

Utilities Data Content Standard  
Appendix B: Feature Types  
(Normative)

Facilities Working Group  
Federal Geographic Data Committee

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## Utilities (Feature Types)

**FEATURE TYPE NAME** electrical\_bus\_line

**FEATURE CLASS NAME** utilities\_electrical\_system

**OBJECT TYPE** String/Chain

**DEFINITION** A rigid metallic conductor (copper or aluminum), typically in the form of a flat bar, angle stock, or square tubing.

**Attributes**

basic insulation level rating	bus group identifier	bus group material composition	disposition
electrical cable use	electrical section identifier	event identifier	facility identifier
frame type	from x coordinate	from y coordinate	narrative
neutral conductor size	number of conductors	number of neutral conductors	project identifier
reactance	resistance	substation identifier	to x coordinate
to y coordinate	to z coordinate	voltage	

**FEATURE TYPE NAME** electrical\_cable\_line

**FEATURE CLASS NAME** utilities\_electrical\_system

**OBJECT TYPE** String/Chain

**DEFINITION** A group of conductors used to carry electrical energy from point to point.

**Attributes**

cable group identifier	cable material	cable mounting configuration type	circuit identifier
conductor size	disposition	ductbank identifier	electrical section identifier
event identifier	facility identifier	from x coordinate	from y coordinate
installation type	insulation material	narrative	neutral conductor size
number of conductors	number of neutral conductors	number of phases	owner
phase letter	project identifier	substation identifier	to x coordinate
to y coordinate	to z coordinate	voltage	

**FEATURE TYPE NAME** electrical\_capacitor\_point

**FEATURE CLASS NAME** utilities\_electrical\_system

**OBJECT TYPE** Point

**DEFINITION** An electrical device placed in a circuit to correct power factor by adding reactive power to the circuit.

**Attributes**

capacitor identifier	capacitor reactive power rating	capacitor units of measure	circuit identifier
control type	disposition	event identifier	facility identifier
installation type	manufacturer identifier	model number	narrative
number of phases	phase letter	project identifier	serial number
substation identifier	switch phase	voltage	

## Utilities (Feature Types)

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**FEATURE TYPE NAME** electrical\_ductbank\_line

**FEATURE CLASS NAME** utilities\_electrical\_system

**OBJECT TYPE** String/Chain

**DEFINITION** A tubular structure that provides protection for underground cables contained in conduit.

**Attributes**

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disposition	ductbank identifier	ductbank length	ductbank material
electrical ductbank size	electrical section identifier	event identifier	facility identifier
from x coordinate	from y coordinate	manufacturer identifier	narrative
number of ducts	number of spares	project identifier	substation identifier
to x coordinate	to y coordinate	to z coordinate	voltage

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**FEATURE TYPE NAME** electrical\_generator\_point

**FEATURE CLASS NAME** utilities\_electrical\_system

**OBJECT TYPE** Point

**DEFINITION** A machine which converts mechanical energy into electrical energy.

**Attributes**

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automatic transfer switch	capacity units of measure	circuit identifier	complex power rating
cooling type	disposition	engine horsepower	engine manufacturer identifier
engine model	engine serial number	event identifier	facility identifier
fuel type	generator identifier	generator type	hertz rating
manufacturer identifier	model number	narrative	number of phases
oil capacity	permit number	phase letter	power factor
project identifier	real power rating	serial number	sound dampening insulation
substation identifier	voltage		

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**FEATURE TYPE NAME** electrical\_ground\_point

**FEATURE CLASS NAME** utilities\_electrical\_system

**OBJECT TYPE** Point

**DEFINITION** The location where the electrical configuration is grounded.

**Attributes**

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electrical ground identifier	facility identifier	feature description
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**FEATURE TYPE NAME** electrical\_junction\_point

**FEATURE CLASS NAME** utilities\_electrical\_system

**OBJECT TYPE** Point

**DEFINITION** A box or small vault (usually concrete, brick, or metal) typically located below grade with above grade access in which cables intersect, connect, or pass through.

## Utilities (Feature Types)

### Attributes

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diameter units of measure	disposition	drain type	electrical manhole identifier
elevation units of measure	event identifier	facility identifier	floor elevation
manhole diameter	manufacturer identifier	material	narrative
number of cables	project identifier	rim elevation	substation identifier
type	use		

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**FEATURE TYPE NAME** electrical\_marker\_point

**FEATURE CLASS NAME** utilities\_electrical\_system

**OBJECT TYPE** Point

**DEFINITION** A sign, concrete monument, etc. installed either directly above or immediately adjacent to underground lines, bends, fittings, etc., identifying the location of the electrical equipment.

### Attributes

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electrical marker identifier	facility identifier	feature description
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**FEATURE TYPE NAME** electrical\_meter\_point

**FEATURE CLASS NAME** utilities\_electrical\_system

**OBJECT TYPE** Point

**DEFINITION** A device installed in a line for measuring the electrical power supplied to a facility or through a section of line.

### Attributes

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amp rate	circuit identifier	complex power capacity rating	disposition
electrical meter identifier	event identifier	facility identifier	hertz rating
manufacturer identifier	meter constant	meter type	meