
v_price_x_catsoil	masterplan	View for code
v_price_x_catarc1	masterplan	View for code
v_price_x_catarc2	masterplan	View for code
v_price_x_catarc3	masterplan	View for code
v_price_x_catarc	masterplan	View for code
v_price_x_catpavement	masterplan	View for code
v_price_x_catnode	masterplan	View for code
v_plan_ml_arc	masterplan	View where is showed the characteristicis of arc by lineal meter (soil, pavement,…)
v_plan_mlcost_arc	masterplan	View where is showed the economic characteristicis of arc by lineal meter (soil, pavement,…) by lineal meter
v_plan_cost_arc	masterplan	View to show full data of cost of arc
v_plan_arc	masterplan	View only with the most important information about the cost of the arc
v_plan_node	masterplan	View only with the most important information about the cost of the node
v_plan_arc_x_psector	masterplan	View to show arcs related to plan sectors.
v_plan_node_x_psector	masterplan	View to show nodes related to plan sectors.
v_plan_psector_arc	masterplan	View to show sectors with the related arcs
v_plan_psector_node	masterplan	View to show sectors with the related nodes
v_plan_other_x_psector	masterplan	View to show other issues of budget related to plan sectors.
v_plan_psector_other	masterplan	View to show sectors with the related other issues of budget
v_plan_psector	masterplan	View to show sectors planifieds

WS – TABLE		
id	**context**	**description**
v_audit_functions		
v_audit_schema_catalog_column		
v_audit_schema_catalog_compare_column		
v_audit_schema_catalog_compare_table		
v_audit_schema_foreign_column_aux		
v_audit_schema_foreign_compare_column		
v_audit_schema_foreign_compare_table		
v_audit_schema_foreign_table		
v_audit_schema_table		
v_inp_arc		
v_inp_arc_x_node		
v_inp_arc_x_node1		
v_inp_arc_x_node2		
v_inp_emitter		
v_inp_node		
v_plan_psector_filtered		
v_edit_connec	GIS feature	Shows editable information about connecs.
v_edit_anl_valve	Analysis	Shows editable information from valve analysis
v_edit_link	GIS feature	Shows editable information about links.
v_edit_man_fountain	GIS feature	Shows editable information about fountain
v_edit_man_greentap	GIS feature	Shows editable information about greentap.
v_edit_man_hydrant	GIS feature	Shows editable information about hydrant
v_edit_man_tap	GIS feature	Shows editable information about tap
v_edit_man_junction	GIS feature	Shows editable information about junction
v_edit_man_manhole	GIS feature	Shows editable information about manhole
v_edit_man_meter	GIS feature	Shows editable information about meter
v_edit_man_pump	GIS feature	Shows editable information about pump
v_edit_man_reduction	GIS feature	Shows editable information about reduction
v_edit_man_source	GIS feature	Shows editable information about source
v_edit_man_tank	GIS feature	Shows editable information about tank
v_edit_man_valve	GIS feature	Shows editable information about valves
v_edit_man_waterwell	GIS feature	Shows editable information about waterwell
v_edit_man_wjoin	GIS feature	Shows editable information about wjoin
v_ui_om_visit_x_arc	O&M information	Shows the visits related to elements related to arcs. User Interface view.
v_ui_om_visit_x_connec	O&M information	Shows the visits related to elements related to connecs. User Interface view.
v_ui_om_visit_x_node	O&M information	Shows the visits related to elements related to nodes. User Interface view.
v_rtc_hydrometer_period	Real time control	Shows the hydrometer periods.
v_rtc_dma_hydrometer_period	Real time control	System view
v_rtc_dma_parameter_period	Real time control	System view
v_rtc_hydrometer_x_arc	Real time control	System view
v_rtc_hydrometer_x_node_period	Real time control	System view
v_anl_mincut_connec	Analysis	View with aggregated information of the results of mincut analysis (connec)
v_anl_mincut_hydrometer	Analysis	View with aggregated information of the results of mincut analysis (hydrometers)
v_anl_arc	Analysis	
v_anl_connec	Analysis	
v_anl_mincut_result_arc	Analysis	

WS – TABLE		
id	**context**	**description**
v_anl_mincut_result_arc_compare	Analysis	
v_anl_mincut_result_hydrometer	Analysis	
v_anl_mincut_result_hydrometer_compare	Analysis	
v_anl_mincut_result_node	Analysis	
v_anl_mincut_result_node_compare	Analysis	
v_anl_mincut_result_polygon	Analysis	
v_anl_mincut_result_polygon_compare	Analysis	
v_anl_mincut_result_restult_connec	Analysis	
v_anl_mincut_result_restult_connec_compare	Analysis	
v_anl_mincut_result_valve	Analysis	
v_anl_mincut_result_valve_compare	Analysis	
v_anl_node	Analysis	
v_edit_rtc_hydro_data_x_connec	Real time control	Shows editable information data from hydrometers related to connecs
v_ext_urban_propierties		Shows information about urban properties and related to them connecs.
v_man_arc	GIS feature	Shows information about arcs.
v_man_connec	GIS feature	Shows information about connecs
v_man_node	GIS feature	Shows information about nodes
v_price_x_arc	masterplan	Shows the datails of the arc price.
v_price_x_node	masterplan	Shows the datails of the node price.
v_rtc_hydrometer	Real time control	Shows the hydrometer receivers.
v_rtc_hydrometer_x_connec	Real time control	Shows the hydrometer receivers related to connecs.
v_rtc_scada	Real time control	Shows the scada receivers
v_rtc_scada_data	Real time control	Shows the scada data.
v_rtc_scada_value	Real time control	Shows the scada values.
anl_mincut_result_selector_compare	Analysis	Selector for comparing the cut analysis results
ext_hydrometer_category	external table	Catalog of hydrometer categories.
inp_cat_mat_roughness	Hydraulic input data	Catalog of material roughness
rpt_selector_result	Selector	Result´s selector
inp_value_reactions_el	Hydraulic input data	Domain data used to determine the general coefficiency of element's reaction
inp_times	Hydraulic input data	Values of simulation times of hydraulic model

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
price_simple	price	Numeric(12,4)	Price
db_cat_view	description	text	description of the table
db_cat_columns	id	int4	Autonumeric field to store unique values for each row (primary key)
anl_node_orphan	node_type	Varchar(30)	Type of the node
db_cat_columns	db_cat_table_id	int4	Type of column
anl_mincut_result_cat	anl_descript	text	Description of analysis.
anl_node_orphan	node_id	Varchar(16)	Node identifier
anl_arc_same_startend	arc_id		Arc identifier
temp_node	node_type	varchar(30)	Node type.
ext_streetaxis	name	Varchar(100)	Street name.
ext_streetaxis	text	text	Field ready to insert text for additional information.
ext_streetaxis	the_geom	public.geometry	Line geometry field.
ext_urban_propierties	id	Varchar (16)	ID of a urban properites. Primary key.
ext_urban_propierties	code	Varchar (30)	Code of the property.
ext_urban_propierties	streetaxis	Varchar (16)	Street at which the property is located.
ext_urban_propierties	postnumber	Varchar (16)	Post number of the property.
ext_urban_propierties	complement	Varchar (16)	
ext_urban_propierties	placement	Varchar (16)	Location of a property.
ext_urban_propierties	square	Varchar (16)	Square at which the property is located.
ext_urban_propierties	the_geom	public.geometry	Line geometry field.
ext_cat_period	id	Varchar (16)	ID of a period catalog. Primary key.
ext_cat_period	starttime	Timestamp(6)	Defines the begining of the period.
ext_cat_period	endtime	Timestamp(6)	Defines the end of the period.
ext_cat_period	period_seconds	int	Period of time expressed in seconds.
ext_cat_period	comment	Varchar (100)	Comments related to period catalog. Additional information
ext_cat_scada	id	Varchar (16)	ID of a scada catalog. Primary key.
ext_cat_scada	data_type	Varchar (30)	Type of data coming from scada.
ext_cat_scada	units	Varchar (12)	Type of units in which the data is expressed.
ext_cat_scada	text1	Varchar (100)	Field ready to insert text for additional information.
ext_cat_scada	text2	Varchar (100)	Field ready to insert text for additional information.
ext_cat_scada	text3	Varchar (100)	Field ready to insert text for additional information.
ext_cat_scada	link	Varchar (512)	Field to store link to information related to the scada's catalog.
ext_cat_scada	url	Varchar (512)	Field to store URL or folder path with more information related to the scada's catalog.
ext_cat_scada	picture	Varchar (512)	Picture related to the material.
ext_cat_scada	svg	Varchar (50)	Symbology.
ext_rtc_scada	scada_id	Varchar (16)	Id of a related scada receiver.
ext_rtc_scada	cat_scada_id	Varchar (16)	Id of the related scada catalog element.
ext_rtc_scada	text	text	Field ready to insert text for additional information.
ext_rtc_scada_x_value	id	int8	Autonumeric field to store unique values for each row (primary key).
ext_rtc_scada_x_value	scada_id	Varchar (16)	Id of a related scada receiver.
ext_rtc_scada_x_value	value	float	Value obtained from scada.
ext_rtc_scada_x_value	timestamp	Timestamp(6)	Date of capturing the data.
ext_rtc_scada_x_value	interval_seconds	int4	Time interval in which the data was captured expressed in seconds.
ext_rtc_scada_x_data	id	int8	Autonumeric field to store unique values for each row (primary key).
ext_rtc_scada_x_data	scada_id	Varchar (16)	Id of a related scada receiver.
ext_rtc_scada_x_data	min	float	Minimum value.
ext_rtc_scada_x_data	max	float	Maximum value.
ext_rtc_scada_x_data	avg	float	Average value.
ext_rtc_scada_x_data	sum	float	Sum of the values.

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
ext_rtc_scada_x_data	cat_period_id	Varchar(16)	Id of a related period catalog.
ext_rtc_scada_dma_period	id	int8	Autonumeric field to store unique values for each row (primary key).
ext_rtc_scada_dma_period	dma_id		ID of the related management area related (District Meter Area)
ext_rtc_scada_dma_period	m3_min	float	Minimum value.
ext_rtc_scada_dma_period	m3_max	float	Maximum value.
ext_rtc_scada_dma_period	m3_avg	float	Average value.
ext_rtc_scada_dma_period	m3_total_period	float	
ext_rtc_scada_dma_period	cat_period_id	Varchar (16)	Id of the related period catalog element.
ext_cat_hydrometer	id	Varchar (16)	Autonumeric field to store unique values for each row (primary key).
ext_cat_hydrometer	text2	Varchar (100)	Field ready to insert text for additional information.
ext_cat_hydrometer	text3	Varchar (100)	Field ready to insert text for additional information.
ext_cat_hydrometer	link	Varchar (512)	Field to store link to information related to the hydrometer's catalog.
ext_cat_hydrometer	url	Varchar (512)	Field to store URL or folder path with more information related to the hydrometer's catalog.
ext_cat_hydrometer	picture	Varchar (512)	Picture related to the material.
ext_cat_hydrometer	svg	Varchar (50)	Symbology.
ext_rtc_hydrometer	hydrometer_id	Varchar(16)	ID of a hydrometer. Primary key.
ext_rtc_hydrometer	cat_hydrometer_id	Varchar(16)	ID of a related hydrometer catalog element.
ext_rtc_hydrometer_x_value	id	int8	Autonumeric field to store unique values for each row (primary key).
ext_rtc_hydrometer_x_value	hydrometer_id	Varchar(16)	Id of a related hydrometer.
ext_rtc_hydrometer_x_value	value	float	Value obtained from hydrometer.
ext_rtc_hydrometer_x_value	timestamp	Timestamp(6)	Date of capturing the data.
ext_rtc_hydrometer_x_value	interval_seconds	int4	Time interval in which the data was captured expressed in seconds.
ext_rtc_hydrometer_x_data	id	int8	Autonumeric field to store unique values for each row (primary key).
ext_rtc_hydrometer_x_data	hydrometer_id	Varchar(16)	Id of a related hydrometer.
ext_rtc_hydrometer_x_data	min	float	Minimum value.
ext_rtc_hydrometer_x_data	max	float	Maximum value.
ext_rtc_hydrometer_x_data	avg	float	Average value.
ext_rtc_hydrometer_x_data	sum	float	Sum of the values.
ext_rtc_hydrometer_x_data	cat_period_id	Varchar (16)	Id of the related period catalog element.
arc_type	id	varchar(18)	Custom type of arc defined by the user. The relation with type is n to 1.
arc_type	type	varchar(18)	Type of arc. The data of this field is system data
arc_type	epa_default	varchar(18)	Default's value of EPA software. The data of this field is system data
arc_type	man_table	varchar(18)	Name of the table with additional information of feature (management information). The data of this field is system data
node	node_id	varchar(16)	Node identifier. Primary key
arc_type	epa_table	varchar(18)	Name of the table with additional information of feature (hidraulic model). The data of this field is system data
arc_type	event_table	varchar(18)	Name of the table with additional information of feature (operation information). The data of this field is system data
node_type	id	varchar(18)	Custom type of node defined by the user. The relation with type is n to 1
node_type	type	varchar(18)	Type of node. The data of this field is system data
node_type	epa_default	varchar(18)	Default's value of EPA software. The data of this field is system data
cat_connec	type	varchar(16)	Type of the connect.
node_type	man_table	varchar(18)	Name of the table with additional information of feature (management information). The data of this field is system data
node_type	epa_table	varchar(18)	Name of the table with additional information of feature (hidraulic model). The data of this field is system data
node_type	event_table	varchar(18)	Name of the table with additional information of feature (operation information). The data of this field is system data
element_type	id	varchar(18)	Type of element adapted to reality, and ready to translate. The relation with type is n to 1
element_type	event_table	varchar(18)	Name of the table with additional information of feature (operation information). The data of this field is system data
cat_mat_arc	id	varchar(30)	ID of arc's material catalog. Primary key.
cat_mat_arc	descript	varchar(512)	Field to store additional information about the material
cat_mat_arc	roughness	Numeric(12,4)	Roughness of the material.
cat_mat_arc	link	varchar(512)	Field to store link to information related to the arc's material catalog.

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
cat_mat_arc	url	varchar(512)	Field to store URL or folder path with more information related to the arc's material catalog.
cat_mat_arc	picture	varchar(512)	Picture related to the material.
cat_mat_node	id	varchar(30)	ID of node's material catalog. Primary key.
cat_mat_node	descript	varchar(512)	Field to store additional information about the material.
cat_mat_node	roughness	Numeric(12,4)	Roughness of the material.
cat_mat_node	link	varchar(512)	Field to store link to information related to the node's material catalog.
cat_mat_node	url	varchar(512)	Field to store URL or folder path with more information related to the node's material catalog.
cat_mat_node	picture	varchar(512)	Picture of a material.
cat_arc	id	varchar(30)	ID of the arc catalog. Primary key.
cat_arc	arctype_id	varchar(16)	Type of arc identifier related to the primary key of arc_type table.
cat_arc	matcat_id	varchar(30)	Material catalog identifier.
cat_arc	pnom	varchar(16)	Nominal pressure.
cat_arc	dnom	varchar(16)	Nominal diameter.
cat_arc	dint	Numeric(12,5)	Internal diameter of the arc
cat_arc	dext	Numeric(12,5)	Diameter exterior.
cat_arc	descript	varchar(512)	Field to store additional information about the catalog.
cat_arc	link	varchar(512)	Field to store link to information related to the arc catalog.
cat_arc	url	varchar(512)	Field to store URL or folder path with more information related to the arc catalog.
cat_arc	picture	varchar(512)	Picture of an arc.
cat_arc	svg	varchar(50)	Symbology.
arc	node_2	varchar(16)	Node located at the end of the arc.
cat_arc	z1	Numeric(12,2)	Distance from the bottom of the trench of conduit to the top of the conduit's protection material
cat_arc	z2	Numeric(12,2)	Distance from the top of the conduit to the top of the conduit's protection material
cat_arc	width	Numeric(12,2)	Maximum width of the conduit's section (by point of view of constructive issues). Often is the same value that (geom2 + 2*bulk)
cat_arc	area	Numeric(12,4)	Full area of the conduit's section
cat_arc	estimated_depth	Numeric(12,2)	In case no data of depth of conduit this depth is used to estimate the budget.
cat_arc	bulk	Numeric(12,2)	Bulk of the conduit. It consider the same bulk for all the walls of the conduit
cat_arc	cost_unit	Varchar(3)	Units measurements. (Only ml or ut. are allowed values). Sometimes the budget of an arc could be treated as unitary price (applied using length=1)
cat_arc	cost	varchar(16)	(Price_compost.id) of full cost of conduit's subministration and installation
cat_arc	m2bottom_cost	varchar(16)	(Price_compost.id) of full cost of bottom's trench arrangement
cat_arc	m3protec_cost	varchar(16)	(Price_compost.id) of full cost of conduit's proteccion material
cat_node	id	varchar(30)	ID of the node catalog. Primary key.
cat_node	nodetype_id	varchar(16)	ID of the related node type.
cat_node	matcat_id	varchar(30)	ID of the related material type.
cat_node	pnom	varchar(16)	Nominal pressure.
cat_node	dnom	varchar(16)	Nominal diameter.
cat_node	dint	Numeric(12,5)	Internal diameter of the node
cat_node	geometry	varchar(30)	Geometry of the node.
cat_node	descript	varchar(512)	Field to store additional information about the catalog.
cat_node	link	varchar(512)	Field to store link to information related to the node catalog.
cat_node	url	varchar(512)	Field to store URL or folder path with more information related to the node catalog.
cat_node	picture	varchar(512)	Picture of an arc.
cat_node	svg	varchar(50)	Pictogram of the symbology.
cat_node	estimated_depth	Numeric(12,2)	In case no data of depth of conduit this depth is used to estimate the budget.
cat_node	cost_unit	Varchar(3)	Units measurements. (Only ml or ut. are allowed values). Sometimes the budget of an node could be treated as lineal price (using the depth as length to compute the cost)
cat_node	cost	varchar(16)	(Price_compost.id) of full cost of conduit's subministration and installation
cat_mat_element	id	varchar(30)	ID of element's material catalog. Primary key.
cat_mat_element	descript	varchar(512)	Field to store additional information about the material.

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
cat_mat_element	link	varchar(512)	Field to store link to information related to the element's material catalog.
cat_mat_element	url	varchar(512)	Field to store URL or folder path with more information related to the element's material catalog.
cat_mat_element	picture	varchar(512)	Picture of the material.
cat_element	id	varchar(30)	ID of the element catalog. Primary key.
cat_element	elementtype_id	varchar(30)	Element type identifier.
cat_element	matcat_id	varchar(30)	Material catalog identifier.
cat_element	geometry	varchar(30)	Geometry of the element.
cat_element	descript	varchar(512)	Field to store additional information about the catalog.
cat_element	link	varchar(512)	Field to store link to information related to the element catalog.
cat_element	url	varchar(512)	Field to store URL or folder path with more information related to the element catalog.
cat_element	picture	varchar(512)	Picture of the element.
cat_element	svg	varchar(50)	Pictogram of the symbology.
cat_connec	id	varchar(30)	ID of the connect catalog. Primary key.
cat_connec	matcat_id	varchar(16)	Material catalog identifier.
cat_connec	pnom	varchar(16)	Nominal pressure.
cat_connec	dnom	varchar(16)	Nominal diameter.
cat_connec	geometry	varchar(30)	Geometry of the connect.
cat_connec	descript	varchar(512)	Field to store additional information about the catalog.
cat_connec	link	varchar(512)	Field to store link to information related to the connect catalog.
cat_connec	url	varchar(512)	Field to store URL or folder path with more information related to the connect catalog.
cat_connec	picture	varchar(512)	Picture of the connect.
cat_connec	svg	varchar(50)	Pictogram of the symbology.
cat_soil	id	varchar(30)	ID of the soil. Primary key.
cat_soil	descript	varchar(512)	Description of a soil type. Additional information
cat_soil	link	varchar(512)	Field to store link to information related to the soil catalog.
cat_soil	url	varchar(512)	Field to store URL or folder path with more information related to the soil catalog.
cat_soil	picture	varchar(512)	Picture of the soil
cat_soil	y_param	Numeric(5,2)	Slope of the wall of the trench. On the expression (a:y_param) 'a' is the horitzontal distance and y_param is the vertical distance of the slope of the trench.
cat_soil	b	Numeric(5,2)	Value of the distance from conduit to the wall of the trenchline, measured on the bottom's trench.
cat_soil	trenchlining	Numeric(3,2)	Percentage of the trench where with trenchlining
cat_soil	m3exc_cost	Varchar(16)	Cost of excavation (cubic meter)
cat_soil	m3fill_cost	Varchar(16)	Cost of filling the (cubic meter)
arc	arccat_id	varchar(30)	Arc catalog identifier related to the primary key of arc table.
cat_soil	m3excess_cost	Varchar(16)	Cost of manage the excess of soil from the trench (cubic meter)
cat_soil	m2trenchl_cost	Varchar(16)	Cost of the trenchiling (square meter)
cat_builder	id	varchar(30)	ID of the builder. Primary key.
cat_builder	descript	varchar(512)	Description of the builder. Additional information
cat_builder	link	varchar(512)	Field to store link to information related to the builder catalog.
cat_builder	url	varchar(512)	Field to store URL or folder path with more information related to the builder catalog.
cat_builder	picture	varchar(512)	Picture of the builder.
cat_work	id	varchar(30)	ID of the work. Primary key.
cat_work	descript	varchar(512)	Description of the construction work. Additional information
cat_work	link	varchar(512)	Field to store link to information related to the work catalog.
cat_work	picture	varchar(512)	Picture of the construction work.
cat_owner	id	varchar(30)	ID of the owner. Primary key.
cat_owner	descript	varchar(512)	Description of the owner.
cat_owner	link	varchar(512)	Field to store link to information related to the owner catalog.
cat_owner	picture	varchar(512)	Picture of the owner.

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
cat_pavement	id	Varchar(16)	ID of the pavement. Primary key.
cat_pavement	descript	text	Description of the pavement. Additional information
cat_pavement	link	varchar(512)	Field to store link to information related to the pavement.
cat_pavement	picture	varchar(512)	Picture of the pavement.
cat_pavement	thickness	Numeric(12,2)	Value of pavement thickness.
cat_pavement	m2_cost	Varchar(16)	(Price_compost.id) of the full cost of pavement demolition and reconstruction.
cat_press_zone	id	Varchar(18)	ID of the press zone. Primary key.
cat_press_zone	descript	text	Description of the pressure zone. Additional information
cat_press_zone	link	Varchar(512)	Field to store link to information related to the pressure zone.
cat_press_zone	picture	Varchar(512)	Picture of the pressure zone.
man_type_category	id	varchar(20)	ID of the management type category. Primary key.
man_type_category	observ	varchar(50)	Observations related to type category. Additional information
man_type_fluid	id	varchar(20)	ID of the management type of fluid. Primary key.
man_type_fluid	observ	varchar(50)	Observations related to fluid type. Additional information
man_type_location	id	varchar(20)	ID of the management location type. Primary key.
man_type_location	observ	varchar(50)	Observations related to type location. Additional information
connec_type	id	varchar(20)	ID of the connect type. Primary key.
connec_type	observ	varchar(50)	Observations related to connect type. Additional information
sector	sector_id	varchar(30)	Sector identifier. Primary key
sector	descript	varchar(100)	Field to store additional information about the feature.
sector	the_geom	public.geometry	Polygon geometry field
node	elevation	Numeric(12,4)	Elevation of the node in ft or m.
node	depth	Numeric(12,4)	Depth of the node in ft or m.
node	nodecat_id	varchar(30)	Node catalog identifier related to the primary key of cat_node table
node	epa_type	varchar(16)	EPANET behaviour of the node.
node	sector_id	varchar(30)	Hydraulic sector identifier related to the primary key of sector table
node	state	character varying(16)	Domain value of node's state.
node	annotation	character varying(254)	Annotations related to node. Additional information.
node	observ	character varying (254)	Observations related to node. Additional information
node	comment	character varying (254)	Comments related to node. Additional information
node	dma_id	varchar(30)	ID of the management area related to the arc (District Meter Area)
node	soilcat_id	varchar(16)	ID of the soil related to the node.
node	category_type	varchar(18)	ID of the category type related to node.
node	fluid_type	varchar(18)	ID of the fluid type related to node.
node	location_type	varchar(18)	ID of the location type related to node.
node	workcat_id	varchar(255)	ID of the construction work related to node.
node	buildercat_id	varchar(30)	ID of the builder related to node.
node	builtdate	timestamp(6)	ID of the construction date related to node.
node	ownercat_id	varchar(30)	ID of the owner related to node.
node	adress_01	varchar(50)	Field to store information about the adress of the feature.
node	adress_02	varchar(50)	Field to store information about the adress of the feature.
node	adress_03	varchar(50)	Field to store information about the adress of the feature.
node	descript	varchar(254)	Field to store additional information about the feature.
node	rotation	Numeric(6,3)	Field to use in order to rotate the symbology of the GIS canvas
node	link	character varying(512)	Field to store link to information related to the node.
node	verified	varchar(16)	Value domain with information about the state of verification of the element (to review, verified,â¦)
node	the_geom	public.geometry	Point geometry field
arc	arc_id	varchar(16)	Arc identifier. Primary key
arc	node_1	varchar(16)	Node located at the beginning of the arc.

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
arc	sector_id	varchar(30)	Hydraulic sector identifier related to the primary key of sector table
arc	epa_type	varchar(16)	EPANET behaviour of the arc. (pipe or undefined)
arc	state	character varying(16)	Domain value of arc's state (on service, planified, obsolete)
arc	annotation	character varying(254)	Annotations related to arc. Additional information
arc	observ	character varying (254)	Observations related to arc. Additional information
arc	comment	character varying (254)	Comments related to arc. Additional information
arc	custom_length	Numeric(12,2)	Customized length, not from GIS geometry. Used to customize the length of the element
arc	dma_id	varchar(30)	ID of the management area related to the arc (District Meter Area)
arc	soilcat_id	varchar(16)	ID of the soil related to the arc
arc	category_type	varchar(18)	ID of the category type related to arc
arc	fluid_type	varchar(18)	ID of the fluid type related to arc
arc	location_type	varchar(18)	ID of the location type related to arc
arc	workcat_id	varchar(255)	ID of the construction work related to arc
arc	buildercat_id	varchar(30)	ID of the builder related to arc
arc	builtdate	timestamp(6)	ID of the construction date related to arc.
arc	ownercat_id	varchar(30)	ID of the owner related to arc.
arc	adress_01	varchar(50)	Field to store information about the adress of the feature.
arc	adress_02	varchar(50)	Field to store information about the adress of the feature.
arc	adress_03	varchar(50)	Field to store information about the adress of the feature.
arc	descript	varchar(254)	Field to store additional information about the feature.
arc	rotation	Numeric(6,3)	Field to use in order to rotate the symbology of the GIS canvas
arc	link	character varying (512)	Field to store URL or folder path with more information related to the arc
arc	verified	varchar(16)	Value domain with information about the state of verification of the element (to review, verified,â¦)
arc	the_geom	public.geometry	Linestring geometry field
dma	dma_id	varchar(30)	ID of the management area related to the arc (District Meter Area). Primary key.
dma	sector_id	varchar(30)	Hydraulic sector identifier related to the primary key of sector table
dma	presszonecat_id	Varchar(30)	Identifier or the pressure zone where the dma is located
dma	descript	varchar(255)	Field to store additional information about the feature.
dma	observ	character varying (512)	Observations related to dma. Additional information
dma	the_geom	public.geometry	Polygon geometry field
connec	connec_id	varchar(16)	Connect identifier. Primary key. Often connec is the postnumber address of the building. Sometimes one connec is related to one hydrometer, some times not.
connec	elevation	Numeric(12,4)	Elevation of the connect in ft or m.
connec	depth	Numeric(12,4)	Depth of the connect in ft or m.
connec	connecat_id	varchar(30)	Connect catalog identifier
connec	sector_id	varchar(30)	Hydraulic sector identifier related to the primary key of sector table
connec	code	varchar(30)	Code of the connec from the comercial database or something equivalent
connec	n_hydrometer	int4,	Number of hydrometers related to the connec (From 1 to n).
connec	demand	Numeric(12,8)	Demand for water by the main category of consumer. Measured in the current flow units
connec	state	character varying(16)	Domain value of connect's state.
connec	annotation	character varying(254)	Annotations related to connect. Additional information.
connec	observ	character varying (254)	Observations related to connect. Additional information
connec	comment	character varying (254)	Comments related to connect. Additional information
connec	rotation	Numeric(6,3)	Field to use in order to rotate the symbology of the GIS canvas
connec	dma_id	varchar(30)	ID of the management area related to the connect (District Meter Area)
connec	soilcat_id	varchar(16)	ID of the soil related to the connect.
connec	category_type	varchar(18)	ID of the category type related to connct.
connec	fluid_type	varchar(18)	ID of the fluid type related to connect.
connec	location_type	varchar(18)	ID of the location type related to connect.

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
connec	workcat_id	varchar(255)	ID of the construction work related to connect.
connec	buildercat_id	varchar(30)	ID of the builder related to connect.
connec	builtdate	varchar(12)	ID of the construction date related to connect.
connec	ownercat_id	varchar(30)	ID of the owner related to connect.
connec	adress_01	varchar(50)	Field to store information about the adress of the feature.
connec	adress_02	varchar(50)	Field to store information about the adress of the feature.
connec	adress_03	varchar(50)	Field to store information about the adress of the feature.
connec	streetaxis_id	Varchar(16)	Street identifier.
connec	postnumber	Varchar(16)	Post code number.
anl_mincut_result_cat	exec_end	timestamp	
connec	descript	varchar(254)	Field to store additional information about the feature.
connec	link	character varying (512)	Field to store link to information related to the connect.
temp_node	node_id	varchar(16)	Temporary node identifier. Primary key
connec	verified	varchar(16)	Value domain with information about the state of verification of the element (to review, verified,â¦)
connec	the_geom	public.geometry	Point geometry field
inp_report	f_factor	varchar(16)	Friction factor.
vnode	vnode_id	varchar(16)	Virtual node identifier. Primary key
vnode	arc_id	varchar(16)	Arc identifier related to the primary key of arc table
vnode	userdefined_pos	boolean	Column to control when the user have moved the vnode (custom position, not automatic position). The goal of this control is dissable the posibility to ovewrite the vnode position if
vnode	vnode_type	varchar(30)	Virtual node type.
vnode	sector_id	varchar(30)	Hydraulic sector identifier related to the primary key of sector table
vnode	state	character varying (16)	Domain value of virtual node's state.
vnode	annotation	character varying (254)	Annotations related to virtual node. Additional information.
vnode	the_geom	public.geometry	Point geometry field
link	link_id	varchar(16)	Link identifier. Primary key
link	the_geom	public.geometry	Linestring geometry field
link	connec_id	varchar(16)	Connect identifier related to the primary key of connec table
link	vnode_id	varchar(16)	Virtual node identifier.
link	custom_length	Numeric(12,3)	Custom length of the link.
man_junction	node_id	varchar(16)	Junction identifier.
man_junction	add_info	varchar(255)	Additional information about the feature
ext_type_street	id	Varchar (20)	ID of a street type. Primary key.
ext_type_street	observ	Varchar (50)	Observations related to street type. Additional information
ext_streetaxis	id	Varchar(16)	ID of a street. Primary key.
ext_streetaxis	type	Varchar(18)	Street type.
inp_report	head	varchar(16)	Head in ft or m.
rpt_arc	id	int4	Primary key for table.
man_tank	node_id	varchar(16)	Node identifier related to the primary key of the node table
man_tank	vmax	Numeric(12,4)	Maximum volumen of the tank
man_tank	area	Numeric(12,4)	Surface of the tank
man_tank	add_info	varchar(255)	Additional information about the feature
man_hydrant	node_id	varchar(16)	Node identifier related to the primary key of the node table
man_hydrant	add_info	varchar(255)	Additional information about the feature
man_valve	node_id	varchar(16)	Node identifier related to the primary key of the node table
man_valve	type	varchar(16)	Valve type identifier.
man_valve	opened	boolean	Configuration parameter used on fct_min_cut function
man_valve	broken	boolean	Configuration parameter used on fct_min_cut function
man_valve	add_info	varchar(255)	Additional information about the feature

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
man_pump	node_id	varchar(16)	Node identifier related to the primary key of the node table
man_pump	add_info	varchar(255)	Additional information about the feature
man_filter	node_id	varchar(16)	Node identifier related to the primary key of the node table
man_filter	add_info	varchar(255)	Additional information about the feature
man_meter	node_id	varchar(16)	Node identifier related to the primary key of the node table
man_meter	add_info	varchar(255)	Additional information about the feature
man_pipe	arc_id	varchar(16)	Additional information about the valve type.
man_pipe	add_info	varchar(255)	Additional information about the feature
element	element_id	varchar(16)	Element identifier. Primary key
element	elementcat_id	varchar(30)	Element catalog identifier
element	state	character varying (16)	Domain value of element's state.
inp_report	quality	varchar(16) character varying (254)character varying (254)character varying (254)character varying (254)character varying	Selects the type of water quality analysis to perform
element	annotation	(254)	Annotations related to element. Additional information.
element	observ	character varying (254)	Observations related to element. Additional information
element	comment	character varying (254)	Comments related to element. Additional information
element	location_type	varchar(18)	ID of the location type related to element.
element	workcat_id	varchar(255)	ID of the construction work related to element.
element	buildercat_id	varchar(30)	ID of the builder related to element.
element	builtdate	timestamp(6)	ID of the construction date related to element.
element	ownercat_id	varchar(30)	ID of the owner related to element.
element	enddate	timestamp(6)	Expiration date. Expected or real. The goal of this column is to enable the posilibity to have information of all the deprecated elements of the infraestructure without delete it
element	rotation	Numeric(6,3)	Field to use in order to rotate the symbology of the GIS canvas
element	link	character varying (512)	Field to store link to information related to the element
element	verified	varchar(16)	Value domain with information about the state of verification of the element (to review, verified,â¦)
element_x_arc	id	varchar(16)	Element related to arc identifier. Primary key.
element_x_arc	element_id	varchar(16)	Element identifier related to the primary key of element table
element_x_arc	arc_id	varchar(16)	Arc identifier related to the primary key of the arc table
element_x_node	id	varchar(16)	Element related to node identifier. Primary key.
element_x_node	element_id	varchar(16)	Element identifier related to the primary key of element table
element_x_node	node_id	varchar(16)	Node identifier related to the primary key of the node table
element_x_connec	id	varchar(16)	Element related to connect identifier. Primary key.
element_x_connec	element_id	varchar(16)	Element identifier related to the primary key of element table
element_x_connec	connec_id	varchar(16)	Connect identifier related to the primary key of connec table
value_state	id	varchar(16)	ID of value state. Primary key.
value_state	observ	varchar(254)	Observations related to state. Additional information
value_verified	id	varchar(16)	ID of verification status. Primary key.
value_verified	observ	varchar(254)	Observations related to verification status Additional information
value_yesno	id	varchar(16)	ID of value yes/no. Primary key.
value_yesno	observ	varchar(254)	Observations related to yes/no value Additional information
man_selector_valve	id	varchar(16)	ID of value man selector valve. Primary key.
temp_node	elevation	numeric(12,4),	Elevation of the temporary node in ft or m.
temp_node	depth	numeric(12,4),	Depth of the temporary node in ft or m.
temp_node	nodecat_id	varchar(30)	Node catalog identifier related to the primary key of cat_node table
temp_node	epa_type	varchar(16)	EPANET behaviour of the node.

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
temp_node	sector_id	varchar(30)	Hydraulic sector identifier related to the primary key of sector table
temp_node	state	character varying (16)	Domain value of node's state.
temp_node	annotation	character varying (254)	Annotations related to temporary node. Additional information.
temp_node	observ	character varying (254)	Observations related to temporary node. Additional information
temp_node	comment	character varying (254)	Comments related to temporary node. Additional information
temp_node	rotation	Numeric(6,3)	Field to use in order to rotate the symbology of the GIS canvas
temp_node	link	character varying (512)	Field to store link to information related to the temporary node.
temp_node	verified	varchar(16)	Value domain with information about the state of verification of the element (to review, verified,â¦)
temp_node	the_geom	public.geometry	Point geometry field
temp_arc	arc_id	varchar(16)	Temporary arc identifier. Primary key
temp_arc	node_1	varchar(16)	Node located at the beginning of the temporary arc.
temp_arc	node_2	varchar(16)	Node located at the end of the temporary arc.
temp_arc	arccat_id	varchar(30)	Arc catalog identifier related to the primary key of arc table.
temp_arc	epa_type	varchar(16)	EPANET behaviour of the temporary arc. (pipe or undefined)
temp_arc	sector_id	varchar(30)	Hydraulic sector identifier related to the primary key of sector table
temp_arc	state	character varying (16)	Domain value of temporary arc's state (on service, planified, obsolete)
temp_arc	annotation	character varying (254)	Annotations related to temporary arc. Additional information.
temp_arc	observ	character varying (254)	Observations related to temporary arc. Additional information
temp_arc	comment	character varying (254)	Comments related to temporary arc. Additional information
temp_arc	custom_length	Numeric(12,2)	Customized length, not from GIS geometry. Used to customize the length of the element
temp_arc	rotation	Numeric(6,3)	Field to use in order to rotate the symbology of the GIS canvas
temp_arc	link	character varying (512)	Field to store link to information related to the temporary arc.
temp_arc	verified	varchar(16)	Value domain with information about the state of verification of the element (to review, verified,â¦)
temp_arc	the_geom	public.geometry	Linestring geometry field
inp_node_type	id	varchar(16)	Value domain of EPANET node types.
inp_backdrop	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information. See definition and remark's section for more information.
inp_backdrop	text	varchar(254)	Text options Backdrop.
inp_controls	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
inp_controls	text	varchar(254)	Â Controls text. For more information, see appendix c of epanet user manual.
inp_curve	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
inp_curve	curve_id	varchar(16)	Name assigned to table.
inp_curve	x_value	Numeric(12,4)	An x (independent variable) value.
inp_curve	y_value	numeric(12,4)	An y (independent variable) value.
inp_curve_id	id	varchar(16)	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information. See definition and remark's section for more information.
inp_curve_id	curve_type	varchar(20)	Curve types include PUMP, EFFICIENCY, VOLUME, and HEADLOSS.
inp_demand	id	int4	Row id. Unique value needed.
inp_demand	node_id	varchar(16)	Node identifier related to the primary key of the node table
inp_demand	demand	Numeric(12,6)	Base demand (flow units).
inp_demand	pattern_id	varchar(16)	Demand pattern ID.
inp_demand	deman_type	varchar(18)	Name of demand category preceded by a semicolon.
inp_emitter	node_id	varchar(16)	Node identifier related to the primary key of the node table
inp_emitter	coef	numeric	Flow coefficient, flow units at 1 psi (1 meter) pressure drop.
inp_energy_el	id	int4	Row id. Unique value needed.
inp_energy_el	pump_id	Varchar(16)	Node identifier related to the primary key of the node table
inp_energy_el	parameter	varchar(20)	Options parameters. Must be PRICE, PATTERN or EFFIC
inp_energy_el	value	varchar(30)	Value of the parameter selected

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
inp_energy_gl	id	int4	Row id. Unique value needed.
inp_energy_gl	energ_type	varchar(18)	Energy type. Must be GLOBAL or DEMAND CHARGE
inp_energy_gl	parameter	varchar(20)	Â Options parameters of energy applied to global features
inp_energy_gl	value	varchar(30)	Values for the selected parameter.
inp_junction	node_id	varchar(16)	Node identifier related to the primary key of the node table
inp_junction	demand	Numeric(12,6)	The spot elevation junction. (ft or m).
inp_junction	pattern_id	varchar(16)	Base demand (flow units). This field is optional.
inp_label	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
inp_label	xcoord	Numeric(18,6)	Horizontal coordinate of vertex relative to origin in lower left of map.
inp_label	ycoord	Numeric(18,6)	Vertical coordinate of vertex relative to origin in lower left of map.
inp_label	label	varchar(50)	Text of label in double quotes.
inp_label	node_id	varchar(16)	Node identifier related to the primary key of the node table
inp_mixing	node_id	varchar(16)	Node identifier related to the primary key of the node table
inp_mixing	mix_type	varchar(18)	Defines the type of mixing model.
inp_mixing	value	numeric	Compartment volume (fraction).
inp_options	units	varchar(20)	Type of units in which flow rates are expressed.
inp_options	headloss	varchar(20)	Formula to use for computing head loss for flow through a pipe
inp_options	hydraulics	varchar(12)	Allows you to either savethe current hydraulics solution to a file or usea previously saved hydraulics solution.Allows you to either savethe current hydraulics solution to a file or usea previously saved hydraulics solution.
inp_options	specific_gravity	Numeric(12,6)	The ratio of the density of the fluid being modeled to that of water at 4oCThe ratio of the density of the fluid being modeled to that of water at 4oC
inp_options	viscosity	Numeric(12,6)	The kinematic viscosity of the fluid being modeled relative to that of water at 20oC. The default value is 1.0.
inp_options	trials	Numeric(12,6)	The maximum number of trials used to solve network hydraulics at each hydraulic time step of a simulation. The default is 40.
inp_options	accuracy	Numeric(12,6)	Prescribes the convergence criterion that determines when a hydraulic solution has been reached. The trials end when the sum of all flow changes from the previous solution divided by the total flow in all links is less than this number. The default is 0.001.
inp_options	unbalanced	varchar(12)	Determines what happens if a hydraulic solution cannot be reached within the prescribed number of trialsat some hydraulic time step into the simulation.
inp_options	checkfreq	Numeric(12,6)	Advanced hydrulic parameters from EPANET model.
inp_options	maxcheck	Numeric(12,6)	Advanced hydrulic parameters from EPANET model.
inp_options	damplimit	Numeric(12,6)	Advanced hydrulic parameters from EPANET model.
inp_options	pattern	varchar(16)	Provides the ID label of a default demand pattern to be applied to all junctions where no demand pattern was specified.
inp_options	demand_multiplier	Numeric(12,6)	Adjusts the values of baseline demands for all junctions and all demand categories.
inp_options	emitter_exponent	Numeric(12,6)	Specifies the power to which the pressure at a junction is raised when computing the flow issuing from an emitter. The default is 0.5.
inp_options	quality	varchar(18)	Selects the type of water quality analysis to perform
inp_options	diffusivity	Numeric(12,6)	The molecular diffusivity of the chemical being analyzed relative to that of chlorine in water. The default value is 1.0
inp_options	tolerance	Numeric(12,6)	The difference in water quality level below which one can say that one parcel of water is essentially the same as another. The default is 0.01
inp_options	hydraulics_fname	varchar(254)	If hydraulic information is related to file, this column stores the folder path of this file
inp_report	length	varchar(16)	Length of the arc.
inp_report	diameter	varchar(16)	Diameter in inches or mm.
inp_options	unbalanced_n	Numeric(12,6)	In case that the hydraulic analisys won't be balanced during 40 trials, user can custom additional trials inserting into this column the number of additional iterations
inp_options	node_id	varchar(16)	In case to use quality options (trace_id). The user must insert the node identifier into this column
inp_pattern	id	int4	Autonumeric field to store unique values for each row (primary key)
inp_pattern	pattern_id	varchar(16)	Pattern identifier.
inp_pattern	factor_1	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_2	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_3	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_4	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_5	Numeric(12,4)	Pattern value (one or more multipliers).

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
inp_pattern	factor_6	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_7	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_8	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_9	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_10	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_11	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_12	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_13	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_14	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_15	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_16	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_17	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_18	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_19	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_20	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_21	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_22	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_23	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pattern	factor_24	Numeric(12,4)	Pattern value (one or more multipliers).
inp_pipe	arc_id	varchar(16)	Arc identifier related to the primary key of arc table
inp_pipe	minorloss	Numeric(12,6)	Minor loss coefficient.
inp_pipe	status	varchar(12)	Status (OPEN, CLOSED or CV)
inp_shortpipe	node_id	varchar(16)	Node identifier related to the primary key of the node table
anl_mincut_result_cat	exec_user	varchar(30)	
inp_shortpipe	minorloss	Numeric(12,6)	Minor loss coefficient.
inp_shortpipe	to_arc	varchar(16)	This fields identifies the direction of the flow of the shortpipe, applied only for the case of check valves
inp_shortpipe	status	varchar(12)	Status (OPEN, CLOSED or CV)
inp_pump	node_id	varchar(16)	Node identifier related to the primary key of the node table
inp_pump	power	varchar	Write it POWER, leave a space and write the value of power. (Power value for constant energy pump, hp (kW))
inp_pump	curve_id	varchar	ID label of the curve used for the pump
inp_pump	speed	Numeric(12,6)	Write it SPEED, leave a space and write the value of speed. (Relative speed setting (normal speed is 1.0, 0 means pump is off))
rpt_cat_result	dam_li_thr	numeric	Advanced parameter of the hydraulic simulation
inp_pump	pattern	varchar	Write it PATTERN, leave a space and write the value of pattern. (ID of time pattern that describes how speed setting varies with me)
inp_pump	status	varchar(12)	Status (OPEN, CLOSED or CV)
inp_quality	node_id	varchar(16)	Node identifier related to the primary key of the node table
inp_quality	initqual	numeric	Initial quality.
inp_reactions_el	id	int4	Row id. Unique value needed.
inp_reactions_el	parameter	varchar(20)	BULK, WALL or TANK.Â Used to override the global reaction coefficients for specific pipes and tanks
inp_reactions_el	arc_id	varchar(16)	Element ID with specific chemical reaction.
inp_reactions_el	value	numeric	Reaction coefficient vaules. For further information see appendix C of EPANET users manual.
inp_reactions_gl	id	int4	Row id. Unique value needed.
inp_reactions_gl	react_type	varchar(30)	Reaction type. Must be ORDER or GLOBAL (see below)
inp_reactions_gl	parameter	varchar(20)	Options parameters. Must be BULB, WALL, TANK, LIMITING POTENCIAL or ROUGHNESS CORRELATION.For further information see appendix C of EPANET users manual.
inp_reactions_gl	value	numeric	Value of the specified parameter
inp_report	pagesize	numeric	Sets the number of lines written per page of the output report. Default is 0.
inp_report	file	varchar(254)	Supplies the name of a file to which the output report will be written.
inp_report	status	varchar(4)	Determines whether a hydraulic status report should be generated.
inp_report	summary	varchar(3)	Determines whether a summary table of number of network components and key analysis

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
inp_report	energy	varchar(3)	Determines if a table reporting average energy usage and cost for each pump is provided.Default is NO. For further information see appendix C of EPANET users manual.
inp_report	nodes	varchar(254)	Identifies which nodes will be reported on.
inp_report	links	varchar(254)	Identifies which links will be reported on.
inp_report	elevation	varchar(16)	Elevation in ft or m.
inp_report	demand	varchar(16)	Demand for water by the main category of consumer. Measured in the current flow units
inp_report	pressure	varchar(16)	Pressure in psi or m.
inp_report	flow	varchar(16)	Flow (flow units)
inp_report	velocity	varchar(16)	Velocity in fps.
inp_report	headloss	varchar(16)	Headloss (/1000ft).
inp_report	setting	varchar(16)	Setting. (Roughness for pipes, speed for pumps, pressure/flow setting for valves).
inp_report	reaction	varchar(16)	Reaction coefficient vaules For further information see appendix C of EPANET users manual.
inp_reservoir	node_id	varchar(16)	Node identifier related to the primary key of the node table
inp_reservoir	head	Numeric(12,4)	Head, ft (m).
inp_reservoir	pattern_id	varchar(16)	Head pattern ID. This field is optional
inp_rules	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
inp_rules	text	varchar(254)	Defines rule-based controls that modify links based on a combination of conditions.
inp_source	node_id	varchar(16)	Node identifier related to the primary key of the node table
inp_source	sourc_type	varchar(18)	Source type (CONCEN, MASS, FLOWPACED, or SETPOINT).
inp_source	quality	Numeric(12,6)	Baseline source strength.
inp_source	pattern_id	varchar(16)	Time pattern identifier.
inp_tags	object	varchar(18)	The keyword NODE or LINK.
inp_tags	node_id	varchar(16)	The node or link ID label.
inp_tags	tag	varchar(50)	The text of the tag label (with no spaces).
inp_tank	node_id	varchar(16)	Node identifier related to the primary key of the node table
inp_tank	initlevel	Numeric(12,4)	Initial water level. (ft or m).
inp_tank	minlevel	Numeric(12,4)	Minimum water level. (ft or m).
inp_tank	maxlevel	Numeric(12,4)	Maximum water level. (ft or m).
inp_tank	diameter	Numeric(12,4)	Nominal diameter. (ft or m).
inp_tank	minvol	Numeric(12,4)	Minimum volume. (cubic ft or cubic meters).
inp_tank	curve_id	int4	Volume curve ID.
inp_valve	node_id	varchar(16)	Node identifier related to the primary key of the node table
inp_valve	valv_type	varchar(18)	Valve type (see remarks)
inp_valve	pressure	Numeric(12,4)	Pressure in psi or m.
inp_valve	diameter	Numeric(12,4)	Diameter in inches or mm.
inp_valve	flow	Numeric(12,4)	Flow (flow units)
inp_valve	coef_loss	Numeric(12,4)	Loss coefficient.
inp_valve	curve_id	int4,	ID of head loss curve
inp_valve	minorloss	Numeric(12,4)	Minor loss coefficient.
inp_valve	status	varchar(12)	Status (OPEN, CLOSED or CV)
inp_typevalue_energy	id	varchar(18)	Value domain of EPANET energy type. See ws_14_inp_vdomain.sql for more information about this field
inp_typevalue_pump	id	varchar(18)	Value domain of EPANET pump type. See ws_14_inp_vdomain.sql for more information about this field
inp_typevalue_reactions_gl	id	varchar(30)	Value domain of EPANET of types of reactions (aplied to all the elements). See ws_14_inp_vdomain.sql for more information about this field
inp_typevalue_source	id	varchar(18)	Value domain of EPANET source type. See ws_14_inp_vdomain.sql for more information about this field
inp_typevalue_valve	id	varchar(18)	Value domain of EPANET valve type. See ws_14_inp_vdomain.sql for more information about this field
inp_typevalue_valve	descript	varchar(50)	Detailed description of EPANET valve type. See ws_14_inp_vdomain.sql for more information about this field
inp_typevalue_valve	meter	varchar(18)	Generic description of EPANET valve. See ws_14_inp_vdomain.sql for more information about this field
inp_value_ampm	id	varchar(18)	Value domain of EPANET time (AM or PM). See ws_14_inp_vdomain.sql for more information about this field

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
inp_value_curve	id	varchar(18)	Value domain of EPANET curve. See ws_14_inp_vdomain.sql for more information about this field
inp_value_mixing	id	varchar(18)	Value domain of EPANET mixing. See ws_14_inp_vdomain.sql for more information about this field
inp_value_noneall	id	varchar(18)	Value domain of EPANET values (NONE or ALL). See ws_14_inp_vdomain.sql for more information about this field
inp_value_opti_headloss	id	varchar(18)	Value domain of EPANET headloss options (options table). See ws_14_inp_vdomain.sql for more information about this field
rpt_cat_result	spec_grav	numeric	Specific gravity of the simulation
inp_value_opti_hyd	id	varchar(20)	Value domain of EPANET hydraulics options (options table). See ws_14_inp_vdomain.sql for more information about this field
inp_value_opti_qual	id	varchar(18)	Value domain of EPANET quality options (options table). See ws_14_inp_vdomain.sql for more information about this field
inp_value_opti_unbal	id	varchar(20)	Value domain of EPANET unbalanced options (options table). See ws_14_inp_vdomain.sql for more information about this field
inp_value_opti_units	id	varchar(18)	Value domain of EPANET units (options table). See ws_14_inp_vdomain.sql for more information about this field
inp_value_param_energy	id	varchar(18)	Value domain of EPANET energy parameters. See ws_14_inp_vdomain.sql for more information about this field
inp_value_reactions_el	id	varchar(18)	Value domain of EPANET reactions data (element). See ws_14_inp_vdomain.sql for more information about this field
inp_value_reactions_gl	id	varchar(18)	Value domain of EPANET reactions data (global). See ws_14_inp_vdomain.sql for more information about this field
inp_value_status_pipe	id	varchar(18)	Value domain of EPANET pipe status. See ws_14_inp_vdomain.sql for more information about this field
inp_value_status_pump	id	varchar(18)	Value domain of EPANET pump status. See ws_14_inp_vdomain.sql for more information about this field
rpt_cat_result	max_trials	numeric	Maximun number of trials to balance the result
inp_value_status_valve	id	varchar(18)	Value domain of EPANET valve status. See ws_14_inp_vdomain.sql for more information about this field
ext_cat_hydrometer	voltman_flow	varchar	
inp_value_times	id	varchar(18)	Value domain of EPANET time. See ws_14_inp_vdomain.sql for more information about this field
inp_value_yesno	id	varchar(3)	Value domain of EPANET yes/no. See ws_14_inp_vdomain.sql for more information about this field
inp_value_yesnofull	id	varchar(18)	Value domain of EPANET yes/no/full. See ws_14_inp_vdomain.sql for more information about this field
inp_value_plan	id	Varchar(16)	Value domain of plan
inp_value_plan	observ	Varchar(254)	Observations related to value plan. Additional information
inp_giswater_config	id	Varchar(16)	Primary key for table.
inp_giswater_config	giswater_file_path	text	Giswater file path
inp_giswater_config	giswater_software_path	text	Giswater software path
inp_giswater_config	inp_file_path	text	inp_file_path
inp_giswater_config	rpt_file_path	text	rpt_file_path
inp_giswater_config	rpt_result_id	text	rpt result identifier
rpt_arc	result_id	varchar(16)	Result identifier related to the primary key of rpt_cat_result table
rpt_arc	arc_id	varchar(16)	Arc identifier related to the primary key of arc table
rpt_arc	length	numeric	Length of the arc.
rpt_arc	diameter	numeric	Diameter of the arc. EPANET ever works with internal diameter
rpt_arc	flow	numeric	Flow in flow units.
rpt_arc	vel	numeric	Velocity in fps.
rpt_arc	headloss	numeric	Headloss (/1000ft).
rpt_arc	setting	numeric	Setting. (Roughness for pipes, speed for pumps, pressure/flow setting for valves).
rpt_arc	reaction	numeric	Reaction value
rpt_arc	ffactor	numeric	Friction factor.
rpt_arc	other	varchar(100)	Other information about the simulation.
rpt_arc	time	varchar(100)	Time period for which the simulation was conducted.
rpt_arc	status	varchar(16)	Status (OPEN, CLOSED or CV)
rpt_energy_usage	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_energy_usage	result_id	varchar(16)	Result identifier related to the primary key of rpt_cat_result table
rpt_energy_usage	node_id	varchar(16)	Node identifier related to the primary key of the node table
rpt_energy_usage	usage_fact	numeric	Usage factor.
rpt_energy_usage	avg_effic	numeric	Average efficiency.
rpt_energy_usage	kwhr_mgal	numeric	Kw â hr (/Mgal).
rpt_energy_usage	avg_kw	numeric	Average (Kw).

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
rpt_energy_usage	peak_kw	numeric	Peak (Kw)
rpt_energy_usage	cost_day	numeric	Cost (/day)
rpt_hydraulic_status	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_hydraulic_status	result_id	varchar(16)	Result identifier related to the primary key of rpt_cat_result table
rpt_hydraulic_status	time	varchar(10)	Time period for which the simulation was conducted.
rpt_hydraulic_status	text	varchar(100)	Field ready to insert text for additional information
rpt_node	id	int4	Primary key for table.
rpt_node	result_id	varchar(16)	Result identifier related to the primary key of rpt_cat_result table
rpt_node	node_id	varchar(16)	Node identifier related to the primary key of the node table
rpt_node	elevation	numeric	Elevation in ft or m.
rpt_node	demand	numeric	Demand for water by the main category of consumer. Measured in the current flow units
rpt_node	head	numeric	Head in ft or m.
rpt_node	press	numeric	Pressure in psi or m.
rpt_node	other	varchar(100)	Other information about the simulation.
rpt_node	time	varchar(100)	Time period for which the simulation was conducted.
rpt_node	quality	numeric(12,4)	Selects the type of water quality analysis to perform
rpt_cat_result	id	int4	Autonumeric field to store unique values for each row (primary key)
rpt_cat_result	result_id	varchar(16)	Result identifier related to the primary key of rpt_cat_result table
rpt_cat_result	n_junction	numeric	Number of junctions of the simulation's results
rpt_cat_result	n_reservoir	numeric	Number of junctions of the simulation's results
rpt_cat_result	n_tank	numeric	Number of junctions of the simulation's results
rpt_cat_result	n_pipe	numeric	Number of junctions of the simulation's results
rpt_cat_result	n_pump	numeric	Number of junctions of the simulation's results
rpt_cat_result	n_valve	numeric	Number of junctions of the simulation's results
rpt_cat_result	head_form	varchar(20)	Advanced parameter of the hydraulic simulation
rpt_cat_result	hydra_time	varchar(10)	Hydraulic time of the simulation
rpt_cat_result	hydra_acc	numeric	Advanced parameter of the hydraulic simulation
rpt_cat_result	st_ch_freq	numeric	Advanced parameter of the hydraulic simulation
rpt_cat_result	max_tr_ch	numeric	Advanced parameter of the hydraulic simulation
rpt_cat_result	q_analysis	varchar(20)	Advanced parameter of the hydraulic simulation
ext_rtc_hydrometer	identif	text	
rpt_cat_result	r_kin_visc	numeric	Value for viscosity
rpt_cat_result	r_che_diff	numeric	Advanced parameter of the hydraulic simulation
rpt_cat_result	dem_multi	numeric	Advanced parameter of the hydraulic simulation
rpt_cat_result	total_dura	varchar(10)	Total duration of the simulation
rpt_cat_result	exec_date	timestamp(6)	Timestamp for the moment to insert the result into the catalog of results (rpt_cat_results)
rpt_cat_result	q_timestep	varchar(16)	Quality time step of the simulation
rpt_cat_result	q_tolerance	varchar(16)	Quality tolerance of the simulation
plan_other_x_psector	measurement	Numeric(12,2)	Measurement
rpt_selector_result	result_id	Varchar(16)	System field used to filter results in order to provide information on v_rpt views of qgis.
rpt_selector_compare	result_id	Varchar(16)	System field used to filter results in order to provide information on v_rpt views of qgis.
inp_selector_sector	sector_id	varchar(30)	Hydraulic sector identifier related to the primary key of sector table
inp_selector_state	id	varchar(16)	ID label.
inp_selector_state	observ	varchar(254)	Observations related to selector state. Additional information
doc_type	id	varchar(30)	Document type identifier. Primary key.
doc_type	comment	varchar(512)	Comments related to document type. Additional information.
cat_tag	id	Varchar(16)	Document tag identifier. Primary key.
cat_tag	comment	Varchar (512)	Comments related to document tag. Additional information.

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
doc	id	int8	Document identifier. Primary key
doc	path	varchar(512)	Field to store folder path related to document.
doc	observ	varchar(512)	Observations related to documents. Additional information
doc	tagcat_id	varchar(16)	Tag identifier.
doc	date	timestamp(6)	Date of adding the document.
doc_x_node	id	int8	Autonumeric field to store unique values for each row (primary key)
doc_x_node	doc_id	int8,	Document identifier related to the primary key of doc table
doc_x_node	node_id	varchar(16)	Node identifier related to the primary key of the node table
doc_x_arc	id	int8	Autonumeric field to store unique values for each row (primary key)
doc_x_arc	doc_id	int8,	Document identifier related to the primary key of doc table
doc_x_arc	arc_id	varchar(16)	Arc identifier related to the primary key of arc table
doc_x_connec	id	int8	Autonumeric field to store unique values for each row (primary key)
doc_x_connec	doc_id	int8,	Document identifier related to the primary key of doc table
doc_x_connec	connec_id	varchar(16)	Connect identifier related to the primary key of connec table
rtc_options	rtc_status	Varchar(3)	Field to define the status of the Real Time Control (ON or OFF)
rtc_options	period_id	Varchar(16)	Period identifier where the RTC is allowed
rtc_options	coefficient	Varchar(16)	Value domain of the coefficient applied (MAX, AVG o MIN)
rtc_scada_node	scada_id	Varchar(16)	Identifier of the SCADA
rtc_scada_node	node_id	Varchar(16)	Indentifier of the node
rtc_scada_x_sector	id	int4	Autonumeric field to store unique values for each row (primary key)
rtc_scada_x_sector	scada_id	Varchar(16)	Id of a related scada receiver.
rtc_scada_x_sector	sector_id	Varchar(16)	Id of the sector
rtc_scada_x_sector	flow_sign	int2	Flow sign
rtc_value_opti_coef	id	Varchar(16)	Value domain of coefficient options
rtc_value_opti_status	id	Varchar(16)	Value domain of status options
rtc_hydrometer_x_connec	hydrometer_id	character varying (16)	Hydrometer identifier, related to the cat_hydrometer table
rtc_hydrometer_x_connec	connec_id	character varying (16)	Connect identifier related to the primary key of connec table
plan_psector	psector_id	varchar	Plan sector identifier. Primary key.
plan_psector	descript	Varchar (254)	Field to store additional information about the psector.
plan_psector	priority	Varchar (16)	Field to identify the priority of the psector
plan_psector	text1	Varchar (254)	Field ready to insert text for additional information.
plan_psector	text2	Varchar (254)	Field ready to insert text for additional information.
plan_psector	observ	Varchar (254)	Observations related to plan sector. Additional information
plan_psector	rotation	Numeric(8,4)	Field to use to rotate the map
plan_psector	scale	Numeric(8,2)	Field to use to configurate the scale of the map
plan_psector	sector_id	Varchar(30)	Hydraulic sector identifier related to the primary key of sector table
plan_psector	atlas_id	Varchar(30)	Field to use to configurate the position of the psector on the whole atlas
plan_psector	gexpenses	Numeric(4,2)	General expenses related to this psector.
plan_psector	vat	Numeric(4,2)	Value of vat tax related to this psector.
plan_psector	other	Numeric(4,2)	Other expenses related to this psector.
plan_psector	the_geom	public.geometry	Polygon geometry field.
plan_arc_x_psector	id	int4	Arc related to psector identifier. Primary key.
plan_arc_x_psector	arc_id	Varchar(16)	Arc identifier related to the primary key of arc table
plan_arc_x_psector	psector_id	Varchar(16)	Psector related to the primary key of psector table
plan_arc_x_psector	atlas_id	Varchar(16)	Indicates the order of map files.
plan_arc_x_psector	descript	Varchar(254)	Field to store additional information about the arc related to psector.
plan_node_x_psector	id	int4	Node related to psector identifier. Primary key.
plan_node_x_psector	node_id	Varchar(16)	Node identifier related to the primary key of node table
plan_node_x_psector	psector_id	Varchar(16)	Psector related to the primary key of psector table

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
plan_node_x_psector	atlas_id	Varchar(16)	Indicates the order of map files.
plan_node_x_psector	descript	Varchar(254)	Field to store additional information about the node related to psector.
plan_other_x_psector	id	int4	Other objectt related to psector identifier. Primary key.
plan_other_x_psector	price_id	Varchar(16)	Identifier of the price
plan_other_x_psector	psector_id	Varchar(16)	Psector related to the primary key of psector table
plan_other_x_psector	atlas_id	Varchar(16)	Indicates the order of map files.
plan_other_x_psector	descript	Varchar(254)	Field to store additional information about the other objects related to psector.
plan_arc_x_pavement	id	int4	Arc related to pavement identifier. Primary key.
plan_arc_x_pavement	arc_id	Varchar(16)	Arc identifier related to the primary key of arc table
plan_arc_x_pavement	pavcat_id	Varchar(16)	Identifier of the pavement
plan_arc_x_pavement	percent	Numeric(3,2)	Percent of pavement's coverage on arc.
plan_value_ps_priority	id	Varchar(16)	Identifier of the value domain of priority
plan_value_ps_priority	observ	Varchar(254)	Additional information
plan_selector_economic	id	Varchar(16)	Economic selector identifier. Primary key.
plan_selector_economic	observ	Varchar(254)	Observations related to economic selector. Additional information
plan_selector_psector	id	Varchar(16)	Plan sector selector identifier. Primary key.
plan_selector_psector	observ	Varchar(254)	Observations related to plan sector selector. Additional information
price_simple	id	Varchar (16)	Simple price identifier. Primary key.
price_simple	unit	Varchar (5)	Units used to express the price.
price_simple	descript	Varchar (100)	Field to store additional information about the simple price.
price_simple	text	text	Field ready to insert text for additional information.
price_simple	obs	Varchar (16)	Additional information
price_compost	id	Varchar (16)	Compost price identifier. Primary key.
price_compost	unit	Varchar (5)	Units used to express the price.
price_compost	descript	Varchar (100)	Field to store additional information about the compound price
price_compost	text	text	Field ready to insert text for additional information.
price_compost	price	Numeric(12,4)	Price
price_compost_value	id	int4	Compound value identifier.Primary key.
price_compost_value	compost_id	Varchar (16)	Compound price identifier related to the primary key of price compost table
price_compost_value	simple_id	Varchar (16)	Simple price identifier related to the primary key of price simple table
price_compost_value	value	Numeric(16,4)	Measurement
price_value_unit	id	Varchar (16)	Price units identifier. Primary key.
price_value_unit	descript	Varchar (100)	Field to store additional information about the price value units.
anl_mincut_polygon	polygon_id	Varchar (16)	Polygon identifier
anl_mincut_polygon	the_geom	public.geometry	Geometry
anl_mincut_node	node_id	Varchar (16)	Node identifier
anl_mincut_node	the_geom	public.geometry	Geometry
anl_mincut_arc	arc_id	Varchar (16)	Arc identifier
anl_mincut_arc	the_geom	public.geometry	Geometry
anl_mincut_valve	valve_id	Varchar (16)	Node identifier (of valve)
anl_mincut_valve	the_geom	public.geometry	Geometry
anl_valveanaytics_connec	connec_id	Varchar (16)	Connec id
anl_valveanaytics_connec	the_geom	public.geometry	Geometry
version	wsoftware	varchar(16)	Identifies the water software compatible with the project
version	postgres	varchar(512)	Identifies the version of PostgreSQL where the project was created
version	postgis	varchar(512)	Identifies the version of Postgis where the project was created
config	id	varchar(18)	Autonumeric field to store unique values for each row (primary key)
config	node_proximity	double precision	Configuration parameter of node proximity related to trg_node_proximity function trigger
config	arc_searchnodes	double precision	Configuration parameter of arc searching start and end nodes related to trg_arc_searchnodes function trigger

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
anl_arc_no_startend_node	arc_id	varchar (16)	Arc identifier
config	node2arc	double precision	Configuration parameter of disconected nodes about it's proximity to arcs related to fct_node2arc function
config	connec_proximity	double precision	Configuration parameter of node proximity related to trg_connec_proximity function trigger
config	arc_toporepair	double precision	Configuration parameter of arc repair related to fct_arc_toporepair function
config	nodeinsert_arcendpoint	boolean	Configuration parameter of automatic node insert when endnode does not exist related to trg_arc_searchnodes function trigger
config	orphannode_delete	boolean	Configuration parameter of automatic delete node when arc is deleted related to trg_orphannode_delete fuction trigger
config	vnode_update_toleranc e	double precision	Configuration parameter of defining node tolerance.
config	nodetype_change_enab led	boolean	Enable change node type option.
version	id	int4	ID of version. Primary key.
version	giswater	varchar(16)	Identifies the version of giswater with the project was created
config	node_proximity_control	boolean	Field to put enable (true) or dissabled (false) the rules of topology to prevent nodes closet to other nodes
config	node_duplicated_tolera nce	float	Tolerace for function of node duplicated indentification
config	connec_proximity_contr ol	boolean	Field to put enable (true) or dissabled (false) the rules of topology to prevent connec closet to other connec
config	connec_duplicated_toler ance	float	Tolerace for function of connec duplicated indentification
config	audit_function_control	boolean	Field to put enable (true) or dissabled (false) the audit function control
config	arc_searchnodes_contr ol	boolean	Field to put enable (true) or dissabled (false) the rules of topology to prevent arcs without nodes at init or end position
config_csv_import	table_name	Varchar (50)	Name of table to insert csv data
config_csv_import	gis_client_layer_name	Varchar (50)	Alias of this table on the GIS project
db_cat_table	id	int4	Autonumeric field to store unique values for each row (primary key)
db_cat_table	name	text	Name of the table
db_cat_table	project_type	text	Project type of the table (WS, UD or SE).
db_cat_table	context	text	Context where this table is showed
db_cat_table	db_cat_clientlayer_id	int4	Name of the GIS layer (if exists)
db_cat_table	description	text	description of the table
db_cat_view	id	int4	Autonumeric field to store unique values for each row (primary key)
db_cat_view	name	text	Name of the view
db_cat_view	project_type	text	Project type of the table (WS, UD or SE).
db_cat_view	context	text	Context where this view is showed
db_cat_view	db_cat_clientlayer_id	int4	Name of the GIS layer (if exists)
anl_mincut_result_cat	mincut_result_type	varchar(30)	Type of minimum cut result
anl_node_orphan	the_geom	public.geometry	Geometry of node
anl_node_sink	num_arcs	integer	Number of arcs joining the node
anl_node_sink	node_id	Varchar(16)	Node identifier
anl_node_sink	the_geom	public.geometry	Geometry of node
anl_node_duplicated	node_id	Varchar(16)	Node identifier
anl_node_duplicated	node_conserv	Varchar(16)	Node identifier of the duplicated node
anl_node_duplicated	the_geom	public.geometry	Geometry of node
anl_arc_same_startend	the_geom	public.geometry	Geometry of arc
anl_mincut_result_cat	mincut_result_state	varchar(30)	State of minimum cut result
anl_mincut_result_cat	anl_user	varchar(30)	User conducting the anlyssis
audit_cat_error	id	int	Identifier of the error
audit_cat_error	error_message	text	Message of the error
audit_cat_error	hint_message	text	Hint message
audit_cat_error	log_level	int2	Log level of the error
audit_cat_error	show_user	boolean	Field to define to show (or not) to the user this message

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
audit_cat_error	context	text	Context of the message
audit_cat_function	id	int4	Identifier of the function
audit_cat_function	name	text	Name of the function
audit_cat_function	function_type	text	Type of the function (trigger function or function)
audit_cat_function	context	text	Context of the function
audit_cat_function	input_params	json	Input parameters of the function
audit_cat_function	return_type	text	Type of return of the function
audit_function_actions	id	bigserial	Autonumeric field to store unique values for each row (primary key)
audit_function_actions	tstamp	timestamp with time zone	Timestamp
audit_function_actions	audit_cat_error_id	int	Identifier of the error
audit_function_actions	audit_cat_function_id	int4	Identifier of the function
audit_function_actions	query	text	String with the full query realized
audit_function_actions	user_name	text	Name of the user
audit_function_actions	debug_info	text	Additional information to debug
anl_arc_no_startend_node	the_geom	public.geometry	Geometry of arc
anl_arc_same_startend	length	float	Length of the arc
anl_connec_duplicated	connec_conserv	varchar (16)	
ext_cat_hydrometer	madeby	varchar	
anl_connec_duplicated	connec_id	varchar(16)	Connec identifier
anl_connec_duplicated	id	int	Autonumeric field to store unique values for each row (primary key)
anl_connec_duplicated	the_geom	public.goemetry	Geometry of connec
anl_mincut_result_arc	id	int	Autonumeric field to store unique values for each row (primary key)
anl_mincut_result_arc	arc_id	varchar(16)	Arc identifier
anl_mincut_result_arc	mincut_result_cat_id	varchar(30)	Identificador del catalogo de resultados
anl_mincut_result_cat	id	int	Autonumeric field to store unique values for each row (primary key)
anl_mincut_result_cat	anl_tstamp	timestamp	
anl_mincut_result_cat	exec_forecast_date	date	
anl_mincut_result_cat	exec_start	timestamp	
anl_mincut_result_cat	exec_descript	text	
anl_mincut_result_cat_state	id	int	Autonumeric field to store unique values for each row (primary key)
db_cat_columns	description	text	Description of the table
db_cat_columns	column_type	text	Type of a column
anl_mincut_result_cat_state	descript	text	Description of the state
anl_mincut_result_cat_type	id	int	Autonumeric field to store unique values for each row (primary key)
anl_mincut_result_cat_type	descript	text	Description of the type
anl_mincut_result_connec	id	int	Autonumeric field to store unique values for each row (primary key)
anl_mincut_result_connec	mincut_result_cat_id	varchar(30)	Identificador del catalogo de resultados
anl_mincut_result_hydrometer	mincut_result_cat_id	varchar(30)	Identificador del catalogo de resultados
anl_mincut_result_hydrometer	hydrometer_id	varchar(16)	Hydrometer identifier
anl_mincut_result_hydrometer	id	int	Autonumeric field to store unique values for each row (primary key)
anl_mincut_result_node	id	int	Autonumeric field to store unique values for each row (primary key)
anl_mincut_result_connec	connec_id	varchar(16)	Connec identifier
anl_mincut_result_node	node_id	varchar(16)	Node identifier
config_search_plus	hydrometer_layer	varchar(30)	Name of hydrometer layer
anl_mincut_result_node	mincut_result_cat_id	varchar(30)	Identificador del catalogo de resultados
anl_mincut_result_polygon	polygon_id	varchar(16)	Polygon identifier
anl_mincut_result_polygon	the_geom	public.geometry	Geometry of polygon
config_search_plus	hydrometer_field_code	varchar(30)	Name of field with hydrometer code
ext_rtc_hydrometer	hydrometer_code	text	Code of hydrometer

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
anl_mincut_result_selector_compare	id	varchar(30)	Identifier.
anl_mincut_result_valve	valve_id	varchar(16)	Valve identifier
anl_mincut_result_valve	mincut_result_cat_id	varchar(30)	Identificador del catalogo de resultados
anl_mincut_result_polygon	mincut_result_cat_id	varchar(30)	Identificador del catalogo de resultados
anl_mincut_result_polygon	id	int	Autonumeric field to store unique values for each row (primary key)
anl_mincut_result_valve	id	int	Autonumeric field to store unique values for each row (primary key)
audit_schema_data_integrity	parameter_id	varchar(50)	Parameter identifier
audit_schema_data_integrity	id	int	Autonumeric field to store unique values for each row (primary key)
audit_schema_data_integrity	value1	int	
audit_schema_data_integrity	value2	int	
audit_schema_data_integrity	count	int	
config	samenode_init_end_control	bool	Field to put enable (true) or dissabled (false) the rules of topology to prevent arc with same begining and end node
config	nodeinsert_catalog_vdefault	varchar(30)	Configuration parameter of default node values.
anl_mincut_result_selector	id	varchar(30)	Identifier.
config_search_plus	hydrometer_field_urban_propierties_code	varchar(30)	Name of field with connec code
config_extract_raster_value	raster_band_value	varchar(30)	Band from which the value is taken
config_search_plus	hydrometer_urban_propierties_layer	varchar(30)	Name of connec layer
config_extract_raster_value	raster_layer	varchar(30)	Name of raster layer from which value is taken
config_extract_raster_value	vector_layer	varchar(30)	Name of vector layer into which the values are inserted
config_extract_raster_value	vector_field_value	varchar(30)	Name of field of vector layer into which the values are inserted
config_search_plus	hydrometer_urban_propierties_field_code	varchar(30)	Name of field with connec code
config_ui_forms	id	int	Autonumeric field to store unique values for each row (primary key)
config_search_plus	ppoint_layer	varchar(30)	Name of point layer
config_extract_raster_value	id	varchar(18)	Identifier.
config_search_plus	urban_propierties_layer	varchar(30)	Name of urban properties layer.
config_search_plus	urban_propierties_field_number	varchar(30)	Name of field with entrance number
config_search_plus	street_layer	varchar(30)	Name of street layer
config_search_plus	street_field_code	varchar(30)	Name of field with street code
config_search_plus	street_field_name	varchar(30)	Name of field with street name
config_search_plus	portal_layer	varchar(30)	Name of entrance number layer
config_search_plus	portal_field_code	varchar(30)	Name of field with entrance code
config_search_plus	portal_field_number	varchar(30)	Name of field with entrance number
config_search_plus	urban_propierties_field_pzone	varchar(30)	Name of a field with zone data
config_search_plus	urban_propierties_field_block	varchar(30)	Name of field with block data
ext_rtc_hydrometer	flow	text	Flow in flow units.
doc	doc_type	varchar(30)	Type of a document
db_cat_columns	column_name	text	Name of a column
doc	user_name	varchar(30)	Name of a user who added the document.
ext_cat_hydrometer	hydrometer_type	varchar(100)	Type of a hydrometer
ext_postnumber	id	varchar(16)	Entrance identifier
ext_postnumber	streetaxis	varchar(16)	Code of streeetat which the entrance is located
ext_postnumber	postnumber	varchar(16)	Entrance number

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
config_ui_forms	column_index	smallint	Index of a column
ext_postnumber	urban_properties_id	varchar(16)	Identifier of related urban propertie
ext_postnumber	the_geom	public.geometry	Geometry of building entrance - point.
ext_rtc_hydrometer	easel_diameter_mm	text	
ext_rtc_hydrometer	ulmc	text	
ext_rtc_hydrometer	brand	text	The brand of hydrometer.
ext_rtc_hydrometer	client_name	text	Client name.
ext_rtc_hydrometer	digits_hydrometer	text	
ext_rtc_hydrometer	cover	text	
ext_rtc_hydrometer	multi_jet_flow	text	
ext_rtc_hydrometer	hydrometer_number	text	
ext_rtc_hydrometer	kit_flag_ulmc	text	
ext_rtc_hydrometer	technical_average	text	
config_ui_forms	ui_form	varchar(50)	Name of a n UI form
config_ui_forms	alias	varchar(50)	Alias of a field
config_ui_forms	width	int	Width of a column
config_search_plus	ppoint_field_zone	varchar(30)	Name of field with ppoint zone
ext_rtc_hydrometer	kink_date	text	
ext_rtc_hydrometer	easel_diameter_pol	text	
ext_rtc_hydrometer	hydrometer_flag	text	
ext_rtc_hydrometer	easel	text	
ext_rtc_hydrometer	class	text	
ext_rtc_hydrometer	voltman_flow	text	
ext_rtc_hydrometer	adress_adjunct	text	
inp_project_id	author	varchar(50)	Author of a project
inp_project_id	date	varchar(12)	Date of creating the project
inp_times	hydraulic_timestep	varchar(10)	
inp_times	quality_timestep	varchar(10)	
inp_times	rule_timestep	varchar(10)	
inp_times	pattern_timestep	varchar(10)	
inp_times	pattern_start	varchar(10)	
inp_times	report_timestep	varchar(10)	
inp_times	report_start	varchar(10)	
inp_times	start_clocktime	varchar(10)	
inp_times	statistic	varchar(18)	
man_valve	hydraulic_anl	bool	
man_valve	mincut_anl	bool	
node	node_type	varchar(18)	Node type.
point	point_id	varchar(30)	Point identifier.
point	point_type	varchar(18)	Point type.
point	observ	varchar(512)	Observations.
point	the_geom	public.geometry	Geometry of point.
point_type	id	varchar(18)	Identifier of a point type.
point_type	text	tex	Description.
point	text	text	Description
presszone	id	int	Autonumeric field to store unique values for each row (primary key)
presszone	the_geom	public.geometry	Presszone geometry
presszone	text	text	Description
presszone	presszonecat_id	varchar(18)	Press zone catalog identifier

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
rtc_hydrometer	hydrometer_id	varchar(16)	Hydrometer identifier
rtc_scada_x_dma	id	int	Autonumeric field to store unique values for each row (primary key)
temp_arc	descript	varchar(254)	Description
temp_arc	soilcat_id	varchar(16)	ID of the soil related to the arc
temp_arc	adress_03	varchar(50)	Field to store information about the adress of the feature.
temp_arc	buildercat_id	varchar(30)	ID of the builder related to arc
temp_arc	workcat_id	varchar(255)	ID of the construction work related to arc
temp_arc	location_type	varchar(18)	ID of the location type related to arc
temp_arc	adress_01	varchar(50)	Field to store information about the adress of the feature.
temp_arc	adress_02	varchar(50)	Field to store information about the adress of the feature.
temp_arc	dma_id	varchar(30)	ID of the management area related to the arc (District Meter Area)
temp_arc	ownercat_id	varchar(30)	ID of the owner related to arc.
temp_arc	builtdate	date	ID of the builder related to arc
temp_arc	fluid_type	varchar(18)	ID of the fluid type related to arc
temp_node	adress_03	varchar(50)	Field to store information about the adress of the feature.
temp_node	adress_02	varchar(50)	Field to store information about the adress of the feature.
temp_node	adress_01	varchar(50)	Field to store information about the adress of the feature.
temp_node	ownercat_id	varchar(30)	ID of the owner related to node.
temp_node	descript	varchar(254)	Description
temp_node	builtdate	date	ID of the builder related to node
temp_arc	category_type	varchar(18)	ID of the category type related to arc
temp_node	category_type	varchar(18)	ID of the category type related to node.
rtc_scada_x_dma	flow_sign	smallint	Flow sign
temp_node	workcat_id	varchar(255)	ID of the construction work related to node
temp_node	location_type	varchar(18)	ID of the location type related to node
temp_node	buildercat_id	varchar(50)	ID of the builder related to node
temp_node	dma_id	varchar(30)	ID of the management area related to the node (District Meter Area)
temp_node	fluid_type	varchar(18)	ID of the fluid type related to node
temp_node	soilcat_id	varchar(16)	ID of the soil related to the node
man_valve	acessibility	boolean	Configuration parameter used on fct_min_cut function
ext_urban_propierties	text	text	Description
ext_urban_propierties	observ	text	Observation
rtc_scada_x_dma	scada_id	varchar(16)	Id of a related scada receiver.
rtc_scada_x_dma	dma_id	varchar(16)	ID of the management area related to the connect (District Meter Area)
inp_project_id	title	varchar(254)	Title of a project
config_search_plus	ppoint_field_number	varchar(30)	Name of field with ppoint number
config_search_plus	id	varcgar(18)	Identifier.
ext_rtc_hydrometer	diameter	text	Diameter
ext_rtc_hydrometer	instalation_date	text	Date of installing the hydrometer
inp_times	duration	varchar(10)	Duration of a time period
ext_cat_period	name	text	Name of the table
ext_cat_period	db_cat_clientlayer_id	int4	Name of the GIS layer (if exists)
ext_rtc_scada	id	int4	Autonumeric field to store unique values for each row (primary key)
ext_rtc_scada	name	text	Name of the column
ext_rtc_scada	db_cat_table_id	int4	Type of column
ext_rtc_scada	description	text	description of the table
ext_rtc_scada_x_data	node_id	Varchar(16)	Node identifier
ext_rtc_scada_x_data	node_type	Varchar(300)	Type of the node
ext_rtc_scada_x_data	the_geom	public.geometry	Geometry of node

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
ext_rtc_scada_dma_period	node_id	Varchar(16)	Node identifier
ext_rtc_scada_dma_period	num_arcs	integer	Number of arcs joining the node
ext_rtc_scada_dma_period	the_geom	public.geometry	Geometry of node
ext_cat_hydrometer	node_id	Varchar(16)	Node identifier
ext_cat_hydrometer	node_conserv	Varchar(16)	Node identifier of the duplicated node
ext_cat_hydrometer	the_geom	public.geometry	Geometry of node
ext_rtc_hydrometer	arc_id		Arc identifier
ext_urban_propierties	table_name	Varchar (50)	Name of table to insert csv data
ext_urban_propierties	gis_client_layer_name	Varchar (50)	Alias of this table on the GIS project
ext_cat_period	project_type	text	Project type of the table (WS, UD or SE).
ext_cat_period	context	text	Context where this table is showed
ext_cat_period	description	text	description of the table
ext_rtc_hydrometer	the_geom	public.geometry	Geometry of arc
ext_rtc_hydrometer_x_value	arc_id		Arc identifier
ext_rtc_hydrometer_x_value	the_geom	public.geometry	Geometry of arc
ext_cat_hydrometer	multi_jet_flow	varchar	
ext_cat_hydrometer	ulmc	varchar	
connec_type	type	varchar	
inp_pipe	custom_roughness	numeric	
connec_type	event_table	varchar	
samplepoint	place	varchar	Location.
anl_mincut_result_cat	forecast_end	timestamp	
ext_cat_hydrometer	dnom	varchar	Nominal diameter.
connec	connec_type	varchar	Type of a connec
rpt_energy_usage	nodarc_id	varchar	
inp_pipe	custom_dint	numeric	
ext_rtc_hydrometer	id_number	text	
connec_type	man_table	varchar	
anl_mincut_result_cat	forecast_start	timestamp	
ext_cat_hydrometer	class	varchar	
ext_rtc_scada_x_value	status	Varchar(5)	Status (OPEN, CLOSED or CV)
ext_rtc_hydrometer_x_value	status	Varchar(3)	Status (OPEN, CLOSED or CV)
config_ui_forms	ui_table	varchar(50)	UI view name
config_ui_forms	ui_column	varchar(50)	UI column name
config_ui_forms	status	bool	Status (OPEN, CLOSED or CV)
ext_rtc_hydrometer	adress_number	text	Home number where hydrometer is located
ext_rtc_hydrometer	adress	text	Address of a hydrometer location
presszone	sector	varchar(512)	Sector to which belongs the pressure zone
man_wjoin	lead_facade	varchar	Lead facade
point	undelete	bool	Blocks the deleting option
man_source	node_id	varchar	Node identifier related to the primary key of the node table
connec	label_x	varchar	X coordinate of the label's location
connec	undelete	bool	Blocks the deleting option
man_fountain	regulation_tank	varchar	Existence of regulation tank
man_valve	depth_valveshaft	numeric	Depth of valve shaft
man_fountain	add_info	varchar	Additional information about the feature
man_valve	regulator_location	varchar	Location of a valve regulator
man_manhole	node_id	varchar	Node identifier related to the primary key of the node table
arc	label_x	varchar	X coordinate of the label's location

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
temp_node	undelete	bool	Blocks the deleting option
temp_arc	label_rotation	numeric	Angle of rotation of the label
man_fountain	vmax	numeric	Maximum volume.
man_valve	valve	varchar	Type of valve
arc	undelete	bool	Blocks the deleting option
temp_node	label_x	varchar	X coordinate of the label's location
man_reduction	diam_final	numeric	Final diameter.
man_fountain	power	numeric	Total power (Kw)
dma	undelete	bool	Blocks the deleting option
man_tap	connec_id	varchar	Connec identifier related to the primary key of the connec table
man_valve	valve_diam	numeric	Valve diameter
man_wjoin	zone	int4	Consumption zone
man_hydrant	distance_left	numeric	Left distance
man_fountain	connection	varchar	Connection type with the network
ext_rtc_hydrometer	house_number	text	Home number where hydrometer is located
man_fountain	vtotal	numeric	Total volume.
man_waterwell	add_info	varchar	Additional information about the feature
man_valve	burried	varchar	Information whever the valve is burried
man_hydrant	distance_perpendicular	numeric	Perpendicular distance
temp_arc	label_y	varchar	Y coordinate of the label's location
man_tap	drain_distance	numeric	Drain distance
man_hydrant	distance_right	numeric	Right distance
man_greentap	add_info	varchar	Additional information about the feature
man_valve	regulator_observ	varchar	Observations of valve regulator
man_valve	lin_meters	numeric	Lineal meters
man_hydrant	valve_diam	numeric	Diameter of valve
man_tap	shutvalve_number	varchar	Number of shutvalve
man_valve	pression_entry	numeric	Entry pression level
man_valve	pression_exit	numeric	Exit pression level
config	insert_double_geometry	bool	Enables inserting elements with double geometry (point and polygon)
man_hydrant	valve	varchar	Valve type
man_reduction	add_info	varchar	Additional information about the feature
man_wjoin	add_info	varchar	Additional information about the feature
man_tap	drain_exit	varchar	Exit of a drain
node	label_x	varchar	X coordinate of the label's location
man_fountain	container_number	int4	Number of water containers
man_wjoin	top_floor	int4	Level of the highest connected apartment
man_fountain	chlorinator	varchar	Chlorination
man_fountain	name	varchar	Name of the fountain
node	undelete	bool	Blocks the deleting option
ext_rtc_hydrometer	code	text	Code of a hydrometer
man_hydrant	communication	varchar	Communication
ext_rtc_hydrometer	hydrometer_category	text	Category of a hydrometer
man_tank	chlorination	varchar	Chlorination of a tank
man_valve	exit_code	int4	Valve exit code
presszone	undelete	bool	Blocks the deleting option
man_hydrant	location	varchar	Location of a hydrant
man_tap	add_info	varchar	Additional information about the feature
man_tap	type	varchar	Tap type

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
man_tap	drain_gully	varchar	Type of drain connection to the gully
man_valve	exit_type	varchar	Valve exit type
man_waterwell	node_id	varchar	Node identifier related to the primary key of the node table
man_hydrant	location_sign	varchar	Location of an information sign
connec	label_y	varchar	Y coordinate of the label's location
man_tap	continous	varchar	Continous beam
man_tank	function	varchar	Tank function
man_wjoin	length	numeric	Length
node	label_rotation	numeric	Angle of rotation of the label
man_tap	shutvalve_diam	numeric	Shutvalve diameter
man_valve	irrigation_indicator	varchar	Interior irrigation indicator
man_fountain	connec_id	varchar	Connec identifier related to the primary key of the connec table
temp_node	label_y	varchar	Y coordinate of the label's location
man_reduction	node_id	varchar	Node identifier related to the primary key of the node table
config	buffer_value	float8	Half of a size of automaticly inserted polygon (double geometry)
man_tap	arquitect_patrimony	varchar	Architectural heritage
arc	label_y	varchar	Y coordinate of the label's location
man_manhole	add_info	varchar	Additional information about the feature
temp_node	label_rotation	numeric	Angle of rotation of the label
man_source	add_info	varchar	Additional information about the feature
temp_arc	undelete	bool	Blocks the deleting option
man_tap	communication	varchar	Communication
man_valve	regulator_situation	varchar	Situation of valve regulator
temp_arc	label_x	varchar	X coordinate of the label's location
man_wjoin	connec_id	varchar	Connec identifier related to the primary key of the connec table
man_selector_state	id	varchar	ID of value man selector state. Primary key.
man_tap	connection	varchar	Connection type with the network
man_tap	drain_diam	numeric	Drain diameter
man_fountain	pump_number	int4	Number of pumps
arc	label_rotation	numeric	Angle of rotation of the label
man_valve	drive_type	varchar	Valve drive type
sector	undelete	bool	Blocks the deleting option
man_reduction	diam_initial	numeric	Initial diameter.
man_greentap	connec_id	varchar	Connec identifier related to the primary key of the connec table
connec	label_rotation	numeric	Angle of rotation of the label
man_wjoin	arc_id	varchar	Arc identifier related to the primary key of the arc table
man_tap	shutvalve_type	varchar	Shutvalve diameter
man_valve	location	varchar	Location of a valve
node	label_y	varchar	Y coordinate of the label's location
rtc_options	id	Varchar(16)	Option identifier. Primary key.
config_py_tables	observ	varchar	Observation
config_param_bool	id	varchar	Bool parameter identifier. Primary key.
config_py_tables	plugin_version	varchar	Version of a plugin
om_visit_parameter_type	observ	varchar	Observation
config_param_bool	descript	text	Float parameter description.
anl_selector_state	id	varchar	Selector state analysis identifier. Primary key
config_py_tables	id	int4	Py tables identifier. Primary key.
config_param_float	id	varchar	Float parameter identifier. Primary key.
config_param_float	descript	text	Float parameter description.

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
samplepoint	observations	varchar	Observation
config_param_text	descript	text	Text parameter description.
ext_hydrometer_category	observ	varchar	Observation
config_param_text	id	varchar	Text parameter identifier. Primary key.
config_param_int	descript	text	Integer parameter description.
config_param_int	id	varchar	Integer parameter identifier. Primary key.
config_py_tables	table_name	varchar	Name of necessary table.
config_py_tables	context	varchar	Context where this table is showed
config_param_int	context	varchar	Context where this table is showed
config_param_float	context	varchar	Context where this table is showed
config_param_text	context	varchar	Context where this table is showed
config_param_int	to_version	varchar	Output plugin version
om_visit_event	id	int8	Event during visit identifier. Primary key
om_visit	enddate	timestamp	Visit end date
om_visit	startdate	timestamp	Visit start date.
om_visit_x_arc	arc_id	varchar	Arc identifier
om_visit_event	tstamp	timestamp	Event time and date.
om_visit_event	position_id	varchar	Location of an event object
om_visit_parameter	feature	varchar	Feature type to which is related the parameter
om_visit_x_node	visit_id	int8	Identifier of a visit related to node
om_visit_event	xcoord	numeric	X coordinate of the event
config_param_text	value	text	Parameter value
om_visit_event	text	text	Text.
om_visit	id	int8	Visit identifier. Primary key
config_param_bool	from_version	varchar	Input plugin version
config_param_bool	context	varchar	Context where this table is showed
om_visit_value_position	descript	varchar	Description
inp_cat_mat_roughness	end_age	int4	Material expiration date
config_param_text	to_version	varchar	Output plugin version
version	date	timestamp	Date of creation of the schema project
version	epsg	int4	EPSG of the project
version	language	varchar	Language version of plugin
om_visit_x_connec	visit_id	int8	Identifier of a visit related to connec
om_visit_value_position	id	varchar	Position value identifier.Primary key.
config_param_int	value	int4	Parameter value
om_visit_x_arc	id	int8	Visit on arc identifier. Primary key.
config_param_float	to_version	varchar	Output plugin version
om_visit_event	visit_id	int8	Identifier of a visit to which are related the events
inp_cat_mat_roughness	id	varchar	Cat mat roughness identifier.
inp_cat_mat_roughness	descript	text	Description
config_param_int	from_version	varchar	Input plugin version
om_visit_x_connec	connec_id	varchar	Connec identifier related to the primary key of the connec table
inp_cat_mat_roughness	roughness	numeric	Roughness of the material.
om_visit_parameter	parameter_type	varchar	Parameter type.
om_visit_parameter	data_type	varchar	Data type.
config_py_tables	hidden	bool	Decides whether the table is visible for user
om_visit_event	value	text	Event value
pond	connec_id	varchar	Connec identifier related to the primary key of the connec table
om_visit_parameter	id	varchar	Visit parameter identifier. Primary key.

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
om_visit_event	parameter_id	varchar	Parameter of event type
om_visit_parameter	descript	varchar	Description.
inp_cat_mat_roughness	period_id	varchar	Period identifier.
om_visit_x_node	id	int8	Visit on node identifier. Primary key.
om_visit	user_name	varchar	Name of a user conducting the visit
config_param_float	value	numeric	Parameter value
om_visit_x_node	node_id	varchar	Node identifier related to the primary key of the node table
om_visit_parameter_type	id	varchar	Visit parameter type identifier.Primary key.
om_visit_x_connec	id	int8	Visit on connec identifier. Primary key.
config_param_float	from_version	varchar	Input plugin version
om_visit_event	ycoord	numeric	Y coordinate of the event
inp_cat_mat_roughness	matcat_id	varchar	Material catalog identifier.
config_param_bool	value	bool	Parameter value
pool	connec_id	varchar	Connec identifier related to the primary key of the connec table
config_param_text	from_version	varchar	Input plugin version
config_param_bool	to_version	varchar	Output plugin version
om_visit_x_arc	visit_id	int8	Identifier of a visit related to arc
pond	the_geom	geometry	Point geometry field
pond	pond_id	varchar	Pond identifier. Primary key.
plan_selector_state	id	varchar	Masterplan state selector identifier. Primary key.
pool	the_geom	geometry	Point geometry field
samplepoint	the_geom	geometry	Point geometry field
pond	orto2005	int4	Ortofoto identifier.
samplepoint	workcat_id_end	varchar	ID of the end of construction work.
temp_arc	workcat_id_end	varchar	ID of the end of construction work.
samplepoint	workcat_id	varchar	ID of the construction work.
node	workcat_id_end	varchar	ID of the end of construction work.
pool	pool_id	varchar	Pool identifier. Primary key.
element	workcat_id_end	varchar	ID of the end of construction work.
pool	code_comercial	int4	Comercial code of join with network
arc	workcat_id_end	varchar	ID of the end of construction work.
temp_node	workcat_id_end	varchar	ID of the end of construction work.
pool	orto2005	int4	Ortofoto identifier.
connec	workcat_id_end	varchar	ID of the end of construction work.
samplepoint	street1	varchar	Location - street 1
pond	code_comercial	int4	Comercial code of join with network
samplepoint	street2	varchar	Location - street 2
samplepoint	state	varchar	Domain value of samplepoint's state.
samplepoint	code_lab	int4	Sample point code for laboratory
samplepoint	element_type	varchar	Type of the sample element
ext_hydrometer_category	id	varchar	Hydrometer category identifier.primary key
samplepoint	sample_id	varchar	Sample point identifier. Primary key.
samplepoint	rotation	numeric	Field to use in order to rotate the symbology of the GIS canvas
samplepoint	element_code	int4	Code of sample element
samplepoint	cabinet	varchar	Cabinet of the measurements equipment
cat_node	num_arcs	int4	Number of arcs connected to node
samplepoint	dma_id2	varchar	Network to which is connected the samplepoint
om_visit_event	azimut	float8	Azimut hof the direction to which is directed the camera.
om_visit_value_position	feature	varchar	Feature type to which is related the position value

WS – COLUMN			
table_id	**column_id**	**column_type**	**description**
config_py_tables	qgis_project	bool	Confirmation of a correct QGIS Project
config_py_tables	db_schema	bool	Confirmation of correct schema name
inp_pump	to_arc	varchar	This fields identifies the direction of the flow of the shortpipe, applied only for the case of check valves
db_cat_clientlayer	qgis_layer_id	text	QGIS layer identifier.
db_cat_clientlayer	db_cat_table_id	text	Identifier of a table in a database.
db_cat_clientlayer	layer_alias	text	Name of the layer appearing in the table of content (ToC).
db_cat_clientlayer	client_id	text	Client identifier.
db_cat_clientlayer	description	text	Description
db_cat_clientlayer	pre_dependences	text	
db_cat_clientlayer	post_dependences	text	
db_cat_clientlayer	db_cat_client_layer_agr upation_id	varchar(50)	
db_cat_clientlayer	styleqml_use_asdefault	bool	Existing of default layer style.
db_cat_clientlayer	styleqml_file	text	Name of the qml style file
db_cat_clientlayer	geometry_field	text	Existing of the layer's geometry field.
db_cat_clientlayer	project_criticity	smallint	

UD – TABLE		
id	**context**	**description**
anl_flow_trace_arc	Analysis	Table with the result offlow trace (downstream arcs)
inp_node_x_sector	Hydraulic input data	Contains the information about the nodes related to sector.
arc_type	system struture	Contains the types of arcs.
node_type	system struture	Contains the types of nodes.
element_type	system struture	Contains the types of elements.
cat_mat_arc	catalog	Catalog of arc's material.
cat_mat_node	catalog	Catalog of node's material.
cat_node	catalog	Catalog of nodes.
cat_mat_element	catalog	Catalog of element's material.
cat_element	catalog	Catalog of elements.
cat_connec	catalog	Catalog of connections.
cat_grate	catalog	Catalog of grates.
cat_soil	catalog	Catalog of soils.
cat_builder	catalog	Catalog of constructors
cat_work	catalog	Catalog of constructions
cat_owner	catalog	Catalog of owners.
cat_pavement	catalog	Catalog of pavements.
man_type_category	value domain (type)	Domain data of types of management
man_type_fluid	value domain (type)	Domain data of types of fluid management
man_type_location	value domain (type)	Domain data of types of location management
man_type_street	value domain (type)	Domain data of types of street type management
connec_type	value domain (type)	Domain data of connect type.
sector	GIS feature	Table of spatial objects representing sectors.
node	GIS feature	Table of spatial objects representing nodes.
arc	GIS feature	Table of spatial objects representing arcs.
polygon	GIS feature	Table of spatial objects representing polygons.
dma	GIS feature	Table of spatial objects representing delimitation of management areas.
connec	GIS feature	Table of spatial objects representing connects.
vnode	GIS feature	Table of spatial objects representing vnode.
link	GIS feature	Table of spatial objects representing links.
gully	GIS feature	Table of spatial objects representing gullies.
man_junction	Additional info of GIS feature	Additional information for junction management
man_storage	Additional info of GIS feature	Additional information for storage management
man_outfall	Additional info of GIS feature	Additional information for outfall management
man_conduit	Additional info of GIS feature	Additional information for conduit management
element_x_node	Element	Contains the elements related to nodes
element_x_connec	Element	Contains the elements related to connects
element_x_gully	Element	Contains the elements related to gullies
value_state	value domain	Domain data with value describing the state
value_verified	value domain	Domain data with value describing the verification status.
value_yesno	value domain	Domain data with value yes/no
inp_selector_hydrology	Selector	Selector of hydrology.
inp_adjustments	Hydraulic input data	Adjustments are +- changes to temperature and evaporation or multipliers for rainfall that can vary month of the year
inp_aquifer	Hydraulic input data	Supplies parameters for each unconfined groundwater aquifer in the study area. Aquifers consist of two zones âa lower saturated zone and an upper unsaturated zone.
inp_backdrop	Hydraulic input data	Contains the information about system plan and its dimensions
inp_buildup_land_x_pol	Hydraulic input data	Specifies the rate at which pollutants build up over different land uses between rain events.
inp_conduit	Hydraulic input data	Identifies each conduit link of the drainage system. Conduits are pipes or channels that convey water from one node to another.
inp_controls	Hydraulic input data	Determines how pumps and regulators will be adjusted based on simulation time or conditions at specific nodes and links.

UD – TABLE		
id	**context**	**description**
inp_coverage_land_x_subc	Hydraulic input data	Specifies the percentage of a subcatchmentâ€™s area that is covered by each category of land use.
inp_curve	Hydraulic input data	Contains the information about curve definitions
inp_curve_id	Hydraulic input data	Curve catalog. This table could be edited through giswater control panel: Giswater ? Data ? Curves
inp_divider	Hydraulic input data	Identifies each flow divider node of the drainage system. Flow dividers are junctions with exactly two outflow conduits where the total outflow is divided between the two in a prescribed manner.
inp_dwf	Hydraulic input data	Specifies dry weather flow and its quality entering the drainage system at specific nodes.
inp_dwf_pol_x_node	Hydraulic input data	Specifies pollutant inflow to drainage system at specific nodes.
inp_evaporation	Hydraulic input data	Specifies how daily evaporation rates vary with time for the study area.
inp_files	Hydraulic input data	Contains the information about work files of SWMM
inp_groundwater	Hydraulic input data	Supplies parameters that determine the rate of groundwater flow between the aquifer underneath a subcatchment and a node of the conveyance system.
inp_hydrograph	Hydraulic input data	Specifies the shapes of the triangular unit hydrographs that determine the amount of rainfall-dependent infiltration/inflow (RDII) entering the drainage system.
inp_inflows	Hydraulic input data	Specifies external hydrographs and pollutographs that enter the drainage system at specific nodes.
inp_inflows_pol_x_node	Hydraulic input data	Specifies external hydrographs and pollutographs that enter the drainage system at specific nodes.
inp_junction	Hydraulic input data	Nodes with conection type
inp_label	Hydraulic input data	Contains the information about labels
inp_landuses	Hydraulic input data	Identifies the various categories of land uses within the drainage area. Each subcatchment area can be assigned a different mix of land uses. Each land use can be subjected to a different street sweeping schedule.
inp_lid_control	Hydraulic input data	Defines scale-independent LID controls that can be deployed within subcatchments.
plan_arc_x_pavement	Masterplan	Table to relate arcs to pavements
inp_loadings_pol_x_subc	Hydraulic input data	Specifies the pollutant buildup that exists on each subcatchment at the start of a simulation.
price_simple	Masterplan	Table of simple price.
inp_mapdim	Hydraulic input data	Contains the information about the map dimensions
inp_mapunits	Hydraulic input data	Contains the information about map units
inp_options	Hydraulic input data	Contains the general information about the simulation options
inp_orifice	Hydraulic input data	Identifies each orifice link of the drainage system. An orifice link serves to limit the flow exiting a node and is often used to model flow diversions.
inp_outfall	Hydraulic input data	Identifies each outfall node (i.e., final downstream boundary) of the drainage system and the corresponding water stage elevation. Only one link can be incident on an outfall node.
inp_outlet	Hydraulic input data	Identifies each outlet flow control device of the drainage system. These devices are used to model outflows from storage units or flow diversions that have a user-defined relation between flow rate and water depth.
inp_pattern	Hydraulic input data	Specifies time pattern of dry weather flow or quality in the form of adjustment factors applied as multipliers to baseline values. This table could be edited trough giswater control panel:Â Giswater ? Data ? Patterns
inp_pollutant	Hydraulic input data	Identifies the pollutants being analyzed.
inp_project_id	Project ID	Contains the general information about the project.
inp_pump	Hydraulic input data	Identifies each pump link of the drainage system.
inp_rdii	Hydraulic input data	Specifies the parameters that describe rainfall-dependent infiltration/inflow (RDII) entering the drainage system at specific nodes.
inp_report	Hydraulic input data	Contains the information about output simulation report
inp_snowmelt	Hydraulic input data	Snowmelt parameters are climatic variables that apply across the entire study area when simulating snowfall and snowmelt.
inp_snowpack	Hydraulic input data	Specifies parameters that govern how snowfall accumulates and melts on the plowable, impervious and pervious surfaces of subcatchments.
inp_storage	Hydraulic input data	Identifies each storage node of the drainage system. Storage nodes can have any shape as specified by a surface area versus water depth relation.
inp_temperature	Hydraulic input data	Specifies daily air temperatures, monthly wind speed, and various snowmelt parameters for the study area. Required only when snowmelt is being modeled or when evaporation rates are computed from daily temperatures or are read from an external climate file.
inp_timeseries	Hydraulic input data	Table relative to timeseries values. This table could be edited trough giswater control panel:Â Giswater ? Data ? Timeseries
inp_timser_id	Hydraulic input data	Timeseries catalog. This table could be edited trough giswater control panel:Â Giswater ? Data ? Timeseries
inp_transects	Hydraulic input data	Describes the cross-section geometry of natural channels or conduits with irregular shapes following the HEC-2 data format.
inp_treatment_node_x_pol	Hydraulic input data	Specifies the degree of treatment received by pollutants at specific nodes of the drainage system.
inp_arc_type	value domain (type) of hydraulic data	Value domain data with arc's geometry
inp_node_type	value domain (type) of hydraulic data	Value domain data with node's geometry

UD – TABLE		
id	**context**	**description**
inp_giswater_config	system struture	Configuration table with the goal to integrate the Giswater java tool with the Giswater python plugin
inp_typevalue_divider	value domain (value) of hidraulic input data	Value domain data with divider type
inp_typevalue_evap	value domain (value) of hidraulic input data	Value domain data with evaporation type
inp_typevalue_orifice	value domain (value) of hidraulic input data	Value domain data with orifice type
inp_typevalue_outfall	value domain (value) of hidraulic input data	Value domain data with boundary conditions of outfall
inp_typevalue_outlet	value domain (value) of hidraulic input data	Value domain data with outlet values
inp_typevalue_pattern	value domain (value) of hidraulic input data	Value domain data with weather patterns
inp_typevalue_raingage	value domain (value) of hidraulic input data	Value domain data with rain data source type
inp_typevalue_storage	value domain (value) of hidraulic input data	Value domain data with data source which describes the geometry
inp_typevalue_temp	value domain (value) of hidraulic input data	Value domain data with temperature data source type
inp_typevalue_timeseries	value domain (value) of hidraulic input data	Value domain data with time serie data source type
inp_typevalue_windsp	value domain (value) of hidraulic input data	Value domain data with wind data source type
inp_value_allnone	value domain (value) of hidraulic input data	Value domain data with value none/all
inp_value_buildup	value domain (value) of hidraulic input data	Value domain data with function type available for acumulation of pollutants
inp_value_catarc	value domain (value) of hidraulic input data	Value domain data with catalog of conduit type
inp_value_curve	value domain (value) of hidraulic input data	Value domain data with catalog of curve type
inp_value_files_actio	value domain (value) of hidraulic input data	Value domain data with file action
inp_value_files_type	value domain (value) of hidraulic input data	Value domain data with file type
inp_value_inflows	value domain (value) of hidraulic input data	Value domain data with different data inflow values
inp_value_lidcontrol	value domain (value) of hidraulic input data	Value domain data with lidcontrol type
inp_value_mapunits	value domain (value) of hidraulic input data	Value domain data with map units
inp_value_options_fme	value domain (value) of hidraulic input data	Value domain data with option table, field force main equation. See appendix "C" of SWMM user's manual (target OPTIONS) for more information
inp_value_options_fr	value domain (value) of hidraulic input data	Value domain data with option table, field flow routing. See appendix "C" of SWMM user's manual (target OPTIONS) for more information
inp_value_options_fu	value domain (value) of hidraulic input data	Value domain data with option table, flow measurement units. See appendix "C" of SWMM user's manual (target OPTIONS) for more information
plan_other_x_psector	Masterplan	Table of other objects related to plan sectors.
inp_value_options_id	value domain (value) of hidraulic input data	Value domain data with option table, inertial damping. See appendix "C" of SWMM user's manual (target OPTIONS) for more information
price_compost	Masterplan	Table of compound prices
inp_value_options_in	value domain (value) of hidraulic input data	Value domain data with option table, infiltration options. See appendix "C" of SWMM user's manual (target OPTIONS) for more information
inp_value_options_lo	value domain (value) of hidraulic input data	Value domain data with option table, options. See appendix "C" of SWMM user's manual (target OPTIONS) for more information

UD – TABLE		
id	**context**	**description**
inp_value_options_nfl	value domain (value) of hidraulic input data	Value domain data with option table, limited normal flow. See appendix "C" of SWMM user's manual (target OPTIONS) for more information
inp_value_orifice	value domain (value) of hidraulic input data	Value domain data with orifice geometry type. See appendix "C" of SWMM user's manual for more information
inp_value_pollutants	value domain (value) of hidraulic input data	Value domain data with pollutant type
inp_value_raingage	value domain (value) of hidraulic input data	Value domain data with rain data format
inp_value_routeto	value domain (value) of hidraulic input data	Value domain data with direction types of the flow in the subcatchment
inp_value_status	value domain (value) of hidraulic input data	Value domain data with initial state of element
inp_value_timserid	value domain (value) of hidraulic input data	Value domain data with time serie type
inp_value_treatment	value domain (value) of hidraulic input data	Value domain data with deposits treatment type
inp_value_washoff	value domain (value) of hidraulic input data	Value domain data with washoff values.
inp_value_weirs	value domain (value) of hidraulic input data	Value domain data with weir geometry type
inp_value_yesno	value domain (value) of hidraulic input data	Value domain data with value yes/no
inp_washoff_land_x_pol	value domain (value) of hidraulic input data	Specifies the rate at which pollutants are washed off from different land uses during rain events.
inp_weir	value domain (value) of hidraulic input data	Identifies each weir link of the drainage system. Weirs are used to model flow diversions.
inp_windspeed	value domain (value) of hidraulic input data	Windspeed data.
raingage	GIS feature	Identifies each rain gage that provides rainfall data for the study area.
rpt_selector_result	Selector	Result's sectors
rpt_arcflow_sum	Hydraulic result data	Contains the results of arc flow simulations.
rpt_arcpolload_sum	Hydraulic result data	Contains the results of arc pollutant load simulations.
rpt_condsurcharge_sum	Hydraulic result data	Contains the results of conduit surcharge simulations.
rpt_continuity_errors	Hydraulic result data	Contains the results of continuity errors simulations.
rpt_critical_elements	Hydraulic result data	Contains the results of critical elements simulations analysis
rpt_flowclass_sum	Hydraulic result data	Contains the results of flow classification simulations.
rpt_flowrouting_cont	Hydraulic result data	Contains the results of flow routing continuity simulations.
rpt_groundwater_cont	Hydraulic result data	Contains the results of groundwater continuity simulations
rpt_high_conterrors	Hydraulic result data	Contains the results of high continuity errors simulations.
rpt_high_flowinest_ind	Hydraulic result data	Contains the results of high flow instability index simulations.
rpt_instability_index	Hydraulic result data	Contains the results of instability index simulations.
rpt_lidperformance_sum	Hydraulic result data	Contains the results of LID performance simulations.
rpt_nodedepth_sum	Hydraulic result data	Contains the results of depth of nodes
rpt_nodeflooding_sum	Hydraulic result data	Contains the results of flooded nodes
rpt_nodeinflow_sum	Hydraulic result data	Contains the inflow value of nodes
rpt_nodesurcharge_sum	Hydraulic result data	Contains the surcharge value of nodes
rpt_outfallflow_sum	Hydraulic result data	Contains the results of outfall flow simulations.
rpt_outfallload_sum	Hydraulic result data	Contains the results of outfall load simulations.
rpt_pumping_sum	Hydraulic result data	Contains the results of pumping summary simulations.
rpt_qualrouting_cont	Hydraulic result data	Contains the results of quality routing continuity simulations.
rpt_rainfall_dep	Hydraulic result data	Contains the results of rainfall dependent simulations.
rpt_cat_result	Hydraulic result data	Result's catalog

UD – TABLE		
id	**context**	**description**
rpt_routing_timestep	Hydraulic result data	Contains the results of routing timestep simulations
rpt_runoff_qual	Hydraulic result data	Contains the results of runoff quality simulations .
rpt_runoff_quant	Hydraulic result data	Contains the results of runoff quantity simulations .
rpt_storagevol_sum	Hydraulic result data	Contains the results of storage volume simulations
rpt_subcatchwashoff_sum	Hydraulic result data	Contains the results of subcatchment washoff simulations.
rpt_subcathrunoff_sum	Hydraulic result data	Contains the results from subcatchments
rpt_timestep_critelem	Hydraulic result data	Contains the results of timestep critical elements simulations
rpt_selector_compare	Selector	Selector to provide to the hydraulic analyst the possibility to compare two results on the GIS project
inp_selector_sector	Selector	Sector's selector
subcatchment	GeometrÃ-a	Identifies each subcatchment within the study area. Subcatchments are land area units which generate runoff from rainfall.
doc_type	Document management	Contains the document's types.
cat_doc	Document management	Catalog of document's types.
cat_tag	Document management	Catalog of tags.
doc	Document management	Contains the documents.
doc_x_node	Document management	Contains the document related to nodes.
doc_x_arc	Document management	Contains the document related to arcs.
doc_x_connec	Document management	Contains the document related to connections.
doc_x_gully	Document management	Contains the document related to gullies.
plan_psector	Masterplan	Table of plan sector.
plan_arc_x_psector	Masterplan	Table of arcs related to plan sectors.
plan_node_x_psector	Masterplan	Table of nodes related to plan sectors.
plan_value_ps_priority	Masterplan	Domain value table of levels of priority related to psectors
plan_selector_psector	Masterplan	Table of plan sector selectors.
price_compost_value	Masterplan	Table to relate simple prices to compound prices
price_value_unit	Masterplan	View for code
anl_flow_exit_node	Analysis	Table with the result of flow trace (downstream nodes)
anl_flow_exit_arc	Analysis	Table with the result offlow trace (downstream arcs)
anl_flow_trace_node	Analysis	Table with the result offlow trace (upstream nodes)
version	utils	Table to control de version of the software used on the project.
config	utils	Table to define diferent configuration parameters related to the GIS USER interface.
config_csv_import	utils	Table to define the tables enabled for csv import tool
db_cat_table	utils	Table with the information of tables of the project
db_cat_view	utils	Table with the information of views of the project
db_cat_columns	utils	Table with the information of columns of the project
db_cat_clientlayer	utils	Table with the information of GIS layers of the project
anl_node_orphan	utils	Table with the results of the topology process of node orphan function
anl_node_sink	utils	Table with the results of the topology process of node sink function
anl_node_duplicated	utils	Table with the results of the topology process of node duplicated function
anl_arc_same_startend	utils	Table with the results of the topology process of arcs with same node initial and end function
audit_cat_error	utils	Catalog of errors
audit_cat_function	utils	Catalog of functions
audit_function_actions	utils	Table to store information about traceability of user actions with functions
config_extract_raster_value	utils	Table to define the configuration of extracting values from raster
config_search_plus	utils	Table to define the configuration of search plus tool
config_ui_forms	utils	Table to define the configuration of forms.
element_x_arc	GIS Feature	Contains the elements related to arc.
inp_selector_state	Selector	State's selector. Contains the diferents states that will be exported to the model
element	Element	Contains the elements
config_param_bool	utils	Configuration- stash for boolean parameters.

UD – TABLE		
id	**context**	**description**
config_param_float	utils	Configuration- stash for float parameters.
config_param_int	utils	Configuration- stash for integer parameters.
config_param_text	utils	Configuration- stash for text parameters.
config_py_tables	utils	Table with layers which are necessary to the correct functioning of the plugin
om_visit	O&M information	Table of all visits that took place.
om_visit_event	O&M information	Table of events that took place during the visit.
om_visit_parameter	O&M information	Catalog of parameters related to event types.
om_visit_parameter_type	O&M information	Catalog of types of events.
om_visit_value_position	O&M information	Catalog of event's location.
om_visit_x_arc	O&M information	Table of visits related to arc.
om_visit_x_connec	O&M information	Table of visits related to connec.
om_visit_x_gully	O&M information	Table of visits related to gully.
om_visit_x_node	O&M information	Table of visits related to node.
ext_type_street	external table	Catalog of street types.
ext_streetaxis	external table	Table of streetaxis.
ext_urban_propierties	external table	Table of urban properties
ext_postnumber	external table	Table of entrance numbers.
ext_cat_hydrometer	external table	Catalog of hydrometers receivers.
ext_cat_period	external table	Catalog of time periods.
ext_cat_scada	external table	Catalog of scada receivers.
ext_hydrometer_category	external table	Catalog of hydrometer categories.
ext_rtc_hydrometer	external table	Table of hydrometer receivers.
ext_rtc_hydrometer_x_data	external table	Agregated data obtained from hydrometer receivers.
ext_rtc_hydrometer_x_value	external table	Values obtained from hydrometer receivers.
ext_rtc_scada	external table	Table of scada receivers.
ext_rtc_scada_dma_period	external table	Data from scada related to date and dma.
ext_rtc_scada_x_data	external table	Agregated data obtained from scada receivers.
ext_rtc_scada_x_value	external table	Values obtained from scada receivers.
man_manhole	Additional info of GIS feature	Additional information for manhole management
man_netgully	Additional info of GIS feature	Additional information for netgully management
man_netinit	Additional info of GIS feature	Additional information for netinit management
man_selector_state	Additional info of GIS feature	Additional information for state selector management
man_siphon	Additional info of GIS feature	Additional information for siphon management
man_valve	Additional info of GIS feature	Additional information for valve management
man_varc	Additional info of GIS feature	Additional information for virtual arc management
man_waccel	Additional info of GIS feature	Additional information for water accelerator management
man_wjump	Additional info of GIS feature	Additional information for water jump management
man_wwtp	Additional info of GIS feature	Additional information for wastewater treatment plant management
rtc_hydrometer	Real time control	Contains the information to link SCADA with hydrometers
rtc_hydrometer_x_connec	Real time control	Contains the information to link connec with hydrometer
rtc_options	Real time control	Options for real time control
rtc_scada_node	Real time control	Contains the information to link SCADA with nodes
rtc_scada_x_dma	Real time control	Contains the information to link SCADA with dma
v_audit_schema_catalog_column		
rtc_scada_x_sector	Real time control	Contains the information to link SCADA with sector.
rtc_value_opti_coef	Real time control	Value domain for options of real time control
rtc_value_opti_status	Real time control	Value domain for options of real time control
anl_connec_duplicated	Analysis	Table of duplicated connecs
v_audit_schema_foreign_table		

UD – TABLE		
id	**context**	**description**
v_audit_schema_table		
plan_selector_state	masterplan	Domain data with value describing the state for masterplan
man_chamber	Additional info of GIS feature	Additional information for chamber management
point	GIS features	Table of spatial objects representing points.
anl_arc_no_startend_node	Analysis	Table with the results of the topology process of arcs with no nodes on start and/or end function
v_edit_arc	Shows editable information about arcs.	Shows editable information about arcs.
v_edit_connec	Shows editable information about connects.	Shows editable information about connects.
v_edit_link	Shows editable information about links.	Shows editable information about links.
v_edit_gully	Shows editable information about gullys.	Shows editable information about gullys.
v_edit_inp_junction	GIS feature	Shows editable information about junctions.
v_edit_inp_divider	GIS feature	Shows editable information about dividers.
v_edit_inp_outfall	GIS feature	Shows editable information about outfalls.
v_edit_inp_storage	GIS feature	Shows editable information about storages.
v_edit_inp_conduit	GIS feature	Shows editable information about conduits.
v_edit_inp_orifice	GIS feature	Shows editable information about orifices.
v_edit_inp_outlet	GIS feature	Shows editable information about outlets.
v_edit_inp_pump	GIS feature	Shows editable information about pumps.
v_edit_inp_weir	GIS feature	Shows editable information about weirs.
v_arc	Hydraulic input data	Shows the arc data.
v_node	Hydraulic input data	Shows the node data.
v_arc_x_node1	Auxiliar	Shows the relation between arc and nodes1.
v_arc_x_node2	Auxiliar	Shows the relation between arc and node2.
v_arc_x_node	Auxiliar	Shows the relation between arc and nodes.
v_ui_element_x_node	Element management	Contains the elements related to node. User Interface view.
v_ui_element_x_connec	Element management	Contains the elements related to connect. User Interface view.
v_ui_element_x_gully	Element management	Contains the elements related to gully. User Interface view.
v_ui_element_x_arc	Element management	Contains the elements related to arc. User Interface view.
v_inp_buildup	INP data	Shows the information about velocity of the pollutants that accumulate on the surface
v_inp_conduit_cu	INP data	Shows the information about special conduits (custom)
v_inp_conduit_no	INP data	Shows the information about conduits
v_inp_conduit_xs	INP data	Shows the information about special conduits (transects)
v_inp_controls	INP data	Shows the information about the control rules
v_inp_coverages	INP data	Shows the information about the relation between subcatchments and landuses
v_inp_curve	INP data	Shows the information about the curve definitions
v_inp_divider_cu	INP data	Shows the information about the dividers type cutoff
v_inp_divider_ov	INP data	Shows the information about the dividers type overflow.
v_inp_divider_tb	INP data	Shows the information about dividers type tabular
v_inp_divider_wr	INP data	Shows the information about dividers type weir
v_inp_dwf_flow	INP data	Shows the information about flow during the dry period
v_inp_dwf_load	INP data	Shows the information about the relation between the pollutant and the node
v_inp_evap_co	INP data	Shows the information about the evaporation with the constant format type
v_inp_evap_do	INP data	Shows the information about the evaporation
v_inp_evap_fl	INP data	Shows the information about the evaporation with the file format type
v_inp_evap_mo	INP data	Shows the information about the evaporation with the monthly format type
v_inp_evap_pa	INP data	Shows the information about the evaporation with the pan format type
v_inp_evap_te	INP data	Shows the information about the evaporation with the temperature format type

UD – TABLE		
id	**context**	**description**
v_inp_evap_ts	INP data	Shows the information about the evaporation with the timeseries format type
v_inp_groundwater	INP data	Shows the information about groundwaters
v_inp_infiltration_cu	INP data	Shows the information about the infiltration using Curve-Number method
v_inp_infiltration_gr	INP data	Shows the information about the infiltration using Green-Ampt method
v_inp_infiltration_ho	INP data	Shows the information about the infiltration using Horton method
v_inp_inflows_flow	INP data	Shows the information about the inflows related in terms of flow, to nodes (if the user has defined it)
v_inp_inflows_load	INP data	Shows the information about the inflows related in terms of pollutants to nodes (if the user has defined it)
v_inp_junction	INP data	Identifies each junction node of the drainage system. Junctions are points in space where channels and pipes connect together. For sewer systems they can be either connection fittings or manholes.
v_inp_landuses	INP data	Shows the information about land use
v_inp_lidcontrol	INP data	Shows the information about LID controls
v_inp_lidusage	INP data	Shows the information about LID usage.
v_inp_loadings	INP data	Shows the information about loadings.
v_inp_losses	INP data	Shows the information about the coefficiency of losses and conduits behaviour
v_inp_options	INP data	Shows the general information with the simulation options
v_inp_orifice	INP data	Show the information about arcs type orifice
v_inp_outfall_fi	INP data	Shows the information about outfalls with fixed format type
v_inp_outfall_fr	INP data	Shows the information about outfalls with free format type
v_inp_outfall_nm	INP data	Shows the information about outfalls with normal format type
samplepoint	GIS feature	Table of spatial objects representing sample points.
v_inp_outfall_ti	INP data	Shows the information about outfalls with tidal format type
v_audit_schema_catalog_compare_column		
v_inp_outfall_ts	INP data	Shows the information about outfalls with timeseries format type
v_inp_outlet_fcd	INP data	Shows the information about outlet with functional/depth format type
v_inp_outlet_fch	INP data	Shows the information about outlet with functional/head format type
v_edit_rtc_hydro_data_x_connec		
v_inp_outlet_tbd	INP data	Shows the information about outlet with tabular/depth format type
v_inp_outlet_tbh	INP data	Shows the information about outlet with tabular/head format type
v_inp_pattern_dl	INP data	Shows the daily time pattern
v_inp_pattern_ho	INP data	Shows the hourly time pattern
v_inp_pattern_mo	INP data	Shows the monthly time pattern
v_inp_pattern_we	INP data	Shows the weekly time pattern
v_inp_pump	INP data	Shows the information about the arcs type pump
v_inp_rdii	INP data	Shows the information about rainfall-dependent infiltration/inflow (RDII).
v_inp_rgage_fl	INP data	Shows the information about the rain with file format
v_inp_rgage_ts	INP data	Shows the information about the rain with time series
v_inp_snowpack	INP data	Shows the information about snow layer
v_inp_storage_fc	INP data	Shows the information about the deposits with functional type
v_inp_storage_tb	INP data	Shows the information about the deposits with tabular type
v_inp_subcatch	INP data	Shows the information about the poligons with subcatchment type
v_inp_temp_fl	INP data	Shows the information about the temperature data of the project (if user has defined it)
v_inp_temp_sn	INP data	Shows the information about the temperature data of the project (if user has defined it)
v_inp_temp_ts	INP data	Shows the information about the temperature data of the project (if user has defined it)
v_inp_temp_wf	INP data	Shows the information about the temperature data of the project (if user has defined it)
v_inp_temp_wm	INP data	Shows the information about the temperature data of the project (if user has defined it)
v_inp_timser_abs	INP data	Shows the information about time series with absolute type
v_inp_timser_fl	INP data	Shows the information about time series with file
v_inp_timser_rel	INP data	Shows the information about time series with relative type

UD – TABLE		
id	**context**	**description**
v_inp_transects	INP data	Shows the information about transects
v_inp_treatment	INP data	Shows the information about the treatment of deposits
v_inp_vertice	INP data	Shows the geometric information about conduits' vertexes
v_inp_washoff	INP data	Shows the information about the washoff.
v_inp_weir	INP data	Shows the information about arcs type weir
v_rpt_arcflow_sum	Hydraulic results data	Shows the results of arc flow simulations.
v_rpt_arcpolload_sum	Hydraulic results data	Shows the results of arc pollutant load simulations.
v_rpt_condsurcharge_sum	Hydraulic results data	Shows the results of conduit surcharge simulations.
v_rpt_continuity_errors	Hydraulic results data	Shows the results of continuity errors simulations.
v_rpt_critical_elements	Hydraulic results data	Shows the results of critical elements simulations analysis
v_rpt_flowclass_sum	Hydraulic results data	Shows the results of flow classification simulations.
v_rpt_flowrouting_cont	Hydraulic results data	Shows the results of flow routing continuity simulations.
v_rpt_groundwater_cont	Hydraulic results data	Shows the results of groundwater continuity simulations
v_rpt_high_cont_errors	Hydraulic results data	Shows the results of high continuity errors simulations.
v_rpt_high_flowinest_ind	Hydraulic results data	Shows the results of high flow instability index simulations.
v_rpt_instability_index	Hydraulic results data	Shows the results of instability index simulations.
v_rpt_lidperfomance_sum	Hydraulic results data	Shows the results of LID performance simulations.
v_rpt_nodedepth_sum	Hydraulic results data	Shows the results of depth of nodes
v_rpt_nodeflooding_sum	Hydraulic results data	Shows the results of flooded nodes
v_rpt_nodeinflow_sum	Hydraulic results data	Shows the inflow value of nodes
v_rpt_nodesurcharge_sum	Hydraulic results data	Shows the surcharge value of nodes
v_rpt_outfallflow_sum	Hydraulic results data	Shows the results of outfall flow simulations.
v_rpt_outfallload_sum	Hydraulic results data	Shows the results of outfall load simulations.
v_rpt_pumping_sum	Hydraulic results data	Shows the results of pumping summary simulations.
v_rpt_qualrouting	Hydraulic results data	Shows the results of quality routing continuity simulations.
v_rpt_rainfall_dep	Hydraulic results data	Shows the results of rainfall dependent simulations.
v_rpt_routing_timestep	Hydraulic results data	Shows the results of routing timestep simulations
v_rpt_runoff_qual	Hydraulic results data	Shows the results of runoff quality simulations .
v_rpt_runoff_quant	Hydraulic results data	Shows the results of runoff quantity simulations .
v_rpt_storagevol_sum	Hydraulic results data	Shows the results of storage volume simulations
v_rpt_subcatchrunoff_sum	Hydraulic results data	Shows the results from subcatchments runoff simulations.
v_rpt_subcatchwasoff_sum	Hydraulic results data	Shows the results of subcatchment washoff simulations.
v_rpt_timestep_critelem	Hydraulic results data	Shows the results of timestep critical elements simulations
v_rpt_comp_arcflow_sum	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between arcflow simulation results.
v_rpt_comp_arcpolload_sum	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between arc pollutant load simulation results.
v_rpt_comp_condsurcharge_sum	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between conduit surcharge simulations results.
v_rpt_comp_continuity_errors	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between continuity errors simulations results.
v_audit_schema_catalog_compare_table		
v_rpt_comp_critical_elements	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between critical elements simulations analysis results.
v_inp_hydrograph		
v_rpt_comp_flowclass_sum	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between flow classification simulations results.
v_rpt_comp_flowrouting_cont	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between flow routing continuity simulations results.
v_price_x_catsoil1	Masterplan	View for code

UD – TABLE		
id	**context**	**description**
v_price_x_catsoil2	Masterplan	View for code
v_price_x_catsoil3	Masterplan	View for code
v_rpt_comp_groundwater_cont	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between groundwater continuity simulation results.
v_rpt_comp_high_cont_errors	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between high continuity errors simulations results.
v_rpt_comp_high_flowinest_ind	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between high flow instability index simulations results.
v_rpt_comp_instability_index	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between instability index simulations results.
v_rpt_comp_lidperfomance_sum	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between LID performance simulations results.
v_rpt_comp_nodedepth_sum	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between depth of nodes results.
v_rpt_comp_nodeflooding_sum	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between flooded nodes results.
v_rpt_comp_nodeinflow_sum	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between inflow value of nodes results.
v_rpt_comp_nodesurcharge_sum	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between surcharge value of nodes results.
v_rpt_comp_outfallflow_sum	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between outfall flow simulations results..
v_rpt_comp_outfallload_sum	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between outfall load simulations results..
v_rpt_comp_pumping_sum	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between pumping summary simulations results.
v_rpt_comp_qualrouting	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between quality routing continuity simulations results.
v_rpt_comp_rainfall_dep	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between rainfall dependent simulations results.
v_rpt_comp_routing_timestep	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between routing timestep simulations results.
v_rpt_comp_runoff_qual	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between runoff quality simulations results.
v_rpt_comp_runoff_quant	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between runoff quantity simulations results.
v_rpt_comp_storagevol_sum	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between storage volume simulations results.
v_rpt_comp_subcatchrunoff_sum	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between subcatchments runoff simulations results.
v_rpt_comp_subcatchwasoff_sum	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between subcatchment washoff simulations results.
v_rpt_comp_timestep_critelem	Hydraulic result data	Shows the result selecteb by the comparision selector in order to show into GIS project the data from result_selector and result_comparisor to compare between timestep critical elements simulations results.
v_ui_doc_x_node	Document management	Shows the information of document related to nodes. User Interface view.
v_ui_doc_x_arc	Document management	Shows the information of document related to arcs. User Interface view.
v_ui_doc_x_connec	Document management	Shows the information of document related to connects. User Interface view.
v_ui_doc_x_gully	Document management	Shows the information of document related to gully. User Interface view.
v_price_compost	Masterplan	View for code
v_price_x_catsoil4	Masterplan	View for code
v_price_x_catsoil	Masterplan	View for code
v_anl_arc		
v_anl_connec		
v_anl_flowtrace_connec		

UD – TABLE		
id	**context**	**description**
v_anl_flowtrace_hydrometer		
v_anl_node		
v_audit_functions		
v_audit_schema_column		
v_audit_schema_foreign_column		
v_audit_schema_foreign_column_aux		
v_audit_schema_foreign_compare_column		
v_audit_schema_foreign_compare_table		
v_edit_man_chamber	GIS feature	Shows editable information about chamber (point)
v_edit_man_chamber_pol	GIS feature	Shows editable information about chamber (polygon)
v_edit_man_conduit	GIS feature	Shows editable information about conduit
v_edit_man_connec	GIS feature	Shows editable information about connec
v_edit_man_gully	GIS feature	Shows editable information about gully
v_edit_man_junction	GIS feature	Shows editable information about junction
v_edit_man_manhole	GIS feature	Shows editable information about manhole
v_edit_man_netgully	GIS feature	Shows editable information about netgully (point)
v_edit_man_netgully_pol	GIS feature	Shows editable information about netgully (polygon)
v_edit_man_netinit	GIS feature	Shows editable information about netinit
v_edit_man_outfall	GIS feature	Shows editable information about outfall
v_edit_man_pgully	GIS feature	Shows editable information about pgully
v_edit_man_siphon	GIS feature	Shows editable information about siphon
v_edit_man_storage	GIS feature	Shows editable information about storage (point)
v_edit_man_storage_pol	GIS feature	Shows editable information about storage (polygon)
v_edit_man_valve	GIS feature	Shows editable information about valve
v_edit_man_varc	GIS feature	Shows editable information about virtual arc
v_edit_man_waccel	GIS feature	Shows editable information about water accelerator
v_edit_man_wjump	GIS feature	Shows editable information about water jump
v_edit_man_wwtp	GIS feature	Shows editable information about waterwaste treatment plant (point)
v_edit_man_wwtp_pol	GIS feature	Shows editable information about waterwaste treatment plant (polygon)
v_man_arc		Shows information about arcs.
v_man_connec		Shows information about connecs
v_man_node		Shows information about nodes
v_plan_arc	masterplan	View only with the most important information about the cost of the arc
v_plan_arc_x_psector	masterplan	View to show arcs related to plan sectors.
v_plan_cost_arc	masterplan	View to show full data of cost of arc
v_plan_ml_arc	masterplan	View where is showed the characteristicis of arc by lineal meter (soil, pavement,…)
v_plan_mlcost_arc	masterplan	View where is showed the economic characteristicis of arc by lineal meter (soil, pavement,…) by lineal meter
v_plan_node	masterplan	View only with the most important information about the cost of the node
v_plan_node_x_psector	masterplan	View to show nodes related to plan sectors.
v_plan_other_x_psector	masterplan	View to show other issues of budget related to plan sectors.
v_plan_psector	masterplan	View to show sectors planifieds
v_plan_psector_arc	masterplan	View to show sectors with the related arcs
v_plan_psector_filtered	masterplan	
v_plan_psector_node	masterplan	View to show sectors with the related nodes
v_plan_psector_other	masterplan	View to show sectors with the related other issues of budget
v_edit_pgully	Shows editable information about gullys represented as polygons.	Shows editable information about pgullys.

UD – TABLE		
id	**context**	**description**
v_price_x_arc		Shows the datails of the arc price.
v_price_x_catarc		View for code
v_price_x_catarc1		View for code
v_price_x_catarc2		View for code
v_price_x_catarc3		View for code
v_price_x_catnode		View for code
v_price_x_catpavement		View for code
v_price_x_node		Shows the datails of the node price.
v_rtc_dma_hydrometer_period	Real time control	System view
v_rtc_dma_parameter_period	Real time control	System view
v_rtc_hydrometer	Real time control	Shows the hydrometer receivers.
v_rtc_hydrometer_period	Real time control	Shows the hydrometer periods.
v_rtc_hydrometer_x_arc	Real time control	System view
v_rtc_hydrometer_x_connec	Real time control	Shows the hydrometer receivers related to connecs.
v_rtc_hydrometer_x_node_period	Real time control	System view
v_rtc_scada	Real time control	Shows the scada receivers
v_rtc_scada_data	Real time control	Shows the scada data.
v_rtc_scada_value	Real time control	Shows the scada values.
v_ui_om_visit_x_arc	O&M information	Shows the visits related to elements related to arcs. User Interface view.
v_edit_node		Shows editable information about nodes.
cat_feature	catalog	Catalog of feature to which the gully can be connected
O&M information		
v_ui_om_visit_x_connec	O&M information	Shows the visits related to elements related to connecs. User Interface view.
v_ui_om_visit_x_gully	O&M information	Shows the visits related to elements related to gullys. User Interface view.
v_ui_om_visit_x_node	O&M information	Shows the visits related to elements related to nodes. User Interface view.
db_cat_client_layer	utils	Table with the information of GIS layers of the project
cat_arc	catalog	Table with arc catalog data. Your project need minimun at once. This table could be edited trough giswater control panel:Giswater- Data- Arc catalog
cat_hydrology	catalog	Catalog of hydrology.
audit_schema_data_integrity	utils	
catchment	GIS Feature	Catchment management
anl_selector_state	Analysis	State selector for analysis tools.
inp_lidusage_subc_x_lidco	Hydraulic input data	Deploys LID controls within specific subcatchment areas.

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
version	giswater	varchar(16)	Identifies the version of giswater with the project was created
config_extract_raster_value	raster_layer	varchar(30)	Name of raster layer from which value is taken
config_search_plus	hydrometer_urban_propierties_field_code	varchar(30)	Name of field with connec code
config_extract_raster_value	id	varchar(18)	Identifier
catchment	text	text	Description2
ext_rtc_scada	scada_id	varchar	Id of a related scada receiver.
ext_rtc_scada_x_data	min	float8	Minimum value.
element_type	element_type	varchar(18)	Name of the table with additional information of feature (operation information). The data of this field is system data
ext_urban_propierties	code	Varchar (30)	Code of the propierty.
ext_urban_propierties	streetaxis	Varchar (16)	Street at which the propierty is located.
ext_urban_propierties	postnumber	Varchar (16)	Post number of the propierty.
ext_urban_propierties	complement	Varchar (16)	Post number of the propierty complement data
ext_urban_propierties	placement	Varchar (16)	Location of a propierty.
ext_urban_propierties	square	Varchar (16)	Square at which the propierty is located.
ext_urban_propierties	the_geom	public.geometry	Line geometry field.
arc_type	id	varchar(18)	Type of arc adapted to reality, and ready to translate. The relation with type is n to 1
arc_type	type	varchar(18)	Type of arc. The data of this field is system data
arc_type	epa_default	varchar(18)	Default's value of EPA software. The data of this field is system data
arc_type	man_table	varchar(18)	Name of the table with additional information of feature (management information). The data of this field is system data
arc_type	epa_table	varchar(18)	Name of the table with additional information of feature (hidraulic model). The data of this field is system data
arc_type	event_table	varchar(18)	Name of the table with additional information of feature (operation information). The data of this field is system data
node_type	id	varchar(18)	Type of node adapted to reality, and ready to translate. The relation with type is n to 1
node_type	type	varchar(18)	Type of node. The data of this field is system data
node_type	epa_default	varchar(18)	Default's value of EPA software. The data of this field is system data
node_type	man_table	varchar(18)	Name of the table with additional information of feature (management information). The data of this field is system data
node_type	epa_table	varchar(18)	Name of the table with additional information of feature (hidraulic model). The data of this field is system data
node_type	event_table	varchar(18)	Name of the table with additional information of feature (operation information). The data of this field is system data
element_type	id	varchar(18)	Type of element adapted to reality, and ready to translate. The relation with type is n to 1
cat_mat_arc	id	varchar(30)	ID of arc's material catalog. Primary key.
cat_mat_arc	descript	varchar(512)	Field to store additional information about the material
cat_mat_arc	n	Numeric(12,4)	Roughness of the material.
cat_mat_arc	link	varchar(512)	Field to store link to information related to the arc's material catalog.
cat_mat_arc	url	varchar(512)	Field to store URL or folder path with more information related to the arc's material catalog.
cat_mat_arc	picture	varchar(512)	Picture of a material.
cat_mat_node	id	varchar(30)	ID of node's material catalog. Primary key.
cat_mat_node	descript	varchar(512)	Field to store additional information about the material
cat_mat_node	link	varchar(512)	Field to store link to information related to the node's material catalog.
cat_mat_node	url	varchar(512)	Field to store URL or folder path with more information related to the node's material catalog.
cat_mat_node	picture	varchar(512)	Picture of a material.
cat_arc	id	varchar(30)	ID of the arc catalog. Primary key.
cat_arc	matcat_id	varchar(16)	Material catalog identifier.
cat_arc	shape	varchar(16)	Cross-section shape.
cat_arc	tsect_id	varchar(16)	Transect identifier.
cat_arc	curve_id	varchar(16)	Curve identifier.
cat_arc	geom1	numeric(12,4),	Full height of the arc (ft or m).
cat_arc	geom2	numeric(12,4)	Auxiliary parameters (width, side slopes, etc.)

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
cat_arc	geom3	numeric(12,4)	Auxiliary parameters (width, side slopes, etc.)
cat_arc	geom4	numeric(12,4)	Auxiliary parameters (width, side slopes, etc.)
cat_arc	geom_r	varchar(20)	Real geometry of an arc.
cat_arc	short_des	varchar(16)	Field to store additional information about the catalog.
cat_arc	descript	varchar(255)	Field to store additional information about the catalog.
cat_arc	link	varchar(512)	Field to store link to information related to the arc catalog.
cat_arc	url	varchar(512)	Field to store URL or folder path with more information related to the arc catalog.
cat_arc	picture	varchar(512)	Picture of an arc.
cat_arc	svg	varchar(50)	Symbology.
cat_arc	z1	Numeric(12,2)	Distance from the bottom of the trench of conduit to the top of the conduit's protection material
cat_arc	z2	Numeric(12,2)	Distance from the top of the conduit to the top of the conduit's protection material
cat_grate	n_barr_diag	numeric(12,4)	Number of obliquous barrels
cat_arc	width	Numeric(12,2)	Maximum width of the conduit's section (by point of view of constructive issues). Often is the same value that (geom2 + 2*bulk)
point	observ	varchar	Observations.
cat_arc	area	Numeric(12,4)	Full area of the conduit's section
cat_arc	bulk	Numeric(12,2)	Bulk of the conduit. It consider the same bulk for all the walls of the conduit
cat_arc	cost_unit	Varchar(3)	Units measurements. (Only ml or ut. are allowed values). Sometimes the budget of an arc could be treated as unitary price (applied using length=1)
cat_arc	cost	varchar(16)	(Price_compost.id) of full cost of conduit's subministration and installation
cat_arc	m2bottom_cost	varchar(16)	(Price_compost.id) of full cost of bottom's trench arrangement
cat_arc	m3protec_cost	varchar(16)	(Price_compost.id) of full cost of conduit's proteccion material
cat_node	id	varchar(30)	ID of the node catalog. Primary key.
cat_node	matcat_id	varchar(16)	ID of the related material type.
cat_node	geom1	Numeric(12,2)	Full height of the node (ft or m).
cat_node	geom2	Numeric(12,2)	Auxiliary parameters (width, side slopes, etc.)
cat_node	geom3	Numeric(12,2)	Auxiliary parameters (width, side slopes, etc.)
cat_node	value	Numeric(12,2)	Values for catalog
cat_node	short_des	varchar(30)	Field to store additional information about the catalog.
cat_node	descript	varchar(255)	Field to store additional information about the catalog.
cat_node	link	varchar(512)	Field to store link to information related to the node catalog.
cat_node	url	varchar(512)	Field to store URL or folder path with more information related to the node catalog.
cat_node	picture	varchar(512)	Image that represents the catalog element
cat_node	svg	varchar(50)	Symbology.
cat_node	estimated_y	Numeric(12,2)	In case no data of depth of conduit this depth is used to estimate the budget.
cat_node	cost_unit	Varchar(3)	Units measurements. (Only ml or ut. are allowed values). Sometimes the budget of an node could be treated as lineal price (using the depth as length to compute the cost)
cat_node	cost	varchar(16)	(Price_compost.id) of full cost of conduit's subministration and installation
cat_mat_element	id	varchar(30)	ID of element's material catalog. Primary key.
cat_mat_element	descript	varchar(512)	Field to store additional information about the material.
cat_mat_element	link	varchar(512)	Field to store link to information related to the element's material catalog.
cat_mat_element	url	varchar(512)	Field to store URL or folder path with more information related to the element's material catalog.
cat_mat_element	picture	varchar(512)	Image that represents the catalog element
cat_element	id	varchar(30)	ID of the element catalog. Primary key.
cat_element	elementtype_id	varchar(30)	Element type identifier.
cat_element	matcat_id	varchar(30)	Material catalog identifier.
cat_element	geometry	varchar(30)	Geometry of the element.
cat_element	descript	varchar(512)	Field to store additional information about the catalog.
cat_element	link	varchar(512)	Field to store link to information related to the element catalog.

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
cat_element	url	varchar(512)	Field to store URL or folder path with more information related to the element catalog.
cat_element	picture	varchar(512)	Image that represents the catalog element
cat_element	svg	varchar(50)	Pictogram of the symbology.
cat_connec	id	varchar(30)	ID of the connect catalog. Primary key.
cat_connec	type	varchar(16)	Type of the connect.
cat_connec	matcat_id	varchar(16)	Material catalog identifier.
cat_connec	shape	varchar(16)	Cross-section shape.
cat_connec	tsect_id	varchar(16)	Transect identifier.
cat_connec	curve_id	varchar(16)	Curve identifier.
cat_connec	geom1	numeric(12,4),	Full height of the connect (ft or m).
cat_connec	geom2	numeric(12,4)	Auxiliary parameters (width, side slopes, etc.)
cat_connec	geom3	numeric(12,4)	Auxiliary parameters (width, side slopes, etc.)
cat_connec	geom4	numeric(12,4)	Auxiliary parameters (width, side slopes, etc.)
cat_connec	geom_r	varchar(20)	Real geometry of a connect.
cat_connec	short_des	varchar(16)	Field to store additional information about the catalog.
cat_connec	descript	varchar(255)	Field to store additional information about the catalog.
cat_connec	link	varchar(512)	Field to store link to information related to the connect catalog.
cat_connec	url	varchar(512)	Field to store URL or folder path with more information related to the connect catalog.
cat_connec	picture	varchar(512)	Image that represents the catalog element
cat_connec	svg	varchar(50)	Symbology.
cat_grate	id	varchar(30)	ID of the grate catalog. Primary key.
cat_grate	type	varchar(30)	Type of the grate.
cat_grate	matcat_id	varchar(16)	Material catalog identifier.
cat_grate	length	numeric(12,4),	Length of the grate.
cat_grate	width	numeric(12,4)	Width of the grate.
cat_grate	total_area	numeric(12,4)	Total area of the grate.
cat_grate	efective_area	numeric(12,4)	Effective area of the grate.
cat_grate	n_barr_l	numeric(12,4)	Number of length barrels
cat_grate	n_barr_w	numeric(12,4)	Number of width barrels
cat_grate	a_param	numeric(12,4)	A parameter. Needed if you like to simulate it
cat_grate	b_param	numeric(12,4)	B parameter. Needed if you like to simulate it
cat_grate	descript	varchar(255)	Field to store additional information about the catalog.
cat_grate	link	varchar(512)	Field to store link to information related to the grate catalog.
cat_grate	url	varchar(512)	Field to store URL or folder path with more information related to the grate catalog.
cat_grate	picture	varchar(512)	Image that represents the catalog element
cat_grate	svg	varchar(50)	Symbology.
cat_soil	id	varchar(30)	ID of the soil. Primary key.
cat_soil	descript	varchar(512)	Description of a soil type. Additional information
cat_soil	link	varchar(512)	Field to store link to information related to the soil catalog.
cat_soil	url	varchar(512)	Field to store URL or folder path with more information related to the soil catalog.
cat_soil	picture	varchar(512)	Image that represents the catalog element
cat_soil	y_param	Numeric(5,2)	Slope of the wall of the trench. On the expression (a:y_param) 'a' is the horitzontal distance and y_param is the vertical distance of the slope of the trench.
cat_soil	b	Numeric(5,2)	Value of the distance from conduit to the wall of the trenchline, measured on the bottom's trench.
cat_soil	trenchlining	Numeric(3,2)	Percentage of the trench where with trenchlining
cat_soil	m3exc_cost	Varchar(16)	Cost of excavation (cubic meter)
cat_soil	m3fill_cost	Varchar(16)	Cost of filling the (cubic meter)
cat_soil	m3excess_cost	Varchar(16)	Cost of manage the excess of soil from the trench (cubic meter)

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
cat_soil	m2trenchl_cost	Varchar(16)	Cost of the trenchiling (square meter)
cat_builder	id	varchar(30)	ID of the builder. Primary key.
cat_builder	descript	varchar(512)	Description of the builder. Additional information
cat_builder	link	varchar(512)	Field to store link to information related to the builder catalog.
cat_builder	url	varchar(512)	Field to store URL or folder path with more information related to the builder catalog.
cat_builder	picture	varchar(512)	Image that represents the catalog element
cat_work	id	varchar(30)	ID of the work. Primary key.
cat_work	descript	varchar(512)	Description of the construction work. Additional information
cat_work	link	varchar(512)	Field to store link to information related to the work catalog.
cat_work	picture	varchar(512)	Image that represents the catalog element
cat_owner	id	varchar(30)	ID of the owner. Primary key.
cat_owner	descript	varchar(512)	Description of the owner.
cat_owner	link	varchar(512)	Field to store link to information related to the owner catalog.
cat_owner	picture	varchar(512)	Image that represents the catalog element
cat_pavement	id	Varchar(16)	ID of the pavement. Primary key.
cat_pavement	descript	text	Description of the pavement. Additional information
cat_pavement	link	varchar(512)	Field to store link to information related to the pavement.
cat_pavement	picture	varchar(512)	Picture of the pavement.
cat_pavement	thickness	Numeric(12,2)	Value of pavement thickness.
cat_pavement	m2_cost	Varchar(16)	(Price_compost.id) of the full cost of pavement demolition and reconstruction.
man_type_category	id	varchar(20)	ID of the management type category. Primary key.
man_type_category	observ	varchar(50)	Observations related to type category. Additional information
man_type_fluid	id	varchar(20)	ID of the management type of fluid. Primary key.
man_type_fluid	observ	varchar(50)	Observations related to fluid type. Additional information
man_type_location	id	varchar(20)	ID of the management location type. Primary key.
man_type_location	observ	varchar(50)	Observations related to type location. Additional information
connec_type	id	varchar(20)	ID of the connect type. Primary key.
connec_type	observ	varchar(50)	Observations related to connect type. Additional information
sector	sector_id	varchar(30)	Sector identifier. Primary key
sector	descript	varchar(100)	Field to store additional information about the feature.
sector	the_geom	public.geometry	Polygon geometry field
node	node_id	varchar(16)	Node identifier. Primary key
node	top_elev	Numeric(12,4)	Elevation of the node in ft or m.
node	ymax	Numeric(12,4)	Depth from ground to invert elevation (ft or m)
node	sander	Numeric(12,4)	Dimension (depth) of the place to collect sands from urban water
node	node_type	varchar(16)	Node type.
node	nodecat_id	varchar(30)	Node catalog identifier related to the primary key of cat_node table
node	epa_type	varchar(16)	SWMM behaviour of the node.
node	sector_id	varchar(30)	Hydraulic sector identifier related to the primary key of sector table
node	state	character varying(16)	Domain value of node's state.
node	annotation	character varying(254)	Annotations related to node. Additional information.
node	observ	character varying(254)	Observations related to node. Additional information
node	comment	character varying(254)	Comments related to node. Additional information
node	dma_id	varchar(30)	ID of the management area related to the arc (District Meter Area)
node	soilcat_id	varchar(16)	ID of the soil related to the node.

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
node	category_type	varchar(18)	ID of the category type related to node.
node	fluid_type	varchar(18)	ID of the fluid type related to node.
node	location_type	varchar(18)	ID of the location type related to node.
node	workcat_id	varchar(255)	ID of the construction work related to node.
node	buildercat_id	varchar(30)	ID of the builder related to node.
node	builtdate	timestamp(6)	ID of the construction date related to node.
node	ownercat_id	varchar(30)	ID of the owner related to node.
node	adress_01	varchar(50)	Field to store information about the adress of the feature.
node	adress_02	varchar(50)	Field to store information about the adress of the feature.
node	adress_03	varchar(50)	Field to store information about the adress of the feature.
node	descript	varchar(254)	Field to store additional information about the feature.
node	est_top_elev	Varchar(6)	Estimated elevation of the node in ft or m.
node	est_ymax	Varchar(6)	Estimated value of depth from ground to invert elevation (ft or m)
node	rotation	Numeric(6,3)	Field to use in order to rotate the symbology of the GIS canvas
node	link	character varying(512)	Field to store link to information related to the node.
node	verified	varchar(16)	Value domain with information about the state of verification of the element (to review, verified,â¦)
node	the_geom	public.geometry	Point geometry field
arc	arc_id	varchar(16)	Arc identifier. Primary key
arc	node_1	varchar(16)	Node located at the beginning of the arc.
arc	node_2	varchar(16)	Node located at the end of the arc.
arc	y1	Numeric(12,3)	Dept of the conduit at initial node
arc	y2	Numeric(12,3)	Dept of the conduit at end node
arc	arc_type	varchar(16)	Arc type.
arc	arccat_id	varchar(30)	Arc catalog identifier related to the primary key of arc table.
arc	epa_type	varchar(16)	ESWMM behaviour of the arc. (CONDUIT, PUMP, OIRIFICE, WEIR, OUTLET or UNDEFINED)
arc	sector_id	varchar(30)	Hydraulic sector identifier related to the primary key of sector table
arc	state	character varying(16)	Domain value of arc's state (on service, planified, obsolete)
arc	annotation	character varying(254)	Annotations related to arc. Additional information
arc	observ	character varying(254)	Observations related to arc. Additional information
arc	comment	character varying(254)	Comments related to arc. Additional information
arc	inverted_slope	boolean	Field to control the sense of the conduit (perhaps sense interved of the slope).
arc	custom_length	Numeric(12,2)	Customized length, not from GIS geometry. Used to customize the length of the element
arc	dma_id	varchar(30)	ID of the management area related to the arc (District Meter Area)
arc	soilcat_id	varchar(16)	ID of the soil related to the arc
arc	category_type	varchar(18)	ID of the category type related to arc
arc	fluid_type	varchar(18)	ID of the fluid type related to arc
arc	location_type	varchar(18)	ID of the location type related to arc
arc	workcat_id	varchar(255)	ID of the construction work related to arc
arc	buildercat_id	varchar(30)	ID of the builder related to arc
arc	builtdate	timestamp(6)	ID of the construction date related to arc.
arc	ownercat_id	varchar(30)	ID of the owner related to arc.
arc	adress_01	varchar(50)	Field to store information about the adress of the feature.
arc	adress_02	varchar(50)	Field to store information about the adress of the feature.
arc	adress_03	varchar(50)	Field to store information about the adress of the feature.

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
arc	descript	varchar(254)	Field to store additional information about the feature.
arc	est_y1	boolean	Boolean to control if the depth of the conduit at initial node is estimated
arc	est_y2	boolean	Boolean to control if the depth of the conduit at final node is estimated
arc	rotation	Numeric(6,3)	Field to use in order to rotate the symbology of the GIS canvas
arc	link	character varying(512)	Field to store URL or folder path with more information related to the arc
arc	verified	varchar(16)	Value domain with information about the state of verification of the element (to review, verified,â¦)
arc	the_geom	public.geometry	Linestring geometry field
polygon	pol_id	varchar(16)	Polygon identifier. Primary key.
polygon	node_id	varchar(16)	Node identifier.
polygon	text	varchar(254)	Text.
polygon	the_geom	public.geometry	Polygon geometry field
dma	dma_id	varchar(30)	ID of the management area related to the arc (District Meter Area). Primary key.
dma	sector_id	varchar(30)	Hydraulic sector identifier related to the primary key of sector table
dma	descript	varchar(255)	Field to store additional information about the feature.
dma	observ	character varying(512)	Observations related to dma. Additional information
dma	the_geom	public.geometry	Polygon geometry field
connec	connec_id	varchar(30)	Connect identifier. Primary key.
connec	top_elev	Numeric(12,4)	Elevation of the connect in ft or m.
connec	ymax	Numeric(12,4)	Depth from ground to invert elevation (ft or m)
connec	connecat_id	varchar(30)	Connect catalog identifier
connec	sector_id	varchar(30)	Hydraulic sector identifier related to the primary key of sector table
connec	code	Varchar(30)	Special code of the connec
connec	n_hydrometer	int4	Number of hydrometers related to the connec
connec	demand	Numeric(12,8)	Water demand
connec	state	character varying(16)	Domain value of connect's state.
connec	annotation	character varying(254)	Annotations related to connect. Additional information.
connec	observ	character varying(254)	Observations related to connect. Additional information
connec	comment	character varying(254)	Comments related to connect. Additional information
connec	rotation	Numeric(6,3)	Field to use in order to rotate the symbology of the GIS canvas
connec	dma_id	varchar(30)	ID of the management area related to the arc (District Meter Area)
connec	soilcat_id	varchar(16)	ID of the soil related to the connect.
connec	category_type	varchar(18)	ID of the category type related to connct.
connec	fluid_type	varchar(18)	ID of the fluid type related to connect.
connec	location_type	varchar(18)	ID of the location type related to connect.
connec	workcat_id	varchar(255)	ID of the construction work related to connect.
connec	buildercat_id	varchar(30)	ID of the builder related to connect.
connec	builtdate	date	ID of the construction date related to connect.
connec	ownercat_id	varchar(30)	ID of the owner related to connect.
connec	adress_01	varchar(50)	Field to store information about the adress of the feature.
connec	adress_02	varchar(50)	Field to store information about the adress of the feature.
connec	adress_03	varchar(50)	Field to store information about the adress of the feature.
connec	streetaxis_id	Varchar (16)	Street identifier.
connec	postnumber	Varchar(16)	Post code number.

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
connec	descript	varchar(254)	Field to store additional information about the feature.
connec	link	character varying(512)	Field to store link to information related to the connect.
connec	verified	varchar(16)	Value domain with information about the state of verification of the element (to review, verified,â¦)
connec	the_geom	public.geometry	Point geometry field
vnode	vnode_id	varchar(16)	Virtual node identifier. Primary key
vnode	arc_id	Varchar(16)	Arc identifier.
vnode	the_geom	public.geometry	Point geometry field
vnode	userdefined_pos	boolean	Column to control when the user have moved the vnode (custom position, not automatic position). The goal of this control is dissable the posibility to ovewrite the vnode position.
vnode	vnode_type	varchar(30)	Virtual node type.
vnode	sector_id	varchar(30)	Hydraulic sector identifier related to the primary key of sector table
vnode	state	character varying(16)	Domain value of virtual node's state.
vnode	annotation	character varying(254)	Annotations related to virtual node. Additional information.
link	link_id	varchar(16)	Link identifier. Primary key
link	the_geom	public.geometry	Linestring geometry field
link	connec_id	varchar(16)	Connect identifier related to the primary key of connec table
link	vnode_id	varchar(16)	Virtual node identifier.
link	custom_length	Numeric(12,3)	Link length inserted by the user.
gully	gully_id	varchar(16)	Gully identifier. Primary key
gully	top_elev	Numeric(12,4)	Elevation of the gully in ft or m.
gully	ymax	Numeric(12,4)	Depth from ground to invert elevation (ft or m)
gully	sandbox	Numeric(12,4)	Dimension (depth) of the place to collect sands from urban water
gully	matcat_id	varchar(18)	Material catalog identifier.
gully	gratecat_id	varchar(18)	Grate catalog identifier.
gully	units	int2	Number of units of the element
gully	groove	varchar(3)	YES if gully in a joint with kerb has groove to increase the capacity
gully	arccat_id	varchar(18)	Arc catalog identifier.
gully	siphon	varchar(3)	YES if gully has siphon in order to prevent salubrity problems with odours
gully	arc_id	Varchar(16)	Arc identifier.
gully	sector_id	varchar(30)	Hydraulic sector identifier related to the primary key of sector table
gully	state	character varying(16)	Domain value of gully's state.
gully	annotation	character varying(254)	Annotations related to gully. Additional information
gully	observ	character varying(254)	Observations related to gully. Additional information
gully	comment	character varying(254)	Comments related to gully. Additional information
gully	rotation	Numeric(6,3)	Field to use in order to rotate the symbology of the GIS canvas
gully	dma_id	varchar(30)	ID of the management area related to the gully (District Meter Area)
gully	soilcat_id	varchar(16)	ID of the soil related to the gully.
gully	category_type	varchar(18)	ID of the category type related to gully.
gully	fluid_type	varchar(18)	ID of the fluid type related to gully.
gully	location_type	varchar(18)	ID of the location type related to gully.
gully	workcat_id	varchar(255)	ID of the construction work related to gully.
gully	buildercat_id	varchar(30)	ID of the builder related to gully.

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
gully	builtdate	timestamp(6)	ID of the construction date related to gully.
gully	ownercat_id	varchar(30)	ID of the owner related to gully.
polygon	undelete	bool	Blocks the deleting option
gully	adress_01	varchar(50)	Field to store information about the adress of the feature.
gully	adress_02	varchar(50)	Field to store information about the adress of the feature.
gully	adress_03	varchar(50)	Field to store information about the adress of the feature.
gully	descript	varchar(254)	Field to store additional information about the feature.
gully	link	character varying(512)	Field to store link to information related to the gully
gully	verified	varchar(4)	Value domain with information about the state of verification of the element (to review, verified,â¦)
gully	the_geom	public.geometry	Point geometry field
man_junction	node_id	varchar(16)	Junction identifier.
man_storage	node_id	varchar(16)	Storage identifier.
man_outfall	node_id	varchar(16)	Outfalll identifier.
man_conduit	arc_id	varchar(16)	Arc identifier.
element	element_id	varchar(16)	Element identifier. Primary key
element	elementcat_id	varchar(30)	Element catalog identifier
element	state	character varying(16)	Domain value of element's state.
element	annotation	character varying(254)	Annotations related to element. Additional information.
element	observ	character varying(254)	Observations related to element. Additional information
element	comment	character varying(254)	Comments related to element. Additional information
element	location_type	varchar(18)	ID of the location type related to element.
element	workcat_id	varchar(255)	ID of the construction work related to element.
element	buildercat_id	varchar(30)	ID of the builder related to element.
element	builtdate	timestamp(6)	ID of the construction date related to element.
element	ownercat_id	varchar(30)	ID of the owner related to element.
element	enddate	timestamp(6)	Expiration date. Expected or real. The goal of this column is to enable the posilibity to have information of all the deprecated elements of the infraestructure without delete it
element	rotation	Numeric(6,3)	Field to use in order to rotate the symbology of the GIS canvas
element	link	character varying(512)	Field to store link to information related to the element
element	verified	varchar(16)	Value domain with information about the state of verification of the element (to review, verified,â¦)
value_yesno	observ	varchar(254)	Observations related to yes/no value Additional information
cat_hydrology	id	varchar(20)	Hydrology catalog identifier.
cat_hydrology	infiltration	varchar(20)	Infiltration parameter.
cat_hydrology	descript	varchar(255)	Field to store additional information about the feature.
inp_adjustments	id	varchar(16)	Adjustment identifier.
inp_adjustments	adj_type	varchar(16)	Values are TEMPERATURE, EVAPORATION, RAINFALL
inp_adjustments	value_1	Numeric(12,4)	Evaporation value parameters of SWMM project.
inp_adjustments	value_2	Numeric(12,4)	Evaporation value parameters of SWMM project.
inp_adjustments	value_3	Numeric(12,4)	Evaporation value parameters of SWMM project.
inp_adjustments	value_4	Numeric(12,4)	Evaporation value parameters of SWMM project.
inp_adjustments	value_5	Numeric(12,4)	Evaporation value parameters of SWMM project.
inp_adjustments	value_6	Numeric(12,4)	Evaporation value parameters of SWMM project.
inp_adjustments	value_7	Numeric(12,4)	Evaporation value parameters of SWMM project.

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
inp_adjustments	value_8	Numeric(12,4)	Evaporation value parameters of SWMM project.
inp_adjustments	value_9	Numeric(12,4)	Evaporation value parameters of SWMM project.
inp_adjustments	value_10	Numeric(12,4)	Evaporation value parameters of SWMM project.
inp_adjustments	value_11	Numeric(12,4)	Evaporation value parameters of SWMM project.
inp_adjustments	value_12	Numeric(12,4)	Evaporation value parameters of SWMM project.
inp_aquifer	aquif_id	varchar(16)	Aquifer identifier.
inp_aquifer	por	Numeric(12,4)	Soil porosity (fraction).
inp_aquifer	wp	Numeric(12,4)	Soil wilting point (fraction).
inp_aquifer	fc	Numeric(12,4)	Soil field capacity (fraction).
inp_aquifer	k	Numeric(12,4)	Saturated hydraulic conductivity (in/hr or mm/hr).
inp_aquifer	ks	Numeric(12,4)	Slope of hydraulic conductivity versus moisture content curve.
inp_aquifer	ps	Numeric(12,4)	Slope of soil tension versus moisture content curve.
inp_pattern	factor_22	Numeric(12,4)	Multiplier values.
element_x_connec	id	varchar(16)	Element related to connect identifier. Primary key.
inp_aquifer	uef	Numeric(12,4)	Fraction of total evaporation available for evapotranspiration in the upper unsaturated zone.
inp_aquifer	led	Numeric(12,4)	Maximum depth into the lower saturated zone over which evapotranspiration can occur (ft or m).
inp_storage	sh	Numeric(12,4)	Soil capillary suction head (in or mm).
inp_aquifer	gwr	Numeric(12,4)	Rate of percolation from saturated zone to deep groundwater when water table is at ground surface (in/hr or mm/hr).
inp_aquifer	be	Numeric(12,4)	Elevation of the bottom of the aquifer (ft or m).
inp_aquifer	wte	Numeric(12,4)	Water table elevation at start of simulation (ft or m).
inp_aquifer	umc	Numeric(12,4)	Unsaturated zone moisture content at start of simulation (fraction).
catchment	undelete	bool	Blocks the deleting option
inp_aquifer	pattern_id	varchar(16)	Monthly pattern of adjustments to upper evaporation fraction
inp_backdrop	id	int4	Backdrop identifier. Primary key.
inp_backdrop	text	varchar(254)	Text.
inp_buildup_land_x_pol	landus_id	varchar(16)	Land use identifier.
inp_buildup_land_x_pol	poll_id	varchar(16)	Pollutant identifier.
inp_buildup_land_x_pol	funcb_type	varchar(18)	Buildup function type: (POW / EXP / SAT / EXT).
inp_buildup_land_x_pol	c1	Numeric(12,4)	Buildup function parameters (see Table D-2 from Appendix D of SWMM's Manual).
inp_buildup_land_x_pol	c2	Numeric(12,4)	Buildup function parameters (see Table D-2 from Appendix D of SWMM's Manual).
inp_buildup_land_x_pol	c3	Numeric(12,4)	Buildup function parameters (see Table D-2 from Appendix D of SWMM's Manual).
inp_buildup_land_x_pol	perunit	varchar(10)	AREA if buildup is per unit area, CURBLENGTH if per length of curb.
inp_conduit	arc_id	varchar(50)	Arc identifier.
inp_conduit	barrels	int2	Number of barrels (i.e., number of parallel pipes of equal size, slope, and roughness) associated with a conduit (default is 1).
inp_conduit	culvert	varchar(10)	Code number fromÂ Table A.10 (from Appendix A of SWMM's Manual)Â for the conduit's inlet geometry if it is a culvert subject to possible inlet flow control (leave blank otherwise)
inp_conduit	kentry	Numeric(12,4)	Entrance minor head loss coefficient.
inp_conduit	kexit	Numeric(12,4)	Exit minor head loss coefficient.
inp_conduit	kavg	Numeric(12,4)	Average minor head loss coefficient across length of conduit.
inp_conduit	flap	varchar(3)	YES if conduit has a flap gate that prevents back flow, NO otherwise (default is NO).
inp_conduit	q0	Numeric(12,4)	Flow in conduit at start of simulation (flow units) (default is 0).
inp_conduit	qmax	Numeric(12,4)	Maximum flow (flow units)
inp_conduit	seepage	Numeric(12,4)	Rate of seepage loss into surrounding soil
inp_controls	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
inp_evaporation	value_2	Numeric(12,4)	Evaporation value parameters of SWMM project. Evaporation rate in February (in/day or mm/day).

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
inp_controls	text	varchar(254)	Text with control rules. Each control rule is a series of statements of the form. Should follow the format described as: RULE R1 IF SIMULATION TIME >8 THEN PUMP 12 STATUS = ON
inp_coverage_land_x_subc	subc_id	varchar(16)	Subcatchment identifier.
inp_coverage_land_x_subc	landus_id	varchar(16)	Land use identifier.
inp_coverage_land_x_subc	percent	numeric(12,4)	Percent of subcatchment area.
inp_curve	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
inp_curve	curve_id	varchar(16)	Curve identifier
inp_curve	x_value	numeric(18,6)	X value of the curve
inp_curve	y_value	numeric(18,6)	Y value of the curve
inp_curve_id	id	varchar(16)	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
inp_curve_id	curve_type	varchar(20)	STORAGE / DIVERSION / TIDAL / PUMP1 / PUMP2 / PUMP3 / PUMP4 / RATING.
inp_divider	node_id	varchar(50)	Node identifier.
inp_divider	divider_type	varchar(18)	A divider can be: OVERFLOW, CUTOFF, TABULAR or WEIR.
inp_divider	arc_id	varchar(50)	Arc identifier.
inp_divider	curve_id	varchar(16)	Curve identifier
inp_divider	qmin	Numeric(16,6)	Flow at which diversion begins for either a CUTOFF or WEIR divider (flow units).
inp_divider	ht	Numeric(12,4)	Height of WEIR divider (ft orm).
inp_divider	cd	Numeric(12,4)	Discharge coefficient for WEIR divider.
inp_divider	y0	Numeric(12,4)	Water depth at start of simulation (ft or m) (default is 0).
inp_divider	ysur	Numeric(12,4)	Maximum additional head above ground elevation that node can sustain under surcharge conditions (ft or m) (default is 0).
inp_divider	apond	numeric(12,4)	Area subjected to surface ponding once water depth exceeds Ymax (ft2Â or m2) (default is 0)
inp_dwf	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
inp_dwf	node_id	varchar(50)	Node identifier.
inp_dwf	value	Numeric(12,5)	Average baseline value for corresponding Item (flow or concentration units).
inp_dwf	pat1	varchar(16)	Name of up to four time patterns appearing in the patterns table.
inp_dwf	pat2	varchar(16)	Name of up to four time patterns appearing in the patterns table.
inp_dwf	pat3	varchar(16)	Name of up to four time patterns appearing in the patterns table.
inp_dwf	pat4	varchar(16)	Name of up to four time patterns appearing in the patterns table.
ext_type_street	id	Varchar (20)	ID of a street type. Primary key.
ext_type_street	observ	Varchar (50)	Observations related to street type. Additional information
ext_streetaxis	id	Varchar(16)	ID of a street. Primary key.
ext_streetaxis	type	Varchar(18)	Street type.
ext_streetaxis	name	Varchar(100)	Street name.
ext_streetaxis	text	text	Field ready to insert text for additional information.
ext_streetaxis	the_geom	public.geometry	Line geometry field.
ext_urban_propierties	id	Varchar (16)	ID of a urban propierties. Primary key.
element_x_node	id	varchar(16)	Element related to node identifier. Primary key.
element_x_node	element_id	varchar(16)	Element identifier related to the primary key of element table
element_x_node	node_id	varchar(16)	Node identifier related to the primary key of the node table
element_x_connec	element_id	varchar(16)	Element identifier related to the primary key of element table
element_x_connec	connec_id	varchar(16)	Connect identifier related to the primary key of connec table
element_x_gully	id	varchar(16)	Element related to gully identifier. Primary key.
element_x_gully	element_id	varchar(16)	Element identifier related to the primary key of element table
element_x_gully	gully_id	varchar(16)	Node identifier related to the primary key of the gully table
value_state	id	varchar(16)	ID of value state. Primary key.

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
value_state	observ	varchar(254)	Observations related to state. Additional information
value_verified	id	varchar(16)	ID of verification status. Primary key.
value_verified	observ	varchar(254)	Observations related to verification status Additional information
value_yesno	id	varchar(16)	ID of value yes/no. Primary key.
inp_selector_hydrology	hydrology_id	varchar(20)	Hydrology identifier.
rpt_outfallload_sum	value		Value.
inp_dwf_pol_x_node	poll_id	varchar(16)	Pollutant identifier.
inp_dwf_pol_x_node	node_id	varchar(50)	Node identifier.
inp_dwf_pol_x_node	value	Numeric(12,4)	Average baseline value for corresponding Item (flow or concentration units).
inp_dwf_pol_x_node	pat1	varchar(16)	Names of up to four time patterns appearing in the patterns table.
inp_dwf_pol_x_node	pat2	varchar(16)	Names of up to four time patterns appearing in the patterns table.
inp_dwf_pol_x_node	pat3	varchar(16)	Names of up to four time patterns appearing in the patterns table.
inp_dwf_pol_x_node	pat4	varchar(16)	Names of up to four time patterns appearing in the patterns table.
inp_evaporation	evap_type	varchar(16)	Evaporation type (CONSTANT, MONTHLY, TIMESERIES, TEMPERATURE or FILE)
inp_evaporation	evap	Numeric(12,4)	Constant evaporation rate (in/day or mm/day).
inp_evaporation	timser_id	varchar(16)	Name of time series inÂ timeseriesÂ table with evaporation data.
inp_evaporation	value_1	Numeric(12,4)	Evaporation value parameters of SWMM project. Evaporation rate in January (in/day or mm/day).
inp_orifice	ori_type	varchar(18)	Orientation of orifice: either SIDE or BOTTOM.
inp_evaporation	value_3	Numeric(12,4)	Evaporation value parameters of SWMM project. Evaporation rate in March (in/day or mm/day).
inp_evaporation	value_4	Numeric(12,4)	Evaporation value parameters of SWMM project. Evaporation rate in April (in/day or mm/day).
inp_evaporation	value_5	Numeric(12,4)	Evaporation value parameters of SWMM project. Evaporation rate in May (in/day or mm/day).
inp_evaporation	value_6	Numeric(12,4)	Evaporation value parameters of SWMM project. Evaporation rate in June (in/day or mm/day).
inp_evaporation	value_7	Numeric(12,4)	Evaporation value parameters of SWMM project. Evaporation rate in July (in/day or mm/day).
inp_evaporation	value_8	Numeric(12,4)	Evaporation value parameters of SWMM project. Evaporation rate in August (in/day or mm/day).
inp_evaporation	value_9	Numeric(12,4)	Evaporation value parameters of SWMM project. Evaporation rate in September (in/day or mm/day).
inp_evaporation	value_10	Numeric(12,4)	Evaporation value parameters of SWMM project. Evaporation rate in October (in/day or mm/day).
inp_evaporation	value_11	Numeric(12,4)	Evaporation value parameters of SWMM project. Evaporation rate in November (in/day or mm/day).
inp_evaporation	value_12	Numeric(12,4)	Evaporation value parameters of SWMM project. Evaporation rate in December (in/day or mm/day).
inp_evaporation	pan_1	Numeric(12,4)	Pan coefficient for January.
inp_evaporation	pan_2	Numeric(12,4)	Pan coefficient for February.
inp_evaporation	pan_3	Numeric(12,4)	Pan coefficient for March.
inp_evaporation	pan_4	Numeric(12,4)	Pan coefficient for April.
inp_evaporation	pan_5	Numeric(12,4)	Pan coefficient for May.
inp_evaporation	pan_6	Numeric(12,4)	Pan coefficient for June.
inp_evaporation	pan_7	Numeric(12,4)	Pan coefficient for July.
inp_evaporation	pan_8	Numeric(12,4)	Pan coefficient for August.
inp_evaporation	pan_9	Numeric(12,4)	Pan coefficient for September.
inp_evaporation	pan_10	Numeric(12,4)	Pan coefficient for October.
inp_evaporation	pan_11	Numeric(12,4)	Pan coefficient for November.
inp_evaporation	pan_12	Numeric(12,4)	Pan coefficient for December.
inp_evaporation	recovery	varchar(16)	Identifies an optional monthly time pattern of multipliers used to modify infiltration recovery rates during dry periods. For example, if the normal infiltration recovery rate was 1% during a specific time period and a pattern factor of 0,8 applied to this period, then the actual recovery rate would be 0,8%
inp_evaporation	dry_only	varchar(3)	Determines if evaporation only occurs during periods with no precipitation. The default is NO.
inp_files	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
inp_files	actio_type	varchar(18)	Action required by this file.
inp_files	file_type	varchar(18)	File type.
inp_files	fname	varchar(254)	File name

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
inp_groundwater	subc_id	varchar(16)	Subcatchment identifier.
inp_groundwater	aquif_id	varchar(16)	Aquifer identifier.
inp_groundwater	node_id	varchar(50)	Node identifier.
inp_groundwater	surfel	Numeric(12,4)	Surface elevation of subcatchment (ft or m).
inp_groundwater	a1	Numeric(12,4)	Groundwater flow coefficient (see remarks).
inp_groundwater	b1	Numeric(12,4)	Groundwater flow exponent (see remarks).
inp_groundwater	a2	Numeric(12,4)	Surface water flow coefficient (see remarks).
inp_groundwater	b2	Numeric(12,4)	Surface water flow exponent (see remarks).
inp_groundwater	a3	Numeric(12,4)	Surface water â groundwater interaction coefficient (see remarks).
inp_groundwater	tw	Numeric(12,4)	Fixed depth of surface water at receiving node (ft or m) (set to zero if surface water depth will vary as computed by flow routing).
inp_groundwater	h	Numeric(12,4)	Groundwater table height which must be reached before any flows occurs (ft or m). Leave blank to use the height of the receiving node's invert above the aquifer bottom.
inp_groundwater	fl_eq_lat	varchar(50)	To supply a custom equation for lateral groundwater flow. Enter an expression to use in addtion to the standard equation for lateral groundwater flow
inp_groundwater	fl_eq_deep	varchar(50)	To supply a custom equation for deep groundwater flow. Enter an expression to use in addtion to the standard equation for deep groundwater flow
inp_orifice	cd	Numeric(12,4)	Discharge coefficient (unitless).
inp_hydrograph	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
raingage	rgage_type	varchar(18)	Raingage type (TIMESERIES or FILE)
inp_hydrograph	text	varchar(254)	Should follow the described format: Name Raingage, Name Month SHORT/MEDIUM/LONGÂ RÂ TÂ K (Dmax Drec D0)
inp_orifice	shape	varchar(18)	Cross-section shape.The only allowable shapes are CIRCULAR and RECT_CLOSED (closed rectangular).
inp_inflows	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
inp_inflows	node_id	varchar(50)	Node identifier.
inp_inflows	timser_id	varchar(16)	Time series identifier.
inp_inflows	sfactor	Numeric(12,4)	Scaling factor that multiplies the recorded time series values (default is 1.0).
inp_inflows	base	Numeric(12,4)	Constant baseline value added to the time series value (default is 0.0).
inp_inflows	pattern_id	varchar(16)	Name of optional time pattern in patterns table used to adjust the baseline value on a periodic basis.
inp_inflows_pol_x_node	poll_id	varchar(16)	Pollutant identifier.
inp_inflows_pol_x_node	node_id	varchar(50)	Node identifier.
inp_inflows_pol_x_node	timser_id	varchar(16)	Time series identifier.
inp_snowpack	fout	Numeric(12,4)	Fraction of snow on plowable area transferred out of watershed.
inp_inflows_pol_x_node	form_type	varchar(18)	CONCEN if pollutant inflow is described as a concentration, MASS if it is described as a mass flow rate (default is CONCEN).
inp_inflows_pol_x_node	mfactor	Numeric(12,4)	The factor that converts the inflowâs mass flow rate units into the projectâs mass units per second, where the projectâs mass units are those specified for the pollutant in the pollutants table (default is 1.0).
inp_inflows_pol_x_node	sfactor	Numeric(12,4)	Caling factor that multiplies the recorded time series values (default is 1.0).
inp_inflows_pol_x_node	base	Numeric(12,4)	Constant baseline value added to the time series value (default is 0.0).
inp_inflows_pol_x_node	pattern_id	varchar(16)	Name of optional time pattern in patterns table used to adjust the baseline value on a periodic basis.
inp_junction	node_id	varchar(50)	Node identifier.
inp_junction	y0	Numeric(12,4)	Water depth at start of simulation (ft or m) (default is 0).
inp_junction	ysur	Numeric(12,4)	Maximum additional head above ground elevation that manhole junction can sustain under surcharge conditions (ft or m) (default is 0).
inp_junction	apond	numeric(12,4)	Area subjected to surface ponding once water depth exceeds Ymax (ft2Â or m2) (default is 0)
inp_label	label	varchar(16)	Text of label surrounded by double quotes.
inp_label	xcoord	numeric(18,6)	Location of the label: x coordinate.

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
inp_label	ycoord	numeric(18,6)	Location of the label: y coordinate.
inp_label	anchor	varchar(16)	Name of node or subcatchment that anchors the label on zoom-ins
inp_label	font	varchar(50)	Font style of the label.
inp_label	size	Numeric(12,4)	Size of the label.
inp_label	bold	varchar(3)	Style of the label: bold.
inp_label	italic	varchar(3)	Style of the label: italic.
inp_landuses	landus_id	varchar(16)	ID (label land use name).
inp_landuses	sweepint	Numeric(12,4)	Days between street sweeping.
inp_landuses	availab	Numeric(12,4)	Fraction of pollutant buildup available for removal by street sweeping.
inp_landuses	lastsweep	numeric(12,4)	Days since last sweeping at start of the simulation.
inp_lid_control	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
inp_lid_control	lidco_id	varchar(16)	ID label (name assigned to LID process).
inp_lid_control	lidco_type	varchar(10)	The Lid Controls can be: SURFACE, SOIL, PAVEMENT, STORAGE, DRAIN.
inp_lid_control	value_2	Numeric(12,4)	Value dependent on Lidco type (see Remarks).
inp_lid_control	value_3	Numeric(12,4)	Value dependent on Lidco type (see Remarks).
inp_lid_control	value_4	Numeric(12,4)	Value dependent on Lidco type (see Remarks).
inp_lid_control	value_5	Numeric(12,4)	Value dependent on Lidco type (see Remarks).
inp_lid_control	value_6	Numeric(12,4)	Value dependent on Lidco type (see Remarks).
inp_lid_control	value_7	Numeric(12,4)	Value dependent on Lidco type (see Remarks).
inp_lid_control	value_8	Numeric(12,4)	Value dependent on Lidco type (see Remarks).
inp_lidusage_subc_x_lidco	subc_id	varchar(16)	Subcatchment identifier.
inp_lidusage_subc_x_lidco	lidco_id	varchar(16)	ID label (name of an LID process defined in the [LID_CONTROLS] table).
inp_lidusage_subc_x_lidco	number	int2,	The number of replicate LID units deployed.
inp_lidusage_subc_x_lidco	area	Numeric(16,6)	The area of each replicate unit (ft2Â or m2).
inp_lidusage_subc_x_lidco	width	Numeric(12,4)	The width of the outflow face of each identical LID unit (in ft or m). This parameter only applies to LID processes such as porous pavement and vegetative swales that use overland flow to convey surface runoff off of the unit. (The other LID processes, such as bio-retention cells and infiltration trenches simply spill any excess captured runoff over their berms.)
inp_lidusage_subc_x_lidco	initsat	Numeric(12,4)	The percent to which the unit's soil layer or storage layer is initially filled with water.
inp_orifice	orate	Numeric(12,4)	Time in decimal hours to open a fully closed orifice (or close a fully open one). Use 0 if the orifice can open/close instantaneously.
rpt_groundwater_cont	deep_perc	Numeric(12,4)	Deep Percolation.
inp_orifice	flap	varchar(3)	YES if flap gate present to prevent reverse flow, NO if not (default is NO).
inp_snowmelt	stemp	numeric(12,4)	Air temperature at which precipitation falls as snow (deg F or C).
inp_orifice	to_arc	varchar(16)	This fields identifies the direction of the flow of the shortpipe, applied only for the case of check valves
inp_lidusage_subc_x_lidco	fromimp	Numeric(12,4)	The percent of the impervious portion of the subcatchment's non-LID area whose runoff is treated by the LID units. If the LID unit treats only direct rainfall, such as with a green roof, then this value should be 0. If the LID takes up the entire subcatchment then this field is ignored.
inp_lidusage_subc_x_lidco	toperv	int2,	1 if the outflow from the LID is returned onto the subcatchment's pervious area rather than going to the subcatchment's outlet; 0 otherwise. An example of where this might apply is a rain barrel whose contents are used to irrigate a lawn area. This field is ignored if the LID takes up the entire subcatchment.
inp_lidusage_subc_x_lidco	rptfile	varchar(10)	Optional name of a file to which detailed time series results for the LID will be written. Enclose the name in double quotes if it contains spaces and include the full path if it is different than the SWMM input file path.
inp_loadings_pol_x_subc	poll_id	varchar(16)	Pollutant identifier.
inp_loadings_pol_x_subc	subc_id	varchar(16)	Subcatchment identifier.
inp_loadings_pol_x_subc	ibuildup	numeric(12,4)	Initial buildup of pollutant (lbs/acre or kg/hectare).
inp_mapdim	type_dim	varchar(18)	Type of map dimensions.
inp_mapdim	x1	numeric(18,6)	Lower-left X coordinate of full map extent.

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
inp_mapdim	y1	numeric(18,6)	Lower-left Y coordinate of full map extent
inp_mapdim	x2	numeric(18,6)	Upper-right X coordinate of full map extent
inp_mapdim	y2	Numeric(18,6	Upper-right Y coordinate of full map extent
inp_mapunits	type_units	varchar(18)	Type of map units.
inp_mapunits	map_type	varchar(18)	Map type.
inp_node_x_sector	id	int4	Node related to sector identifier. Primary key.
inp_node_x_sector	node_id	Varchar (16)	Node identifier.
inp_node_x_sector	sector_id	Varchar (16)	Sector identifier.
inp_node_x_sector	epa_type	Varchar (16)	Epa type.
inp_options	flow_units	varchar(20)	Type of units in which flow rates are expressed.
inp_options	flow_routing	varchar(12)	Method used to route flows through the drainage system.
inp_options	link_offsets	varchar(12)	The convention used to specify the position of a link offset above the invert of its connecting node.
inp_options	force_main_equation	varchar(3)	Establishes whether the Hazen-Williams (H-W) or the Darcy-Weisbach (D-W) equation will be used to compute friction losses for pressurized flow in conduits that have been assigned a Circular Force Main crosssection shape. The default is H-W.
inp_options	ignore_rainfall	varchar(3)	Set to YES if all rainfall data and runoff calculations should be ignored.
inp_options	ignore_snowmelt	varchar(3)	Set to YES if all snowmelt data and runoff calculations should be ignored when project file contains snow pack objects..
inp_options	ignore_groundwater	varchar(3)	Set to YES if all groundwater data and runoff calculations should be ignored when a project file contains aquifer objects
inp_options	ignore_routing	varchar(3)	Set to YES if only runoff should be computed even if the project contains drainage system links and nodes.
inp_options	ignore_quality	varchar(3)	Set to YES if pollutant washoff, routing, and treatment should be ignored in a project that has pollutants defined.
inp_options	skip_steady_state	varchar(3)	Set to YES if flow routing computations should be skipped during steady state periods of a simulation during which the last set of computed flows will be used.
inp_options	start_date	varchar(12)	Date when the simulation begins.
inp_options	start_time	varchar(12)	Time when the simulation begins.
inp_options	end_date	varchar(12)	Date when the simulation ends.
inp_options	end_time	varchar(12)	Time when the simulation ends.
inp_options	report_start_date	varchar(12)	Date when reporting of results is to begin.
inp_options	report_start_time	varchar(12)	Time when reporting of results is to begin.
inp_options	sweep_start	varchar(12)	Day of the year (month/day) when street sweeping operations begins.
inp_options	sweep_end	varchar(12)	Day of the year (month/day) when street sweeping operations ends.
inp_options	dry_days	Numeric(12)	The number of days with no rainfall prior to the start of the simulation. The default is 0.
inp_options	report_step	varchar(12)	The time interval for reporting of computed results. The default is 0:15:00.
inp_options	wet_step	varchar(12)	The time step length used to compute runoff from subcatchments during periods of rainfall or when ponded water still remains on the surface. The default is 0:05:00.
inp_options	dry_step	varchar(12)	The time step length used for runoff computations (consisting essentially of pollutant buildup) during periods when there is no rainfall and no ponded water. The default is 1:00:00.
inp_options	routing_step	varchar(12)	The time step length in seconds used for routing flows and water quality constituents through the conveyance system. The default is 600 sec.
inp_options	lengthening_step	Numeric(12,6)	Time step, in seconds, used to lengthen conduits under dynamic wave routing, so that they meet the Courant stability criterion under fullflow conditions
inp_options	variable_step	Numeric(12,6)	Safety factor applied to a variable time step computed for each time period under dynamic wave flow routing.
inp_options	inertial_damping	varchar(12)	Indicates how the inertial terms in the Saint Venant momentum equation will be handled under dynamic wave flow routing.
inp_options	normal_flow_limited	varchar(12)	Specifies which condition is checked to determine if flow in a conduit is supercritical and should thus be limited to the normal flow.
inp_options	min_surfarea	Numeric(12,6)	Minimum surface area used at nodes when computing changes in water depth under dynamic wave routing.
inp_options	min_slope	Numeric(12,6)	Minimum value allowed for a conduitâs slope (%).
inp_options	allow_ponding	varchar(3)	YES if the node allow ponding on the surface

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
inp_options	tempdir	varchar(254)	The name of a file directory (or folder) where SWMM writes its temporarty files.
inp_options	max_trials	int4,	Maximum trials allowed on the simulation
inp_options	head_tolerance	Numeric(12,4)	Head tolerance parameter
inp_options	sys_flow_tol	int4,	Tolerance of system flow
inp_options	lat_flow_tol	int4	Tolerance of lateral flow
inp_orifice	arc_id	varchar(16)	Arc identifier
inp_orifice	node_id	varchar(16)	Node identifier.
inp_orifice	offset	Numeric(12,4)	Amount that a Side Orificeâs bottom or the position of a Bottom Orifice is offset above the invert of inlet node (ft or m, expressed as either a depth or as an elevation, depending on the LINK_OFFSETS option setting).
inp_orifice	geom1	Numeric(12,4)	Maximum depth (ft or m).
inp_orifice	geom2	numeric(12,4)	Width parameter (ft or m)
inp_orifice	geom3	numeric(12,4)	Auxiliary parameters (width,side,slopes, etc.) as listed in Table D-1 from Appendix D of SWMM's Manual.
inp_orifice	geom4	numeric(12,4)	Auxiliary parameters (width,side,slopes, etc.) as listed in Table D-1 from Appendix D of SWMM's Manual.
inp_outfall	node_id	varchar(16)	Node identifier.
inp_outfall	outfall_type	varchar(16)	An outfall can be: FREE, NORMAL, FIXED, TIDAL or TIMESERIES.
inp_outfall	stage	Numeric(12,4)	Elevation of fixed stage outfall (ft or m).
inp_outfall	curve_id	varchar(16)	Curve identifier.
inp_outfall	timser_id	varchar(16)	Time series identifier.
inp_outfall	gate	varchar(3)	YES or NO depending on whether a flap gate is present that prevents reverse flow.
inp_outlet	arc_id	varchar(16)	Arc identifier
inp_outlet	node_id	varchar(16)	Node identifier.
inp_outlet	outlet_type	varchar(16)	A outlet can be: TABULAR / DEPTH, TABULAR / HEAD, FUNCTIONALÂ / DEPTH or FUNCTIONAL / HEAD.
inp_outlet	offset	Numeric(12,4)	Amount that the outlet is offset above the invert of inlet node (ft or m, expressed as either a depth or as an elevation, depending on the LINK_OFFSETS option setting).
inp_outlet	curve_id	varchar(16)	Curve identifier.
inp_outlet	cd1	Numeric(12,4)	Coefficient for a FUNCTIONAL discharge funtion
inp_outlet	cd2	Numeric(12,4)	Exponent for a FUNCTIONAL discharge function
inp_outlet	flap	varchar(3)	YES if flap gate present to prevent reverse flow, NO if not (default is NO).
inp_pattern	pattern_id	varchar(16)	Pattern identifier.
inp_pattern	pattern_type	varchar(16)	A pattern can be: MONTHLY, DAILY, HOURLY or WEEKEND (see Remarks)
inp_pattern	factor_1	Numeric(12,4)	Multiplier values.
inp_pattern	factor_2	Numeric(12,4)	Multiplier values.
inp_pattern	factor_3	Numeric(12,4)	Multiplier values.
inp_pattern	factor_4	Numeric(12,4)	Multiplier values.
inp_pattern	factor_5	Numeric(12,4)	Multiplier values.
inp_pattern	factor_6	Numeric(12,4)	Multiplier values.
inp_pattern	factor_7	Numeric(12,4)	Multiplier values.
inp_pattern	factor_8	Numeric(12,4)	Multiplier values.
inp_pattern	factor_9	Numeric(12,4)	Multiplier values.
inp_pattern	factor_10	Numeric(12,4)	Multiplier values.
inp_pattern	factor_11	Numeric(12,4)	Multiplier values.
inp_pattern	factor_12	Numeric(12,4)	Multiplier values.
inp_pattern	factor_13	Numeric(12,4)	Multiplier values.
inp_pattern	factor_14	Numeric(12,4)	Multiplier values.
inp_pattern	factor_15	Numeric(12,4)	Multiplier values.
inp_pattern	factor_16	Numeric(12,4)	Multiplier values.
inp_pattern	factor_17	Numeric(12,4)	Multiplier values.
inp_pattern	factor_18	Numeric(12,4)	Multiplier values.
inp_pattern	factor_19	Numeric(12,4)	Multiplier values.

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
inp_pattern	factor_20	Numeric(12,4)	Multiplier values.
inp_pattern	factor_21	Numeric(12,4)	Multiplier values.
inp_pattern	factor_23	Numeric(12,4)	Multiplier values.
inp_pattern	factor_24	numeric(12,4)	Multiplier values.
inp_pollutant	poll_id	varchar(16)	Pollutant identifier.
inp_pollutant	units_type	varchar(18)	Concentration units (MG/L for milligrams per liter, UG/L for micrograms per liter, or #/L for direct count per liter).
inp_pollutant	crain	Numeric(12,4)	Concentration of pollutant in rainfall (concentration units).
inp_pollutant	cgw	Numeric(12,4)	Concentration of pollutant in groundwater (concentration units).
inp_pollutant	cii	Numeric(12,4)	Concentration of pollutant in inflow/infiltration (concentration units).
inp_pollutant	kd	Numeric(12,4)	First-order decay coefficient (1/days).
inp_pollutant	sflag	varchar(3)	YES if pollutant buildup occurs only when there is snow cover, NO otherwise (default is NO).
inp_pollutant	copoll_id	varchar(16)	Co-pollutant identifier.
inp_pollutant	cofract	Numeric(12,4)	Fraction of co-pollutant concentration (default is 0).
inp_pollutant	cdwf	numeric(12,4)	Concentration of pollutant in dry weather flow (concentration units).
inp_project_id	title	varchar(254)	Title of the project
inp_project_id	author	varchar(50)	Author of the project
inp_project_id	date	varchar(12)	Project creation date.
inp_pump	arc_id	varchar(16)	Arc identifier
inp_pump	node_id	varchar(16)	Node identifier.
inp_pump	curve_id	varchar(16)	Curve identifier.
inp_pump	to_arc	varchar(16)	This fields identifies the direction of the flow of the shortpipe, applied only for the case of check valves
inp_pump	status	varchar(3)	Status at start of simulation (either ON or OFF; default is ON).
inp_pump	startup	Numeric(12,4)	Depth at inlet node when pump turns on (ft or m) (default is 0).
inp_pump	shutoff	numeric(12,4)	Depth at inlet node when pump shuts off (ft or m) (default is 0).
inp_rdii	node_id	varchar(50)	Node identifier.
inp_rdii	hydro_id	varchar(16)	Hydrograph identifier. (name of an RDII unit hydrograph group specified in the hydrographs table).
inp_rdii	sewerarea	numeric(16,6)	Area of the sewershed which contributes RDII to the node (acres or hectares).
inp_report	input	varchar(18)	Specifies whether or not a summary of the input data should be provided in the output report. The default is NO.
inp_report	continuity	varchar(20)	Specifies whether continuity checks should be reported or not. The default is YES.
inp_report	flowstats	varchar(3)	Specifies whether summary flow statistics should be reported or not. The default is YES.
inp_report	controls	varchar(3)	Specifies whether all control actions taken during a simulation should be listed or not. The default is NO.
inp_report	subcatchments	varchar(4)	List of subcatchments whose results are to be reported. The default is NONE.
inp_report	nodes	varchar(4)	List of nodes whose results are to be reported. The default is NONE.
inp_report	links	varchar(4)	List of links whose results are to be reported. The default is NONE.
inp_snowmelt	atiwt	numeric(12,4)	Antecedent temperature index weight (default is 0.5).
inp_snowmelt	rnm	numeric(12,4)	Negative melt ratio (default is 0.6).
inp_snowmelt	elev	numeric(12,4)	Average elevation of study area above mean sea level (ft or m) (default is 0).
inp_snowmelt	lat	numeric(12,4)	Latitude of the study area in degrees North (default is 50).
inp_snowmelt	dtlong	numeric(12,4)	Correction, in minutes of time, between true solar time and the standard clock time (default is 0).
inp_snowmelt	i_f0	numeric(12,4)	In imprevious area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0.
inp_snowmelt	i_f1	numeric(12,4)	In imprevious area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0,1.
inp_snowmelt	i_f2	numeric(12,4)	In imprevious area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0,2.
inp_snowmelt	i_f3	numeric(12,4)	In imprevious area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0,3.
inp_snowmelt	i_f4	numeric(12,4)	In imprevious area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0,4.
inp_snowmelt	i_f5	numeric(12,4)	In imprevious area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0,5.
inp_snowmelt	i_f6	numeric(12,4)	In imprevious area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0,6.
inp_snowmelt	i_f7	numeric(12,4)	In imprevious area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0,7.
inp_snowmelt	i_f8	numeric(12,4)	In imprevious area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0,8.

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
inp_snowmelt	i_f9	numeric(12,4)	In imprevious area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0,9.
inp_snowmelt	p_f0	numeric(12,4)	In previous area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0.
inp_snowmelt	p_f1	numeric(12,4)	In previous area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0.1.
inp_snowmelt	p_f2	numeric(12,4)	In previous area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0.2.
inp_snowmelt	p_f3	numeric(12,4)	In previous area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0.3.
inp_snowmelt	p_f4	numeric(12,4)	In previous area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0.4.
inp_snowmelt	p_f5	numeric(12,4)	In previous area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0.5.
inp_snowmelt	p_f6	numeric(12,4)	In previous area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0.6.
rpt_groundwater_cont	init_stor	Numeric(12,4)	Initial Storage.
inp_snowmelt	p_f7	numeric(12,4)	In previous area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0.7.
inp_snowmelt	p_f8	numeric(12,4)	In previous area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0.8.
inp_snowmelt	p_f9	numeric(12,4)	In previous area, fraction of area covered by snow when ratio of snow depth to depth at 100% cover is 0.9.
inp_snowpack	snow_id	varchar(16)	Snow identifier.
inp_snowpack	cmin_1	Numeric(12,4)	Minimum melt coefficient (in/hr-deg F or mm/hr-deg C).
inp_snowpack	cmax_1	Numeric(12,4)	Maximum melt coefficient (in/hr-deg F or mm/hr-deg C).
inp_snowpack	tbase_1	Numeric(12,4)	Snow melt base temperature (deg F or deg C).
inp_snowpack	fwf_1	Numeric(12,4)	Ratio of free water holding capacity to snow depth (fraction).
inp_snowpack	sd0_1	Numeric(12,4)	Initial snow depth (in or mm water equivalent).
inp_snowpack	fw0_1	Numeric(12,4)	Initial free water in pack (in or mm).
inp_snowpack	snn0_1	Numeric(12,4)	Fraction of impervious area that can be plowed.
inp_snowpack	cmin_2	Numeric(12,4)	Minimum melt coefficient (in/hr-deg F or mm/hr-deg C).
inp_snowpack	cmax_2	Numeric(12,4)	Maximum melt coefficient (in/hr-deg F or mm/hr-deg C).
inp_snowpack	tbase_2	Numeric(12,4)	Snow melt base temperature (deg F or deg C).
inp_snowpack	fwf_2	Numeric(12,4)	Ratio of free water holding capacity to snow depth (fraction).
inp_snowpack	sd0_2	Numeric(12,4)	Initial snow depth (in or mm water equivalent).
inp_snowpack	fw0_2	Numeric(12,4)	Initial free water in pack (in or mm).
inp_snowpack	sd100_1	Numeric(12,4)	Snow depth above which there is 100% cover (in or mm water equivalent).
inp_snowpack	cmin_3	Numeric(12,4)	Minimum melt coefficient (in/hr-deg F or mm/hr-deg C).
inp_snowpack	cmax_3	Numeric(12,4)	Maximum melt coefficient (in/hr-deg F or mm/hr-deg C).
inp_snowpack	tbase_3	Numeric(12,4)	Snow melt base temperature (deg F or deg C).
inp_snowpack	fwf_3	Numeric(12,4)	Ratio of free water holding capacity to snow depth (fraction).
inp_snowpack	sd0_3	Numeric(12,4)	Initial snow depth (in or mm water equivalent).
inp_snowpack	fw0_3	Numeric(12,4)	Initial free water in pack (in or mm).
inp_snowpack	sd100_2	Numeric(12,4)	Snow depth above which there is 100% cover (in or mm water equivalent).
inp_snowpack	sdplow	Numeric(12,4)	Depth of snow on plowable areas at which snow removal begins (in or mm).
rpt_nodedepth_sum	node_id	varchar(50)	Node identifier.
inp_snowpack	fimp	Numeric(12,4)	Fraction of snow on plowable area transferred to impervious area by plowing.
inp_snowpack	fperv	Numeric(12,4)	Fraction of snow on plowable area transferred to pervious area by plowing.
inp_snowpack	fimelt	Numeric(12,4)	Fraction of snow on plowable area converted into immediate melt.
inp_snowpack	fsub	Numeric(12,4)	Fraction ofÂ snow on plowable area transferred to pervious area in another subcatchment.
inp_snowpack	subc_id	varchar(16)	Subcatchment identifier.
inp_storage	node_id	varchar(50)	Node identifier.
inp_storage	storage_type	varchar(18)	A sotrage can be: TABULAR or FUNCTIONAL.
inp_storage	curve_id	varchar(16)	Curve identifier.
inp_storage	a1	Numeric(12,4)	Coefficient of FUNCTIONAL relation between surface area and depth.
inp_storage	a2	Numeric(12,4)	Exponent of FUNCTIONAL relation between surface area and depth.
inp_storage	a0	Numeric(12,4)	Constant of FUNCTIONAL relation between surface area and depth.
inp_storage	fevap	Numeric(12,4)	Fraction of potential evaporation from surface realized (default is 0).

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
inp_storage	hc	Numeric(12,4)	Soil saturated hydraulic conductivity (in/hr or mm/hr).
inp_storage	imd	Numeric(12,4)	Initial soil moisture deficit (volume of voids / total volume).
inp_storage	y0	Numeric(12,4)	Water depth at start of simulation (ft or m) (default is 0).
inp_storage	ysur	Numeric(12,4)	Maximum additional head above ground elevation that node can sustain under surcharge conditions (ft or m) (default is 0).
inp_storage	apond	Numeric(12,4)	Area subjected to surface ponding once water depth exceeds Ymax (ft2Â or m2) (default is 0).
inp_temperature	temp_type	varchar(16)	Temperature type (TIMESERIES or FILE).
inp_temperature	timser_id	varchar(16)	Name of time series inÂ timeseries table with temperature data.
inp_temperature	fname	varchar(254)	Name of external Climate file with temperature data.
inp_temperature	start	varchar(12)	Date to begin reading from the file in month/day/year format (default is the beginning of the file).
inp_timeseries	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
inp_timeseries	timser_id	varchar(16)	Time series identifier.
inp_timeseries	date	varchar(12)	Date in Month/Day/Year format (e.g., June 15, 2001 would be 6/15/2001).
inp_timeseries	hour	varchar(10)	24-hour military time (e.g., 8:40 pm would be 20:40) relative to the last date specified (or to midnight of the starting date of the simulation if no previous date was specified).
inp_timeseries	time	varchar(10)	Hours since the start of the simulation, expressed as a decimal number or as hours:minutes.
inp_timeseries	value	Numeric(12,4)	Value corresponding to given date and time.
inp_timeseries	fname	varchar(254)	Name of a file in which the time series data are stored.
inp_timser_id	id	varchar(16)	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
inp_timser_id	timser_type	varchar(20)	Time series type.
inp_timser_id	times_type	varchar(16)	Times type.
inp_transects	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
inp_transects	text	varchar(254)	Should follow the format described on SWMM user's manual appendix C
inp_treatment_node_x_pol	node_id	varchar(50)	Node identifier.
inp_treatment_node_x_pol	poll_id	varchar(16)	Pollutant identifier.
inp_treatment_node_x_pol	function	varchar(100)	Mathematical function expressing treatment result in terms of pollutant concentrations, pollutant removals, and other standard variables (see Remarks). In treatment function we can choose between: C â function computes effluent concentration and R â function computes fractional removal.
inp_arc_type	id	varchar(16)	Tyoe of arc on the SWMM model (CONDUIT, PUMP, ORIFICE, WEIR, OUTLET or UNDEFINED)
inp_node_type	id	varchar(16)	Type of node on the SWMM model (JUNCTION, DIVIDER, OUTFALL, STORAGE or UNDEFINED)
inp_giswater_config	id	Varchar(16)	Primary key for table.
inp_giswater_config	giswater_file_path	text	Giswater file path
inp_giswater_config	giswater_software_path	text	Giswater software path
inp_giswater_config	inp_file_path	text	inp_file_path
inp_giswater_config	rpt_file_path	text	rpt_file_path
inp_giswater_config	rpt_result_id	text	rpt result identifier
inp_typevalue_divider	id	varchar(16)	Value domain of SWMM divider type. See ud_14_inp_vdomain.sql for more information about this field
inp_typevalue_divider	descript	varchar(100)	Field to store additional information about the feature.
inp_typevalue_evap	id	varchar(18)	Value domain of SWMM about evaporation . See ud_14_inp_vdomain.sql for more information about this field
inp_typevalue_evap	descript	varchar(100)	Field to store additional information about the feature.
inp_typevalue_orifice	id	varchar(16)	Value domain of SWMM orifice type. See ud_14_inp_vdomain.sql for more information about this field
inp_typevalue_orifice	descript	varchar(100)	Field to store additional information about the feature.
inp_typevalue_outfall	id	varchar(16)	Value domain of SWMM outfall type. See ud_14_inp_vdomain.sql for more information about this field
inp_typevalue_outfall	descript	varchar(100)	Field to store additional information about the feature.
inp_typevalue_outlet	descript	varchar(100)	Field to store additional information about the feature.

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
inp_typevalue_pattern	id	varchar(18)	Value domain of SWMM pattern type. See ud_14_inp_vdomain.sql for more information about this field
inp_typevalue_pattern	descript	varchar(100)	Field to store additional information about the feature.
rpt_condsurcharge_sum	hour_limit	numeric(12,4)	Hours capacity limited.
inp_typevalue_raingage	id	varchar(18)	Value domain of SWMM raingage type. See ud_14_inp_vdomain.sql for more information about this field
inp_typevalue_raingage	descript	varchar(100)	Field to store additional information about the feature.
inp_typevalue_storage	id	varchar(16)	Value domain of SWMM storage type. See ud_14_inp_vdomain.sql for more information about this field
inp_typevalue_storage	descript	varchar(100)	Field to store additional information about the feature.
inp_typevalue_temp	id	varchar(18)	Value domain of SWMM about temperature . See ud_14_inp_vdomain.sql for more information about this field
inp_typevalue_temp	descript	varchar(100)	Field to store additional information about the feature.
inp_typevalue_timeseries	id	varchar(18)	Value domain of SWMM timeseries type. See ud_14_inp_vdomain.sql for more information about this field
inp_typevalue_timeseries	descript	varchar(100)	Field to store additional information about the feature.
inp_typevalue_windsp	id	varchar(16)	Value domain of SWMM wind speed type. See ud_14_inp_vdomain.sql for more information about this field
inp_typevalue_windsp	descript	varchar(100)	Field to store additional information about the feature.
inp_value_allnone	id	varchar(18)	Value domain of SWMM all none. See ud_14_inp_vdomain.sql for more information about this field
inp_value_buildup	id	varchar(18)	Value domain of SWMM buildup. See ud_14_inp_vdomain.sql for more information about this field
inp_value_catarc	id	varchar(18)	Value domain of SWMM about catalog of arcs
inp_value_curve	id	varchar(18)	Value domain of SWMM curve. See ud_14_inp_vdomain.sql for more information about this field
raingage	form_type	varchar(12)	Form of recorded rainfall, either INTENSITY, VOLUME or CUMULATIVE.
inp_value_files_actio	id	varchar(18)	Value domain of SWMM files actio. See ud_14_inp_vdomain.sql for more information about this field
inp_value_files_type	id	varchar(18)	Value domain of SWMM files type. See ud_14_inp_vdomain.sql for more information about this field
inp_value_inflows	id	varchar(18)	Value domain of SWMM inflows. See ud_14_inp_vdomain.sql for more information about this field
inp_value_lidcontrol	id	varchar(18)	Value domain of SWMM lid controls. See ud_14_inp_vdomain.sql for more information about this field
rpt_high_conterrors	result_id	varchar(16)	Result identifier.
inp_value_mapunits	id	varchar(18)	Value domain of SWMM map units. See ud_14_inp_vdomain.sql for more information about this field
inp_value_options_fme	id	varchar(16)	Value domain of SWMM options table. See ud_14_inp_vdomain.sql for more information about this field
inp_value_options_fr	id	varchar(18)	Value domain of SWMM options table. See ud_14_inp_vdomain.sql for more information about this field
inp_value_options_fu	id	varchar(16)	Value domain of SWMM options table. See ud_14_inp_vdomain.sql for more information about this field
inp_value_options_id	id	varchar(16)	Value domain of SWMM options table. See ud_14_inp_vdomain.sql for more information about this field
inp_value_options_in	id	varchar(16)	Value domain of SWMM options table. See ud_14_inp_vdomain.sql for more information about this field
inp_value_options_lo	id	varchar(16)	Value domain of SWMM options table. See ud_14_inp_vdomain.sql for more information about this field
inp_value_options_nfl	id	varchar(16)	Value domain of SWMM options table. See ud_14_inp_vdomain.sql for more information about this field
rpt_groundwater_cont	result_id	varchar(16)	ID simulation result.
inp_value_orifice	id	varchar(18)	Value domain of SWMM orifice. See ud_14_inp_vdomain.sql for more information about this field
inp_value_pollutants	id	varchar(18)	Value domain of SWMM pollutants. See ud_14_inp_vdomain.sql for more information about this field
inp_value_raingage	id	varchar(18)	Value domain of SWMM raingage. See ud_14_inp_vdomain.sql for more information about this field
inp_value_routeto	id	varchar(18)	Value domain of SWMM routeto. See ud_14_inp_vdomain.sql for more information about this field
inp_value_status	id	Varchar(6)	Value domain of SWMM status. See ud_14_inp_vdomain.sql for more information about this field
inp_value_timserid	id	varchar(20)	Value domain of SWMM timeseries. See ud_14_inp_vdomain.sql for more information about this field
inp_value_timserid	descript	varchar(100)	Field to store additional information about the feature.
inp_value_treatment	id	varchar(18)	Value domain of SWMM treatment. See ud_14_inp_vdomain.sql for more information about this field
inp_value_washoff	id	varchar(18)	Value domain of SWMM wash off. See ud_14_inp_vdomain.sql for more information about this field
inp_value_weirs	id	varchar(18)	Value domain of SWMM weirs. See ud_14_inp_vdomain.sql for more information about this field
inp_value_weirs	shape	varchar(18)	Cross-section shape.
rpt_arcflow_sum	mfull_dept	Numeric(12,4)	Maximum full depth.
inp_value_yesno	id	varchar(3)	Value domain of SWMM yes/no. See ud_14_inp_vdomain.sql for more information about this field
inp_washoff_land_x_pol	landus_id	varchar(16)	Land use identifier.
inp_washoff_land_x_pol	poll_id	varchar(16)	Pollutant identifier.
inp_washoff_land_x_pol	funcw_type	varchar(18)	Washoff function type: EXP / RC / EMC.

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
inp_washoff_land_x_pol	c1	Numeric(12,4)	Washoff function coefficients(see Table D-3 from Appendix D of SWMM's Manual).
inp_washoff_land_x_pol	c2	Numeric(12,4)	Washoff function coefficients(see Table D-3 from Appendix D of SWMM's Manual).
inp_washoff_land_x_pol	sweepeffic	Numeric(12,4)	Street sweeping removal efficiency (percent).
inp_washoff_land_x_pol	bmpeffic	numeric(12,4)	BMP removal efficiency (percent).
inp_weir	arc_id	varchar(16)	Arc identifier.
inp_weir	node_id	varchar(16)	Node identifier.
inp_weir	weir_type	varchar(18)	A weir can be: TRANSVERSE, SIDEFLOW, V-NOTCH, or TRAPEZOIDAL.
inp_weir	offset	numeric(12,4),	Coffecient related to amount that the weirâs crest is offset above the invert of inlet node (ft or m, expressed as either a depth or as an elevation, depending on the LINK_OFFSETS option setting).
rpt_nodedepth_sum	result_id	varchar(16)	Result identifier.
inp_weir	cd	numeric(12,4),	Amount that the weirâs crest is offset above the invert of inlet node (ft or m, expressed as either a depth or as an elevation, depending on the LINK_OFFSETS option setting).
inp_weir	ec	numeric(12,4),	Number of end contractions for TRANSVERSE or TRAPEZOIDAL weir (default is 0).
inp_weir	cd2	numeric(12,4),	Discharge coefficient for triangular ends of a TRAPEZOIDAL weir (for CFS if using US flow units or CMS if using metric flow units) (default is value of Cd).
inp_weir	flap	varchar(3)	YES if flap gate present to prevent reverse flow, NO if not (default is NO).
inp_weir	to_arc	varchar(16)	This fields identifies the direction of the flow of the shortpipe, applied only for the case of check valves
inp_weir	geom1	numeric(12,4),	Full height (ft or m)
inp_weir	geom2	numeric(12,4)	Auxiliary parameters (width, side slopes, etc.)
inp_weir	geom3	numeric(12,4)	Auxiliary parameters (width, side slopes, etc.)
inp_weir	geom4	numeric(12,4)	Auxiliary parameters (width, side slopes, etc.)
inp_weir	surcharge	varchar(30)	Identifies if weir can surcharge or not
inp_windspeed	wind_type	varchar(16)	Wind speed type (MONTHLY or FILE).
inp_windspeed	value_1	Numeric(12,4)	Wind speed value parameters of SWMM project (mph or km/hr).
inp_windspeed	value_2	Numeric(12,4)	Wind speed value parameters of SWMM project (mph or km/hr).
inp_windspeed	value_3	Numeric(12,4)	Wind speed value parameters of SWMM project (mph or km/hr).
inp_windspeed	value_4	Numeric(12,4)	Wind speed value parameters of SWMM project (mph or km/hr).
inp_windspeed	value_5	Numeric(12,4)	Wind speed value parameters of SWMM project (mph or km/hr).
inp_windspeed	value_6	Numeric(12,4)	Wind speed value parameters of SWMM project (mph or km/hr).
inp_windspeed	value_7	Numeric(12,4)	Wind speed value parameters of SWMM project (mph or km/hr).
inp_windspeed	value_8	Numeric(12,4)	Wind speed value parameters of SWMM project (mph or km/hr).
inp_windspeed	value_9	Numeric(12,4)	Wind speed value parameters of SWMM project (mph or km/hr).
inp_windspeed	value_10	Numeric(12,4)	Wind speed value parameters of SWMM project (mph or km/hr).
inp_windspeed	value_11	Numeric(12,4)	Wind speed value parameters of SWMM project (mph or km/hr).
inp_windspeed	value_12	Numeric(12,4)	Wind speed value parameters of SWMM project (mph or km/hr).
inp_windspeed	fname	varchar(254)	Name of external file with wind speed data.
raingage	rg_id	varchar(16)	Raingage identifier.
rpt_groundwater_cont	lowzone_et	Numeric(12,4)	Lower Zone ET.
raingage	intvl	varchar(10)	Time interval between gage readings in decimal hours or hours:minutes format (e.g., 0:15 for 15-minute readings).
raingage	scf	Numeric(12,4)	Snow catch deficiency correction factor (use 1.0 for no adjustment).
raingage	timser_id	varchar(16)	Name of time series in timeseries table with rainfall data.
raingage	fname	varchar(254)	Name of external file with rainfall data. Rainfall files are discussed in chapter 11.3 of SWMM's Manual.
raingage	sta	Varchar(12)	Name of recording station used in the rain file.
raingage	units	varchar(3)	Rain depth units used in the rain file, either IN (inches) or MM (millimeters).
raingage	the_geom	public.geometry	Point geometry field
rpt_selector_result	result_id	varchar(16)	Result identifier.
rpt_arcflow_sum	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_arcflow_sum	result_id	varchar(16)	Result identifier.

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
rpt_arcflow_sum	arc_id	varchar(50)	Arc identifier.
rpt_arcflow_sum	arc_type	varchar(18)	Arc type.
rpt_arcflow_sum	max_flow	Numeric(12,4)	Maximum total inflow (CMS).
rpt_arcflow_sum	time_days	varchar(10)	Time of max occurrence (days).
rpt_arcflow_sum	time_hour	varchar(10)	Time of max occurrence (hr:min)
rpt_arcflow_sum	max_veloc	Numeric(12,4)	Maximum velocity (m/sec)
rpt_arcflow_sum	mfull_flow	Numeric(12,4)	Maximum full flow.
rpt_arcflow_sum	max_shear	Numeric(12,4)	Maximum shear
rpt_arcflow_sum	max_hr	Numeric(12,4)	Maximun hidraulic radius
rpt_arcflow_sum	max_slope	Numeric(12,4)	Maximum slope
rpt_arcflow_sum	day_max	varchar(10)	Time of max occurrence (days)
rpt_arcflow_sum	time_max	varchar(10)	Time of max occurrence (hr:min)
rpt_arcflow_sum	min_shear	Numeric(12,4)	Minimum shear
rpt_arcflow_sum	day_min	varchar(10)	Time of min occurrence (days)
rpt_arcflow_sum	time_min	varchar(10)	Time of min occurrence (hr:min)
rpt_arcpolload_sum	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_arcpolload_sum	result_id	varchar(16)	Result identifier.
rpt_arcpolload_sum	arc_id		Arc identifier.
rpt_arcpolload_sum	poll_id	varchar(16)	Pollutant identifier.
rpt_condsurcharge_sum	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_condsurcharge_sum	result_id	varchar(16)	Result identifier.
rpt_condsurcharge_sum	arc_id	varchar(50)	Arc identifier.
rpt_condsurcharge_sum	both_ends	Numeric(12,4)	Hours during conduit it's on surcharge condition on both ends.
rpt_condsurcharge_sum	upstream	Numeric(12,4)	Hours during conduit it's on surcharge condition on upstream.
rpt_condsurcharge_sum	dnstream	Numeric(12,4)	Hours during conduit it's on surcharge condition on downstream.
rpt_condsurcharge_sum	hour_nflow	Numeric(12,4)	Hours above full normal flow.
rpt_continuity_errors	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_continuity_errors	result_id	varchar(16)	Result identifier.
rpt_continuity_errors	text	varchar(255)	Text
rpt_critical_elements	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_critical_elements	result_id	varchar(16)	Result identifier.
rpt_critical_elements	text	varchar(255)	Text
rpt_flowclass_sum	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_flowclass_sum	result_id	varchar(16)	Result identifier.
rpt_flowclass_sum	arc_id	varchar(50)	Arc identifier.
rpt_flowclass_sum	length	Numeric(12,4)	Adjusted / Actual length.
rpt_flowclass_sum	dry	Numeric(12,4)	Fraction of time in flow class. Dry.
rpt_flowclass_sum	up_dry	Numeric(12,4)	Fraction of time in flow class. Upstream dry.
rpt_flowclass_sum	down_dry	Numeric(12,4)	Fraction of time in flow class. Downstream dry.
rpt_flowclass_sum	sub_crit	Numeric(12,4)	Fraction of time in flow class. Sub critical flow
rpt_flowclass_sum	sub_crit_1	Numeric(12,4)	Fraction of time in flow class. Super critical flow
rpt_flowclass_sum	up_crit	Numeric(12,4)	Fraction of time in flow class. Upstream critical flow
rpt_flowclass_sum	down_crit	Numeric(12,4)	Fraction of time in flow class. Downstream critical flow
rpt_flowclass_sum	froud_numb	Numeric(12,4)	Froud number

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
rpt_flowclass_sum	flow_chang	Numeric(12,4)	Flow change
rpt_flowrouting_cont	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_flowrouting_cont	result_id	varchar(16)	ID simulation result.
rpt_flowrouting_cont	dryw_inf	Numeric(12,4)	Dry Weather Inflow.
rpt_flowrouting_cont	wetw_inf	Numeric(12,4)	Wet Weather Inflow.
rpt_flowrouting_cont	ground_inf	Numeric(12,4)	Groundwater Inflow.
rpt_flowrouting_cont	rdii_inf	Numeric(12,4)	RDII Inflow.
rpt_flowrouting_cont	ext_inf	Numeric(12,4)	External Inflow.
rpt_flowrouting_cont	ext_out	Numeric(12,4)	External Outflow.
rpt_flowrouting_cont	int_out	Numeric(12,4)	Internal Outflow.
rpt_flowrouting_cont	stor_loss	Numeric(12,4)	Storage Losses.
rpt_flowrouting_cont	initst_vol	Numeric(12,4)	Initial Stored Volume.
rpt_flowrouting_cont	finst_vol	Numeric(12,4)	Final Stored Volume.
rpt_flowrouting_cont	cont_error	Numeric(12,4)	Continuity Error (%).
rpt_flowrouting_cont	evap_losses	numeric(6,4)	Losses of evaporation
rpt_flowrouting_cont	seepage_losses	numeric(6,4)	Losses of seepage.
rpt_groundwater_cont	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_groundwater_cont	infilt	Numeric(12,4)	Infiltration.
rpt_groundwater_cont	upzone_et	Numeric(12,4)	Upper Zone ET.
rpt_groundwater_cont	groundw_fl	Numeric(12,4)	Groundwater Flow.
rpt_groundwater_cont	final_stor	Numeric(12,4)	Final Storage.
rpt_groundwater_cont	cont_error	Numeric(12,4)	Continuity Error (%).
rpt_pumping_sum	avg_flow	numeric(12,4)	Average flow (cms).
rpt_pumping_sum	max_flow	numeric(12,4)	Maximum flow (cms).
rpt_high_conterrors	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_high_conterrors	text	varchar(255)	Text
rpt_high_flowinest_ind	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_high_flowinest_ind	result_id	varchar(16)	Result identifier.
rpt_high_flowinest_ind	text	varchar(255)	Text.
rpt_instability_index	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_instability_index	result_id	varchar(16)	Result identifier.
rpt_instability_index	text	varchar(255)	Text.
rpt_lidperformance_sum	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_lidperformance_sum	result_id	varchar(16)	Result identifier.
rpt_lidperformance_sum	subc_id	varchar(16)	Name assigned to subcatchment.
rpt_lidperformance_sum	lidco_id	varchar(16)	ID LID control.
rpt_lidperformance_sum	tot_inflow	Numeric(12,4)	Total inflow (mm).
rpt_lidperformance_sum	evap_loss	Numeric(12,4)	Evaporation loss (mm).
rpt_lidperformance_sum	infil_loss	Numeric(12,4)	Infiltration loss (mm).
rpt_lidperformance_sum	surf_outf	Numeric(12,4)	Surface outflow (mm).
rpt_lidperformance_sum	drain_outf	Numeric(12,4)	Drain outflow (mm).
rpt_lidperformance_sum	init_stor	Numeric(12,4)	Initial Storage (mm).
rpt_lidperformance_sum	final_stor	Numeric(12,4)	Final Storage (mm).

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
rpt_lidperformance_sum	per_error	Numeric(12,4)	Percentage error.
rpt_nodedepth_sum	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_nodedepth_sum	swnod_type	varchar(18)	Node type on SWMM model.
rpt_nodedepth_sum	aver_depth	Numeric(12,4)	Average depth (meters).
rpt_nodedepth_sum	max_depth	Numeric(12,4)	Maximum depth (meters).
rpt_nodedepth_sum	max_hgl	Numeric(12,4)	Maximum HGL (meters).
rpt_nodedepth_sum	time_days	varchar(10)	Time of max occurrence (days).
rpt_nodedepth_sum	time_hour	varchar(10)	Time of max occurrence (hr:min).
rpt_nodeflooding_sum	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_nodeflooding_sum	result_id	varchar(16)	Result identifier.
rpt_nodeflooding_sum	node_id	varchar(50)	Node identifier.
rpt_nodeflooding_sum	hour_flood	Numeric(12,4)	Hours flooded.
rpt_nodeflooding_sum	max_rate	Numeric(12,4)	Maximum rate (cms).
rpt_nodeflooding_sum	time_days	varchar(10)	Time of max occurrence (days).
rpt_nodeflooding_sum	time_hour	varchar(10)	Time of max occurrence (hr:min).
rpt_nodeflooding_sum	tot_flood	Numeric(12,4)	Total flood volume (10^6 ltr).
rpt_nodeflooding_sum	max_ponded	numeric(12,4)	Maximum ponded depth (meters).
rpt_nodeinflow_sum	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_nodeinflow_sum	result_id	varchar(16)	Result identifier.
rpt_nodeinflow_sum	node_id	varchar(50)	Node identifier.
rpt_nodeinflow_sum	swnod_type	varchar(18)	Node type on SWMM model.
rpt_nodeinflow_sum	max_latinf	numeric(12,4),	Maximum lateral inflow (cms).
rpt_nodeinflow_sum	max_totinf	numeric(12,4),	Maximum total inflow (cms).
rpt_nodeinflow_sum	time_days	varchar(10)	Time of max occurrence (days).
rpt_nodeinflow_sum	time_hour	varchar(10)	Time of max occurrence (hr:min).
rpt_nodeinflow_sum	latinf_vol	numeric(12,4),	Lateral inflow volume (10^6 ltr).
rpt_nodeinflow_sum	totinf_vol	numeric(12,4),	Total inflow volume (10^6 ltr).
rpt_nodeinflow_sum	flow_balance_error	numeric(12,2),	Error of flow balance
rpt_nodeinflow_sum	other_info	varchar(12)	Sector where is the node.
rpt_nodesurcharge_sum	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_nodesurcharge_sum	result_id	varchar(16)	Result identifier.
rpt_nodesurcharge_sum	node_id	varchar(50)	Node identifier.
rpt_nodesurcharge_sum	swnod_type	varchar(18)	Node type on SWMM model.
rpt_nodesurcharge_sum	hour_surch	Numeric(12,4)	Hous surcharged.
rpt_nodesurcharge_sum	max_height	Numeric(12,4)	Maximum height above crown (meters).
rpt_nodesurcharge_sum	min_depth	numeric(12,4)	Minimum depth below rim (meters).
subcatchment	subc_id	varchar(16)	Subcatchment idenifier.
rpt_outfallflow_sum	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_outfallflow_sum	result_id	varchar(16)	Result identifier.
rpt_outfallflow_sum	node_id	varchar(50)	Node identifier.
rpt_outfallflow_sum	flow_freq	Numeric(12,4)	Flow frequency. (Percentage).
rpt_outfallflow_sum	avg_flow	Numeric(12,4)	Average flow (cms).
rpt_outfallflow_sum	max_flow	Numeric(12,4)	Maximum flow (cms).
rpt_outfallflow_sum	total_vol	numeric(12,4)	Total volume (10^6 ltr).

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
rpt_outfallload_sum	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_outfallload_sum	result_id	varchar(16)	Result identifier.
rpt_outfallload_sum	poll_id	varchar(16)	ID simulation result.
rpt_outfallload_sum	node_id	varchar(50)	Pollutant identifier.
rpt_pumping_sum	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_pumping_sum	result_id	varchar(16)	ID simulation result.
rpt_pumping_sum	arc_id	varchar(50)	Arc identifier.
rpt_pumping_sum	percent	numeric(12,4)	Percent utilized.
rpt_pumping_sum	num_startup	int4,	Numbers of startups of pump
rpt_pumping_sum	min_flow	numeric(12,4)	Minimum flow (cms).
rpt_pumping_sum	vol_ltr	numeric(12,4)	Total volume (10^6 ltr).
rpt_pumping_sum	powus_kwh	numeric(12,4)	Power usage (Kw-hr).
rpt_pumping_sum	timoff_min	numeric(12,4)	Time off the pump curve low
rpt_pumping_sum	timoff_max	numeric(12,4)	Time off the pump curve high
ext_rtc_hydrometer_x_data	min	float8	Minimum value.
rpt_qualrouting_cont	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_qualrouting_cont	result_id	varchar(16)	Result identifier.
rpt_qualrouting_cont	poll_id	varchar(16)	Pollutant identifier.
rpt_qualrouting_cont	dryw_inf	numeric(12,4)	Dry Weather Inflow.
rpt_qualrouting_cont	wetw_inf	numeric(12,4)	Wet Weather Inflow.
rpt_qualrouting_cont	ground_inf	numeric(12,4)	Groundwater Inflow.
rpt_qualrouting_cont	rdii_inf	numeric(12,4)	RDII Inflow.
rpt_qualrouting_cont	ext_inf	numeric(12,4)	External Inflow.
rpt_qualrouting_cont	int_inf	numeric(12,4)	Internal Flooding.
rpt_qualrouting_cont	ext_out	numeric(12,4)	External Outflow.
rpt_qualrouting_cont	mass_reac	numeric(12,4)	Mass Reacted.
rpt_qualrouting_cont	initst_mas	numeric(12,4)	Initial Stored Mass.
rpt_qualrouting_cont	finst_mas	numeric(12,4)	Final Stored Mass.
rpt_qualrouting_cont	cont_error	numeric(12,4)	Continuity Error (%).
rpt_rainfall_dep	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_rainfall_dep	result_id	varchar(16)	Result identifier.
rpt_rainfall_dep	sewer_rain	Numeric(12,4)	Sewershed Rainfall.
rpt_rainfall_dep	rdiip_prod	Numeric(12,4)	RDII Produced.
rpt_rainfall_dep	rdiir_rat	numeric(12,4)	RDII Ratio.
rpt_cat_result	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_cat_result	result_id	varchar(16)	Result identifier.
rpt_cat_result	flow_units	varchar(3)	Main characteristics of the result. Type of units in which flow rates are expressed.
rpt_cat_result	rain_runof	varchar(3)	Main characteristics of the result. Rainfall and runoff module used
rpt_cat_result	snowmelt	varchar(3)	Main characteristics of the result. Snowmelt module used
rpt_cat_result	groundw	varchar(3)	Main characteristics of the result. Groundwater module used
rpt_cat_result	flow_rout	varchar(3)	Main characteristics of the result. Flow routing module used
rpt_cat_result	pond_all	varchar(3)	Main characteristics of the result. Ponding allowed
rpt_cat_result	water_q	varchar(3)	Main characteristics of the result. Water quality module used
rpt_cat_result	infil_m	varchar(18)	Main characteristics of the result. Infiltration module used

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
rpt_cat_result	flowrout_m	varchar(18)	Main characteristics of the result. Flow routing module used
rpt_cat_result	start_date	varchar(25)	Start date of the simulation.
rpt_cat_result	end_date	varchar(25)	End date of the simulation.
rpt_cat_result	dry_days	Numeric(12,4)	Number of dry days.
rpt_cat_result	rep_tstep	varchar(10)	Main characteristics of the result. Reporting step used
rpt_cat_result	wet_tstep	varchar(10)	Main characteristics of the result. Wet step used
rpt_cat_result	dry_tstep	varchar(10)	Main characteristics of the result. Dry step used
rpt_cat_result	rout_tstep	varchar(10)	Main characteristics of the result. Routing step used
rpt_cat_result	var_time_step	varchar(3)	Main characteristics of the result. Variable time step used
rpt_cat_result	max_trials	Numeric(4,2)	Main characteristics of the result. Maximum trials of the simulation
rpt_cat_result	head_tolerance	varchar(12)	Main characteristics of the result. Head tolerance
rpt_cat_result	exec_date	timestamp(6)	Main characteristics of the result. Date and time of the result's import
subcatchment	node_id	varchar(50)	Node identifier.
subcatchment	rg_id	varchar(16)	Raingage identifier.
rpt_routing_timestep	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_routing_timestep	result_id	varchar(254)	Result identifier.
rpt_routing_timestep	text	varchar(255)	Text
rpt_runoff_qual	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_runoff_qual	result_id	varchar(16)	Result identifier.
rpt_runoff_qual	poll_id	varchar(16)	Pollutant identifier.
rpt_runoff_qual	init_buil	Numeric(12,4)	Initial Buildup.
rpt_runoff_qual	surf_buil	Numeric(12,4)	Surface Buildup.
rpt_runoff_qual	wet_dep	Numeric(12,4)	Wet Deposition.
rpt_runoff_qual	sweep_re	Numeric(12,4)	Sweeping Removal.
rpt_runoff_qual	infil_loss	Numeric(12,4)	Infiltration Loss.
rpt_runoff_qual	bmp_re	Numeric(12,4)	BMP Removal.
rpt_runoff_qual	surf_runof	Numeric(12,4)	Surface Runoff.
rpt_runoff_qual	rem_buil	Numeric(12,4)	Remaining Buildup.
rpt_runoff_qual	cont_error	Numeric(12,4)	Continuity Error (%).
rpt_runoff_quant	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_runoff_quant	result_id	varchar(16)	Result identifier.
rpt_runoff_quant	initsw_co	Numeric(12,4)	Initial Snow Cover.
rpt_runoff_quant	total_prec	Numeric(12,4)	Total Precipitation.
rpt_runoff_quant	evap_loss	Numeric(12,4)	Evaporation Loss.
rpt_runoff_quant	infil_loss	Numeric(12,4)	Infiltration Loss.
rpt_runoff_quant	surf_runof	Numeric(12,4)	Surface Runoff.
rpt_runoff_quant	snow_re		Snow Removed.
rpt_runoff_quant	finalsw_co	Numeric(12,4)	Final Snow Cover.
rpt_runoff_quant	finals_sto	Numeric(12,4)	Final Surface Storage.
rpt_runoff_quant	cont_error	Numeric(12,4)	Continuity Error (%).
rpt_runoff_quant	initlid_sto	Numeric(12,4)	Initial storage on LID.
rpt_storagevol_sum	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_storagevol_sum	result_id	varchar(16)	Result identifier.
rpt_storagevol_sum	node_id	varchar(50)	Node identifier.

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
rpt_storagevol_sum	aver_vol	Numeric(12,4)	Average volume 1000m3.Average volume 1000m3.Average volume 1000m3.Average volume 1000m3.Average volume 1000m3.Average volume 1000m3.Average volume 1000m3.Average volume 1000m3.Average volume 1000m3.Average volume 1000m3.Average volume 1000m3.Average volume 1000m3.
rpt_storagevol_sum	avg_full	Numeric(12,4)	Average percentage full.
rpt_storagevol_sum	ei_loss	Numeric(12,4)	E&I Percentage loss.
rpt_storagevol_sum	max_vol	Numeric(12,4)	Maximum volume 1000m3.Maximum volume 1000m3.Maximum volume 1000m3.Maximum volume 1000m3.Maximum volume 1000m3.Maximum volume 1000m3.Maximum volume 1000m3.Maximum volume 1000m3.Maximum volume 1000m3.Maximum volume 1000m3.Maximum volume 1000m3.Maximum volume 1000m3.
rpt_storagevol_sum	max_full	Numeric(12,4)	Maximum percentage full.
rpt_storagevol_sum	time_days	varchar(10)	Time of max occurrence (days).
rpt_storagevol_sum	time_hour	varchar(10)	Time of max occurrence (hr:min).
rpt_storagevol_sum	max_out	Numeric(12,4)	Maximum outflow (cms).
rpt_subcatchwashoff_sum	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_subcatchwashoff_sum	result_id	varchar(16)	Result identifier.
rpt_subcatchwashoff_sum	subc_id	varchar(16)	Name assigned to subcatchment.
rpt_subcatchwashoff_sum	poll_id	varchar(16)	Pollutant identifier.
rpt_subcatchwashoff_sum	value	numeric	Value.
rpt_subcathrunoff_sum	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_subcathrunoff_sum	result_id	varchar(16)	Result identifier.
rpt_subcathrunoff_sum	subc_id	varchar(16)	Name assigned to subcatchment.
rpt_subcathrunoff_sum	tot_precip	Numeric(12,4)	Total precipitation (mm).
rpt_subcathrunoff_sum	tot_runon	Numeric(12,4)	Total runon (mm).
rpt_subcathrunoff_sum	tot_evap	Numeric(12,4)	Total evaporation (mm).
rpt_subcathrunoff_sum	tot_infil	Numeric(12,4)	Total infiltration (mm).
rpt_subcathrunoff_sum	tot_runoff	Numeric(12,4)	Total runoff (mm).
rpt_subcathrunoff_sum	tot_runofl	Numeric(12,4)	Total runoff (10^6 ltr).
rpt_subcathrunoff_sum	peak_runof	Numeric(12,4)	Peak runoff (cms).
rpt_subcathrunoff_sum	runoff_coe	Numeric(12,4)	Runoff coefficient.
rpt_subcathrunoff_sum	vxmax	Numeric(12,4)	Maximum velocity on x axis
rpt_subcathrunoff_sum	vymax	Numeric(12,4)	Maximum velocity on y axis
rpt_subcathrunoff_sum	depth	Numeric(12,4)	Maximum depth.
rpt_subcathrunoff_sum	vel	Numeric(12,4)	Maximum velocity
rpt_subcathrunoff_sum	vhmax	numeric(12,6)	Maximum (velocity x depth) value
rpt_timestep_critelem	id	int4	Defines the order of the line text. You must to use this code in order to sort as you need the lines of text. As you sort the text lines Giswater reads by this order the information.
rpt_timestep_critelem	result_id	varchar(16)	Result identifier.
rpt_timestep_critelem	text	varchar(255)	ID simulation result.
rpt_selector_compare	result_id	varchar(16)	Result identifier.
inp_selector_sector	sector_id	varchar(30)	Sector identifier.
subcatchment	area	Numeric(16,6)	Area of subcatchment (acres or hectares).
subcatchment	imperv	Numeric(12,4)	Percent imperviousness of subcatchment.
subcatchment	width	Numeric(12,4)	Characteristic width of subcatchment (ft or meters).
subcatchment	slope	Numeric(12,4)	Subcatchment slope (percent).
subcatchment	clength	Numeric(12,4)	Total curb length (any length units).
subcatchment	snow_id	varchar(16)	Name of snow pack object that characterizes snow accumulation and melting over the subcatchment.
subcatchment	nimp	Numeric(12,4)	Manning's N for overland flow over the impervious sub-area.

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
subcatchment	nperv	Numeric(12,4)	Manning's N for overland flow over the pervious sub-area.
subcatchment	simp	Numeric(12,4)	Depression storage for impervious sub-area (inches or mm).
subcatchment	sperv	Numeric(12,4)	Depression storage for pervious sub-area (inches or mm).
subcatchment	zero	Numeric(12,4)	Percent of impervious area with no depression storage (default = 0.00).
subcatchment	routeto	varchar(20)	Use IMPERVIOUS if pervious area runoff runs onto impervious area, PERVIOUS if impervious runoff runs onto impervious area, or OUTLET if both areas drain to the subcatchment's outlet. (default is IMPERVIOUS).
subcatchment	rted	Numeric(12,4)	Percent of runoff routed from one type of area to another (default = 100).
subcatchment	maxrate	Numeric(12,4)	Maximum infiltration rate on Horton curve (in/hr or mm/hr).
subcatchment	minrate	Numeric(12,4)	Minimum infiltration rate on Horton curve (in/hr or mm/hr).
subcatchment	decay	Numeric(12,4)	Decay rate constant of Horton curve (l/hr).
subcatchment	drytime	Numeric(12,4)	Time it takes for fully saturated soil to dry (days).
subcatchment	maxinfil	Numeric(12,4)	Maximum infiltration volume possible (0 if not applicable) (in or mm).
subcatchment	suction	Numeric(12,4)	Soil capillary suction (in or mm).
subcatchment	conduct	Numeric(12,4)	Soil saturated hydraulic conductivity (in/hr or mm/hr).
subcatchment	initdef	Numeric(12,4)	Initial soil moisture deficit (volume of voids / total volume).
subcatchment	curveno	Numeric(12,4)	SCS Curve Number.
subcatchment	conduct_2	Numeric(12,4)	Soil saturated hydraulic conductivity (in/hr or mm/hr) (This property has been deprecated and is no longer used).
subcatchment	drytime_2	Numeric(12,4)	Time it takes for fully saturated soil to dry (days).
subcatchment	sector_id	varchar(30)	Sector where there is the subcatchment.
subcatchment	hydrology_id	varchar(20)	Hydrologic scenario used. You must to fill this field and the value should be compatible with the infiltration parameters used.
subcatchment	the_geom	public.geometry	Polygon geometry field
doc_type	id	varchar(30)	Document type identifier. Primary key.
doc_type	comment	varchar(512)	Comments related to document type. Additional information.
cat_tag	id	varchar(16)	Tag identifier. Primary key
cat_tag	comment	varchar(512)	Comments related to tags. Additional information.
doc	id	int8	Document identifier. Primary key
doc	path	varchar(512)	Field to store folder path related to document.
doc	observ	varchar(512)	Observations related to documents. Additional information
doc	tagcat_id	varchar(16)	Tag identifier.
doc	date	timestamp(6)	Date of adding the document.
doc_x_node	id	int8	Autonumeric field to store unique values for each row (primary key)
doc_x_node	doc_id	int8	Document identifier related to the primary key of doc table
doc_x_node	node_id	varchar(16)	Node identifier related to the primary key of the node table
doc_x_arc	id	int8	Autonumeric field to store unique values for each row (primary key)
ext_rtc_hydrometer	code	text	Code of a hydrometer
doc_x_arc	doc_id	int8,	Document identifier related to the primary key of doc table
doc_x_arc	arc_id	varchar(16)	Arc identifier related to the primary key of arc table
doc_x_connec	id	int8	Autonumeric field to store unique values for each row (primary key)
doc_x_connec	doc_id	int8,	Document identifier related to the primary key of doc table
doc_x_connec	connec_id	varchar(16)	Connect identifier related to the primary key of connec table
doc_x_gully	id	int8	Autonumeric field to store unique values for each row (primary key)
doc_x_gully	doc_id	int8	Document identifier related to the primary key of doc table
doc_x_gully	gully_id	varchar(16)	Connect identifier related to the primary key of gully table
plan_psector	psector_id	varchar	Plan sector identifier. Primary key.
plan_psector	descript	Varchar (254)	Field to store additional information about the psector.
plan_psector	priority	Varchar (16)	Field to identify the priority of the psector
plan_psector	text1	Varchar (254)	Field ready to insert text for additional information.
plan_psector	text2	Varchar (254)	Field ready to insert text for additional information.

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
plan_psector	observ	Varchar (254)	Observations related to plan sector. Additional information
plan_psector	rotation	Numeric(8,4)	Field to use to rotate the map
plan_psector	scale	Numeric(8,2)	Field to use to configurate the scale of the map
plan_psector	sector_id	Varchar(30)	Hydraulic sector identifier related to the primary key of sector table
plan_psector	atlas_id	Varchar(30)	Field to use to configurate the position of the psector on the whole atlas
plan_psector	gexpenses	Numeric(4,2)	General expenses related to this psector.
plan_psector	vat	Numeric(4,2)	Value of vat tax related to this psector.
plan_psector	other	Numeric(4,2)	Other expenses related to this psector.
plan_psector	the_geom	public.geometry	Polygon geometry field.
plan_arc_x_psector	id	int4	Arc related to psector identifier. Primary key.
plan_arc_x_psector	arc_id	Varchar(16)	Arc identifier related to the primary key of arc table
plan_arc_x_psector	psector_id	Varchar(16)	Psector related to the primary key of psector table
plan_arc_x_psector	atlas_id	Varchar(16)	Indicates the order of map files.
plan_arc_x_psector	descript	Varchar(254)	Field to store additional information about the arc related to psector.
plan_node_x_psector	id	int4	Node related to psector identifier. Primary key.
plan_node_x_psector	node_id	Varchar(16)	Node identifier related to the primary key of node table
plan_node_x_psector	psector_id	Varchar(16)	Psector related to the primary key of psector table
plan_node_x_psector	atlas_id	Varchar(16)	Indicates the order of map files.
plan_node_x_psector	descript	Varchar(254)	Field to store additional information about the node related to psector.
plan_other_x_psector	id	int4	Other objectt related to psector identifier. Primary key.
plan_other_x_psector	price_id	Varchar(16)	Identifier of the price
plan_other_x_psector	measurement	Numeric(12,2)	Measurement
plan_other_x_psector	psector_id	Varchar(16)	Psector related to the primary key of psector table
plan_other_x_psector	atlas_id	Varchar(16)	Indicates the order of map files.
plan_other_x_psector	descript	Varchar(254)	Field to store additional information about the other objects related to psector.
plan_arc_x_pavement	id	int4	Arc related to pavement identifier. Primary key.
plan_arc_x_pavement	arc_id	Varchar(16)	Arc identifier related to the primary key of arc table
plan_arc_x_pavement	pavcat_id	Varchar(16)	Identifier of the pavement
plan_arc_x_pavement	percent	Numeric(3,2)	Percent of pavement's coverage on arc.
plan_value_ps_priority	id	Varchar(16)	Identifier of the value domain of priority
plan_value_ps_priority	observ	Varchar(254)	Additional information
plan_selector_psector	id	Varchar(16)	Plan sector selector identifier. Primary key.
plan_selector_psector	observ	Varchar(254)	Observations related to plan sector selector. Additional information
price_simple	id	Varchar (16)	Simple price identifier. Primary key.
price_simple	unit	Varchar (5)	Units used to express the price.
price_simple	descript	Varchar (100)	Field to store additional information about the simple price.
price_simple	text	text	Field ready to insert text for additional information.
price_simple	price	Numeric(12,4)	Price
price_simple	obs	Varchar (16)	Additional information
price_compost	id	Varchar (16)	Compost price identifier. Primary key.
price_compost	unit	Varchar (5)	Units used to express the price.
price_compost	descript	Varchar (100)	Field to store additional information about the compound price
price_compost	text	text	Field ready to insert text for additional information.
price_compost	price	Numeric(12,4)	Price
price_compost_value	id	int4	Compound value identifier.Primary key.
price_compost_value	compost_id	Varchar (16)	Compound price identifier related to the primary key of price compost table
price_compost_value	simple_id	Varchar (16)	Simple price identifier related to the primary key of price simple table
price_compost_value	value	Numeric(16,4)	Measurement

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
price_value_unit	id	Varchar (16)	Price units identifier. Primary key.
price_value_unit	descript	Varchar (100)	Field to store additional information about the price value units.
anl_flow_exit_node	node_id	Varchar(16)	Node identifier related to the primary key of node table
anl_flow_exit_node	the_geom	public.geometry	Point geometry field.
anl_flow_exit_arc	arc_id	Varchar(16)	Arc identifier related to the primary key of node table
anl_flow_exit_arc	the_geom	public.geometry	Linestring geometry field.
anl_flow_trace_node	node_id	Varchar(16)	Node identifier related to the primary key of node table
anl_flow_trace_node	the_geom	public.geometry	Point geometry field.
anl_flow_trace_arc	arc_id	Varchar(16)	Arc identifier related to the primary key of node table
anl_flow_trace_arc	the_geom	public.geometry	Linestring geometry field.
inp_typevalue_outlet	id	varchar(16)	Value domain of SWMM outlet type. See ud_14_inp_vdomain.sql for more information about this field
version	id	int4	ID of version. Primary key.
version	wsoftware	varchar(16)	Identifies the water software compatible with the project
version	postgres	varchar(512)	Identifies the version of PostgreSQL where the project was created
version	postgis	varchar(512)	Identifies the version of Postgis where the project was created
config	node2arc	double precision	Configuration parameter of disconected nodes about it's proximity to arcs related to fct_node2arc function
config_search_plus	portal_layer	varchar(30)	Name of point layer
config_search_plus	urban_propierties_field_block	varchar(30)	Name of field with block data
config_search_plus	street_layer	varchar(30)	Name of street layer
config_search_plus	street_field_name	varchar(30)	Name of field with street name
config_search_plus	street_field_code	varchar(30)	Name of field with street code
config_search_plus	urban_propierties_field_number	varchar(30)	Name of field with entrance number
config_search_plus	urban_propierties_layer	varchar(30)	Name of urban properties layer.
config	id	varchar(18)	Autonumeric field to store unique values for each row (primary key)
config	node_proximity	double precision	Configuration parameter of node proximity related to trg_node_proximity function trigger
config	arc_searchnodes	double precision	Configuration parameter of arc searching start and end nodes related to trg_arc_searchnodes function trigger
config	connec_proximity	double precision	Configuration parameter of node proximity related to trg_connec_proximity function trigger
config	arc_toporepair	double precision	Configuration parameter of arc repair related to fct_arc_toporepair function
config	nodeinsert_arcendpoint	boolean	Configuration parameter of automatic node insert when endnode does not exist related to trg_arc_searchnodes function trigger
config	orphannode_delete	boolean	Configuration parameter of automatic delete node when arc is deleted related to trg_orphannode_delete fuction trigger
config	vnode_update_tolerance	double precision	Configuration parameter of defining node tolerance.
config	nodetype_change_enabled	boolean	Enable change node type option.
config	node_proximity_control	boolean	Field to put enable (true) or dissabled (false) the rules of topology to prevent nodes closet to other nodes
config	connec_proximity_control	boolean	Field to put enable (true) or dissabled (false) the rules of topology to prevent connec closet to other connec
config	node_duplicated_tolerance	float	Tolerace for function of node duplicated indentification
config	connec_duplicated_tolerance	float	Tolerace for function of connec duplicated indentification
config	audit_function_control	boolean	Field to put enable (true) or dissabled (false) the audit function control
config	arc_searchnodes_control	boolean	Field to put enable (true) or dissabled (false) the rules of topology to prevent arcs without nodes at init or end position
anl_arc_no_startend_node	arc_id	varchar(16)	Arc identifier
anl_arc_no_startend_node	the_geom	public_geometry	Geometry of arc
anl_arc_same_startend	arc_id		Arc identifier
anl_arc_same_startend	the_geom	public.geometry	Geometry of arc
anl_arc_same_startend	length	float	Length of an arc
anl_connec_duplicated	connec_conserv	varchar(16)	
anl_connec_duplicated	connec_id	varchar(16)	Connec identifier
anl_connec_duplicated	id	int	Autonumeric field to store unique values for each row (primary key)

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
anl_connec_duplicated	the_geom	public.geometry	Geometry of connec
anl_node_duplicated	the_geom	public.geometry	Geometry of node
anl_node_duplicated	node_conserv	varchar(16)	Node identifier of the duplicated node
anl_node_duplicated	node_id	varchar(16)	Node identifier
anl_node_orphan	node_id	Varchar(16)	Node identifier
anl_node_orphan	the_geom	public.geometry	Geometry of node
anl_node_orphan	node_type	Varchar(30)	Type of the node
anl_node_sink	node_id	varchar(16)	Node identifier
anl_node_sink	the_geom	public.geometry	Geometry of node
anl_node_sink	num_arcs	int	Number of arcs joining the node
audit_cat_error	id	int	Identifier of the error
audit_cat_error	error_message	text	Message of the error
audit_cat_error	hint_message	text	Hint message
audit_cat_error	log_level	int2	Log level of the error
audit_cat_error	show_user	bool	Field to define to show (or not) to the user this message
audit_cat_error	context	text	Context of the message
audit_cat_function	return_type	text	Type of return of the function
audit_cat_function	input_params	json	Input parameters of the function
audit_cat_function	context	text	Context of the function
audit_cat_function	function_type	text	Type of the function (trigger function or function)
audit_cat_function	name	text	Name of the function
audit_cat_function	id	int4	Identifier of the function
audit_function_actions	debug_info	text	Additional information to debug
audit_function_actions	user_name	text	Name of the user
audit_function_actions	query	text	String with the full query realized
audit_function_actions	audit_cat_function_id	int4	Identifier of the function
audit_function_actions	audit_cat_error_id	int	Identifier of the error
audit_function_actions	tstamp	timestamp	Timestamp
audit_function_actions	id	bigserial	Autonumeric field to store unique values for each row (primary key)
cat_arc	estimated_depth	numeric(12,2)	In case no data of depth of conduit this depth is used to estimate the budget.
catchment	descript	varchar(100)	Description
catchment	catchment_id	varchar(30)	Catchment identifier
catchment	the_geom	public.geometry	Geometry of catchment.
config	samenode_init_end_control	bool	Field to put enable (true) or dissabled (false) the rules of topology to prevent arc with same begining and end node
config	nodeinsert_catalog_vdefault	varchar(30)	Configuration parameter of default node values.
config_csv_import	table_name	varchar(50)	Name of table to insert csv data
ext_rtc_hydrometer	instalation_date	date	Date of installing the hydrometer
config_extract_raster_value	raster_band_value	varchar(30)	Band from which the value is taken
config_extract_raster_value	vector_field_value	varchar(30)	Name of field of vector layer into which the values are inserted
config_extract_raster_value	vector_layer	varchar(30)	Name of vector layer into which the values are inserted
config_search_plus	hydrometer_field_code	varchar(30)	Name of field with hydrometer code
config_search_plus	hydrometer_layer	varchar(30)	Name of hydrometer layer
config_search_plus	ppoint_layer	varchar(30)	Name of ppoint layer
config_search_plus	hydrometer_urban_propierties_layer	varchar(30)	Name of connec layer
config_search_plus	portal_field_number	varchar(30)	Name of field with entrance number
config_search_plus	portal_field_code	varchar(30)	Name of field with entrance code
config_search_plus	id	varchar(18)	Identifier.
config_search_plus	ppoint_field_number	varchar(30)	Name of field with ppoint number

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
config_search_plus	ppoint_field_zone	varchar(30)	Name of field with ppoint zone
config_search_plus	urban_propierties_field_pzone	varchar(30)	Name of a field with zone data
config_ui_forms	id	int	Autonumeric field to store unique values for each row (primary key)
db_cat_columns	id	int	Autonumeric field to store unique values for each row (primary key)
db_cat_columns	description	text	Description
db_cat_columns	column_type	text	Type of column.
db_cat_columns	column_name	text	Name of column
db_cat_columns	db_cat_table_id	int4	Table catalog identifier
db_cat_table	id	int4	Autonumeric field to store unique values for each row (primary key)
db_cat_table	name	text	Name of the table
db_cat_table	project_type	text	Project type of the table (WS, UD or SE).
db_cat_table	context	text	Context where this table is showed
gully	the_geom_pol	public.geometry	Geometry of a gully (polygon)
db_cat_table	description	text	Description of the table
db_cat_view	id	int4	Autonumeric field to store unique values for each row (primary key)
db_cat_view	name	text	Name of the view
db_cat_view	project_type	text	Project type of the table (WS, UD or SE).
db_cat_view	context	text	Context where this view is showed
db_cat_view	description	text	description of the table
doc	user_name	varchar(30)	Name of a user who added the document.
doc	doc_type	varchar(30)	Type of a document
element_x_arc	id	varchar(16)	Element related to arc identifier. Primary key.
element_x_arc	element_id	varchar(16)	Element identifier related to the primary key of element table
element_x_arc	arc_id	varchar(16)	Arc identifier related to the primary key of the arc table
inp_selector_state	observ	varchar(254)	Observation
version	date	timestamp	Date of the version release
ext_urban_propierties	text	text	Description
ext_postnumber	id	varchar(16)	Entrance identifier
ext_urban_propierties	observ	text	Observation
inp_selector_state	id	varchar(16)	State selector identifier. Primary key.
config_ui_forms	ui_form	varchar(50)	Table with UI forms.
ext_postnumber	streetaxis	varchar(16)	Code of streeetat which the entrance is located
ext_postnumber	postnumber	varchar(16)	Entrance number
ext_postnumber	urban_properties_id	varchar(16)	Identifier of related urban propertie
ext_postnumber	the_geom	public.geometry	Geometry of building entrance - point.
config_ui_forms	width	int	Width of a column
config_ui_forms	alias	varchar(50)	Table of alias.
cat_mat_node	node_id	Varchar(16)	Node identifier
cat_mat_node	node_type	Varchar(300)	Type of the node
cat_mat_node	the_geom	public.geometry	Geometry of node
cat_arc	node_id	Varchar(16)	Node identifier
cat_arc	num_arcs	integer	Number of arcs joining the node
cat_arc	the_geom	public.geometry	Geometry of node
cat_node	node_id	Varchar(16)	Node identifier
cat_node	node_conserv	Varchar(16)	Node identifier of the duplicated node
cat_node	the_geom	public.geometry	Geometry of node
cat_mat_element	arc_id		Arc identifier
ext_urban_propierties	table_name	Varchar (50)	Name of table to insert csv data

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
man_storage	min_height	numeric	Minimum height of the storage
ext_urban_propierties	gis_client_layer_name	Varchar (50)	Alias of this table on the GIS project
cat_mat_element	the_geom	public.geometry	Geometry of arc
cat_element	arc_id		Arc identifier
cat_element	the_geom	public.geometry	Geometry of arc
gully	label_x	varchar	X coordinate of the label's location
arc	undelete	bool	Blocks the deleting option
config_param_float	to_version	varchar	Output plugin version
config_py_tables	context	varchar	Context where this table is showed
node	workcat_id_end	varchar	ID of the end of construction work.
man_siphon	security_bar	bool	Information whever exists the security bar.
man_storage	total_height	numeric	Tota hight of the storage
ext_cat_hydrometer	dnom	varchar	Nominal diameter.
rtc_options	id	varchar	Option identifier. Primary key.
ext_rtc_hydrometer_x_data	custom_sum	float8	
ext_cat_hydrometer	ulmc	varchar	
ext_rtc_hydrometer	id_number	text	
ext_cat_hydrometer	multi_jet_flow	varchar	
gully	undelete	bool	Blocks the deleting option
arc	label_x	varchar	X coordinate of the label's location
config_param_int	value	int4	Parameter value
node	label_rotation	numeric	Angle of rotation of the label
connec	label_rotation	numeric	Angle of rotation of the label
connec	label_y	varchar	Y coordinate of the label's location
point	undelete	bool	Blocks the deleting option
config_param_int	to_version	varchar	Output plugin version
config_param_text	to_version	varchar	Output plugin version
config_param_text	value	text	Parameter value
config_py_tables	id	int4	Py tables identifier. Primary key.
config_py_tables	hidden	bool	Decides whether the table is visible for user
man_varc	add_info	varchar	Additional information about the feature
man_wjump	add_info	varchar	Additional information about the feature
man_siphon	add_info	varchar	Additional information about the feature
man_manhole	add_info	varchar	Additional information about the feature
man_netgully	add_info	varchar	Additional information about the feature
man_wwtp	add_info	varchar	Additional information about the feature
man_chamber	node_id	varchar	Node identifier related to the primary key of the node table
man_valve	node_id	varchar	Node identifier related to the primary key of the node table
man_netinit	node_id	varchar	Node identifier related to the primary key of the node table
om_visit_x_connec	connec_id	varchar	Connect identifier related to the primary key of connec table
man_waccel	arc_id	varchar	Arc identifier related to the primary key of arc table
rtc_scada_node	node_id	varchar	Node identifier related to the primary key of the node table
man_chamber	pol_id	varchar	Polygon identifier. Primary key.
ext_rtc_hydrometer_x_data	hydrometer_id	varchar	Id of a related hydrometer.
ext_rtc_hydrometer_x_value	id	int8	Autonumeric field to store unique values for each row (primary key).
cat_arc	geom6	numeric	Auxiliary parameters (width, side slopes, etc.)
cat_feature	id	varchar	Feature identifier. Primary key
ext_rtc_hydrometer_x_value	timestamp	timestamp	Date of capturing the data.

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
om_visit_x_gully	id	int8	Visit on gully identifier. Primary key.
ext_rtc_scada	text	text	Description
ext_rtc_scada_x_value	value	float	Value obtained from scada.
ext_rtc_scada_dma_period	m3_max	float8	Maximum value.
ext_rtc_scada_x_data	scada_id	varchar	Id of a related scada receiver.
ext_rtc_scada_dma_period	m3_avg	float8	Average value.
connec	accessibility	bool	Information whever the connec is accessible.
ext_rtc_scada_x_value	id	int8	Autonumeric field to store unique values for each row (primary key).
ext_rtc_scada_x_value	timestamp	timestamp	Date of capturing the data.
man_wjump	sander_depth	numeric	Depth of the sander.
man_wwtp	wwtp_name	varchar	Name of the wastewater treatment plant.
man_selector_state	id	varchar	ID of value man selector valve. Primary key.
man_manhole	sander_depth	numeric	Depth of the sander.
man_storage	total_width	numeric	Total width of the storage
man_wjump	security_bar	bool	Information whever exists the security bar.
rtc_scada_x_dma	id	int4	Autonumeric field to store unique values for each row (primary key)
man_wjump	wjump_name	varchar	Name of the water jump
rtc_scada_x_sector	sector_id	varchar	Id of a related scada receiver.
rtc_scada_x_dma	dma_id	varchar	ID of the management area related to the connect (District Meter Area)
rtc_scada_x_dma	flow_sign	int2	Flow sign
gully	feature_id	varchar	ID of the feature to which the connec is connected
gully	featurecat_id	varchar	Type of feature to which the connec is connected
ext_cat_hydrometer	svg	varchar	Symbology.
ext_cat_scada	text3	varchar	Field ready to insert text for additional information.
ext_cat_scada	link	varchar	Field to store link to information related to the scada's catalog.
ext_cat_scada	svg	varchar	Symbology.
ext_cat_scada	text1	varchar	Field ready to insert text for additional information.
samplepoint	the_geom	geometry	Point geometry field.
om_visit_x_node	visit_id	int8	Identifier of a visit related to node
point	point_type	varchar	Type of point
ext_rtc_hydrometer	hydrometer_id	varchar	Id of a related hydrometer.
ext_rtc_hydrometer	cat_hydrometer_id	text	Id of a category of related hydrometer.
rtc_value_opti_status	id	varchar	Value domain of status options
samplepoint	sample_id	varchar	Sample point identifier. Primary key.
ext_rtc_hydrometer	identif	text	
ext_cat_hydrometer	class	varchar	
ext_rtc_scada_dma_period	m3_total_period	float8	
inp_conduit	custom_n	numeric	
ext_cat_hydrometer	voltman_flow	varchar	
config_param_bool	value	bool	Parameter value
config_param_bool	to_version	varchar	Output plugin version
dma	undelete	bool	Blocks the deleting option
node	label_y	varchar	Y coordinate of the label's location
arc	label_y	varchar	Y coordinate of the label's location
gully	label_y	varchar	Y coordinate of the label's location
config_param_bool	id	varchar	Bool parameter identifier. Primary key.
config_param_text	from_version	varchar	Input plugin version
config_param_text	context	varchar	Context where this table is showed

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
config_param_float	from_version	varchar	Input plugin version
config_param_float	context	varchar	Context where this table is showed
config_param_float	value	numeric	Parameter value
config_py_tables	table_name	varchar	Name of necessary table.
config_py_tables	observ	varchar	Observation
config_py_tables	plugin_version	varchar	Version of a plugin
man_waccel	add_info	varchar	Additional information about the feature
version	language	varchar	Language version of plugin
version	epsg	int4	EPSG of the project
rtc_hydrometer_x_connec	connec_id	varchar	Connect identifier related to the primary key of connec table
man_varc	arc_id	varchar	Arc identifier related to the primary key of arc table
man_netgully	node_id	varchar	Node identifier related to the primary key of the node table
man_wwtp	node_id	varchar	Node identifier related to the primary key of the node table
om_visit_x_node	node_id	varchar	Node identifier related to the primary key of the node table
man_siphon	arc_id	varchar	Arc identifier related to the primary key of arc table
man_wjump	node_id	varchar	Node identifier related to the primary key of the node table
ext_rtc_hydrometer_x_data	id	int4	Autonumeric field to store unique values for each row (primary key).
ext_rtc_hydrometer_x_data	cat_period_id	varchar	Id of the related period catalog element.
ext_rtc_scada_dma_period	cat_period_id	varchar	Id of a related period catalog.
ext_rtc_scada_dma_period	id	int8	Autonumeric field to store unique values for each row (primary key).
ext_rtc_hydrometer_x_value	hydrometer_id	varchar	Id of a related hydrometer.
cat_arc	geom8	numeric	Auxiliary parameters (width, side slopes, etc.)
ext_rtc_hydrometer_x_value	interval_seconds	int4	Time interval in which the data was captured expressed in seconds.
connec	y2	numeric	Depth at the point of connection to the public network
ext_rtc_scada_x_data	max	float8	Maximum value.
ext_rtc_scada_x_data	sum	float8	Sum of the values.
ext_rtc_scada_x_data	id	int8	Autonumeric field to store unique values for each row (primary key).
ext_rtc_scada_x_data	cat_period_id	varchar	Id of a related period catalog.
connec	y1	numeric	Depth at the point of connection with the building
connec	featurecat_id	varchar	Type of feature to which the connec is connected
ext_rtc_scada_dma_period	m3_min	float8	Minimum value.
ext_rtc_scada_dma_period	dma_id	varchar	Id of a related dma
man_waccel	waccel_name	varchar	Name of the water accelerator.
man_waccel	steps	bool	Information whever exist steps
man_waccel	security_bar	bool	Information whever exists the security bar.
man_chamber	total_height	numeric	Total height of the chamber.
man_netinit	netinit_name	varchar	Name of the initial of the network
man_chamber	total_width	numeric	Total width of the chamber.
man_storage	util_volume	numeric	Usable volume of a storage
rtc_scada_x_sector	flow_sign	int2	Flow sign
rtc_scada_x_dma	scada_id	varchar	Id of a related scada receiver.
man_wjump	mheight	numeric	Height of the water jump.
man_waccel	sander_depth	numeric	Depth of the sander.
man_wjump	mlength	numeric	Length of the water jump.
ext_cat_hydrometer	url	varchar	Field to store URL or folder path with more information related to the hydrometer's catalog.
samplepoint	feature_id	varchar	ID of the feature to which the connec is connected
ext_cat_hydrometer	id	varchar	Autonumeric field to store unique values for each row (primary key).
ext_cat_hydrometer	hydrometer_type	varchar	Type of a hydrometer

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
ext_cat_scada	id	int4	Autonumeric field to store unique values for each row (primary key)
ext_cat_scada	text2	varchar	Field ready to insert text for additional information.
ext_cat_scada	picture	varchar	Picture related to the material.
config_search_plus	hydrometer_field_urban_propierties_code	varchar	Name of field with connec code
rtc_hydrometer_x_connec	hydrometer_id	varchar	Id of a related hydrometer.
point	point_id	varchar	ID of the point. Primary key.
ext_cat_hydrometer	madeby	varchar	
ext_cat_hydrometer	picture	varchar	
om_visit_x_arc	arc_id	varchar	Arc identifier
om_visit	user_name	varchar	Name of a user conducting the visit
om_visit_event	text	text	Text.
samplepoint	place_name	varchar	Location name.
om_visit_value_position	id	varchar	Position value identifier.Primary key.
om_visit_event	value	float8	Event value
om_visit_value_position	descript	varchar	Description
om_visit_event	xcoord	numeric	X coordinate of the event
om_visit_parameter	descript	varchar	Description.
om_visit_parameter_type	observ	varchar	Observation
om_visit_event	id	int8	Event during visit identifier. Primary key
om_visit_parameter	data_type	varchar	Data type.
om_visit_parameter	parameter_type	varchar	Parameter type.
om_visit_x_arc	id	int8	Visit on arc identifier. Primary key.
om_visit_event	azimut	float8	Azimuth of the direction to which is directed the camera.
om_visit_event	position_id	varchar	Location of an event object
om_visit_event	tstamp	timestamp	Event time and date.
om_visit	id	int8	Visit identifier. Primary key
om_visit_value_position	feature	varchar	Feature type to which is related the position value
om_visit_parameter_type	id	varchar	Visit parameter type identifier.Primary key.
om_visit_event	ycoord	numeric	Y coordinate of the event
om_visit_parameter	feature	varchar	Feature type to which is related the position value
om_visit	enddate	timestamp	Visit end date
om_visit_x_arc	visit_id	int8	Identifier of a visit related to arc
connec	label_x	varchar	X coordinate of the label's location
connec	undelete	bool	Blocks the deleting option
node	label_x	varchar	X coordinate of the label's location
config_param_bool	context	varchar	Context where this table is showed
config_param_bool	from_version	varchar	Input plugin version
sector	undelete	bool	Blocks the deleting option
arc	label_rotation	numeric	Angle of rotation of the label
node	undelete	bool	Blocks the deleting option
config_param_text	id	varchar	Text parameter identifier. Primary key.
config_param_text	descript	text	Text parameter description.
config_param_float	descript	text	Float parameter description.
config_param_float	id	varchar	Float parameter identifier. Primary key.
ext_rtc_hydrometer_x_data	avg	float8	Average value.
gully	workcat_id_end	varchar	ID of the end of construction work.
man_chamber	add_info	varchar	Additional information about the feature

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
man_valve	add_info	varchar	Additional information about the feature
man_netinit	add_info	varchar	Additional information about the feature
man_wwtp	pol_id	varchar	Polygon identifier. Primary key.
man_netgully	pol_id	varchar	Polygon identifier. Primary key.
man_storage	pol_id	varchar	Polygon identifier. Primary key.
man_manhole	node_id	varchar	Node identifier related to the primary key of the node table
config_py_tables	qgis_project	bool	Confirmation of a correct QGIS Project
config_py_tables	db_schema	bool	Confirmation of correct schema name
cat_arc	geom5	numeric	Auxiliary parameters (width, side slopes, etc.)
element	workcat_id_end	varchar	ID of the end of construction work.
cat_arc	geom7	numeric	Auxiliary parameters (width, side slopes, etc.)
arc	workcat_id_end	varchar	ID of the end of construction work.
connec	private_connecat_id	varchar	ID of a connec catalog related to the private property connection
ext_rtc_scada	cat_scada_id	varchar	Id of the related scada catalog element.
ext_rtc_scada_x_value	scada_id	varchar	Id of a related scada receiver.
ext_rtc_scada_x_data	avg	float8	Average value.
man_manhole	prot_surface	bool	Information whether exists the surface protector.
man_wjump	steps	bool	Information whever exist steps
man_storage	total_volume	numeric	Total volume of the storage
man_chamber	chamber_name	varchar	Name of the chamber
man_siphon	siphon_name	varchar	Name of the siphon
man_storage	total_length	numeric	Total length of the storage
man_wjump	prot_surface	bool	Information whether exists the surface protector.
man_siphon	steps	bool	Information whever exist steps
rtc_scada_node	scada_id	varchar	Id of a related scada receiver.
man_wjump	mwidth	numeric	Width of the water jump.
rtc_scada_x_sector	id	int4	Autonumeric field to store unique values for each row (primary key)
man_valve	valve_name	varchar	Name of the valve
man_waccel	sander_length	numeric	Length of the sander.
man_outfall	outfall_name	varchar	Name of the outfall
samplepoint	feature_id2	varchar	ID of the feature to which the connec is connected
samplepoint	featurecat_id	varchar	Type of feature to which the connec is connected
point	the_geom	geometry	Point geometry field.
ext_rtc_hydrometer	adress	text	Address where hydrometer is located
ext_cat_period	comment	varchar	Comments related to period catalog. Additional information
ext_cat_period	starttime	timestamp	Defines the begining of the period.
om_visit_x_connec	visit_id	int8	Identifier of a visit related to connec
om_visit_event	visit_id	int8	Identifier of a visit to which are related the events
om_visit_event	parameter_id	varchar	Parameter of event type
om_visit	startdate	timestamp	Visit start date.
config_param_bool	descript	text	Float parameter description.
config_param_int	descript	text	Integer parameter description.
config	buffer_value	float8	Half of a size of automaticly inserted polygon (double geometry)
config_param_int	id	varchar	Integer parameter identifier. Primary key.
config_param_int	context	varchar	Context where this table is showed
config_param_int	from_version	varchar	Input plugin version
gully	label_rotation	numeric	Angle of rotation of the label
config_ui_forms	ui_table	varchar(50)	UI view name

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
config_ui_forms	ui_column	varchar(50)	UI column name
config_ui_forms	status	bool	Status (OPEN, CLOSED or CV)
config_ui_forms	column_index	smallint	Index of a column
man_junction	add_info	varchar(255)	Additional information about the feature
man_storage	add_info	varchar(255)	Additional information about the feature
man_outfall	add_info	varchar(255)	Additional information about the feature
man_conduit	add_info	varchar(255)	Additional information about the feature
connec	workcat_id_end	varchar	ID of the end of construction work.
om_visit_x_gully	gully_id	varchar	Gully identifier related to the primary key of the gully table
ext_rtc_hydrometer_x_value	value	numeric	Value obtained from hydrometer.
ext_rtc_hydrometer_x_value	status	varchar	Status (OPEN, CLOSED or CV)
ext_rtc_hydrometer_x_data	max	float8	Maximum value.
om_visit_x_gully	visit_id	int8	Identifier of a visit related to gully
ext_rtc_hydrometer_x_data	sum	float8	Sum of the values.
connec	feature_id	varchar	ID of the feature to which the connec is connected
ext_rtc_scada_x_value	interval_seconds	int4	Time interval in which the data was captured expressed in seconds.
connec	diagonal	varchar	Information whever the connec is diagonal or perpendicular
ext_rtc_scada_x_value	status	varchar	Status (OPEN, CLOSED or CV)
man_netinit	mwidth	numeric	Width of the netinit
man_chamber	total_volume	numeric	Total volume of the chamber.
man_wjump	sander_length	numeric	Length of the sander.
man_waccel	prot_surface	bool	Information whether exists the surface protector.
man_netinit	mheight	numeric	Height of the netinit
man_netinit	mlength	numeric	Length of the netinit
man_chamber	total_length	numeric	Total length of the chamber.
man_storage	storage_name	varchar	Name of the storage
ext_cat_scada	units	varchar	Type of units in which the data is expressed.
om_visit_parameter	id	varchar	Visit parameter identifier. Primary key.
om_visit_x_connec	id	int8	Visit on connec identifier. Primary key.
om_visit_x_node	id	int8	Visit on node identifier. Primary key.
ext_cat_scada	data_type	varchar	Type of data coming from scada.
ext_cat_scada	url	varchar	Field to store URL or folder path with more information related to the scada's catalog.
plan_selector_state	id	varchar	Masterplan state selector identifier. Primary key.
samplepoint	element_type	varchar	Type of the sample element
samplepoint	code_lab	int4	Sample point code for laboratory
ext_rtc_hydrometer	client_name	text	Client name.
samplepoint	state	varchar	Domain value of samplepoint's state.
ext_cat_period	endtime	timestamp	Defines the end of the period.
ext_cat_hydrometer	link	varchar	Field to store link to information related to the hydrometer's catalog.
ext_hydrometer_category	id	varchar	Hydrometer category identifier.primary key
rtc_options	period_id	varchar	Period identifier where the RTC is allowed
point	text	text	Description of a point
ext_rtc_hydrometer	hydrometer_category	text	Category of a hydrometer
ext_cat_period	period_seconds	int4	Period of time expressed in seconds.
samplepoint	street2	varchar	Location - street 2
rtc_value_opti_coef	id	varchar	Value domain of coefficient options
anl_selector_state	id	varchar	Selector state analysis identifier. Primary key
samplepoint	origin	varchar	Information about the origin

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
ext_cat_period	id	varchar	ID of a period catalog. Primary key.
samplepoint	street1	varchar	Location - street 1
ext_rtc_hydrometer	house_number	text	Home number where hydrometer is located
ext_hydrometer_category	observ	varchar	Observation
rtc_hydrometer	hydrometer_id	varchar	Id of a related hydrometer.
rtc_options	return_coeff	float8	Value domain of the return coefficient applied
samplepoint	representative	bool	Information whever the samplepoint is representative.
rtc_options	rtc_status	varchar	Field to define the status of the Real Time Control (ON or OFF)
samplepoint	rotation	numeric	Field to use in order to rotate the symbology of the GIS canvas
rtc_options	peak_coeff	float8	Value domain of the peak coefficient applied
rpt_selector_result	id	int	Selector identifier.Primary key.
rpt_selector_result	cur_user	text	Current user name
rpt_selector_compare	id	int	Selector identifier.Primary key.
rpt_selector_compare	cur_user	text	Current user name
v_edit_connec	workcat_id_end	character varying	
config_csv_import	gis_client_layer_name	varchar(50)	Alias of the table on the GIS project
db_cat_client_layer	qgis_layer_id	text	QGIS layer identifier.
db_cat_client_layer	db_cat_table_id	text	Identifier of a table in a database.
db_cat_client_layer	layer_alias	text	Name of the layer appearing in the table of content (ToC).
db_cat_client_layer	client_id	text	Client identifier.
db_cat_client_layer	description	text	Description
db_cat_client_layer	pre_dependences	text	
db_cat_client_layer	post_dependences	text	
db_cat_client_layer	db_cat_client_layer_agrupation_id	varchar(50)	
db_cat_client_layer	styleqml_use_asdefault	bool	Existing of default layer style.
db_cat_client_layer	styleqml_file	text	Name of the qml style file
db_cat_client_layer	geometry_field	text	Existing of the layer's geometry field.
db_cat_client_layer	project_criticity	smallint	
db_cat_client_layer	automatic_reload_layer	bool	Existing of automatic reload of the layer
anl_topological_consistency	node_id	character varying	
anl_topological_consistency	node_type	character varying	
anl_topological_consistency	num_arcs	integer	
anl_topological_consistency	the_geom	USER-DEFINED	
audit_function_actions	addr	inet	
config	insert_double_geometry	boolean	
connec	connec_type	character varying	
connec_type	type	character varying	
connec_type	man_table	character varying	
connec_type	event_table	character varying	
db_cat_clientlayer	id	integer	
db_cat_clientlayer	name	text	
db_cat_clientlayer	group_level_1	text	
db_cat_clientlayer	group_level_2	text	
db_cat_clientlayer	group_level_3	text	
db_cat_clientlayer	group_level_4	text	
db_cat_clientlayer	description	text	
db_cat_table	db_cat_clientlayer_id	integer	
db_cat_view	db_cat_clientlayer_id	integer	

UD – COLUMN			
table_id	**column_id**	**column_type**	**description**
element_type	type	character varying	
om_visit_event	compass	double precision	
rtc_scada_x_sector	scada_id	character varying	

PLUGINS DE QGIS HABITUALES PARA EL TRABAJO CON GISWATER

Para trabajar con Giswater son interesantes las funcionalidades que nos proporcionan diferentes plugins de QGIS, entre los que merece la pena destacar:

1) Time manager

2) Openstreetmap

3) QAD

4) Go2streetview

5) Table manager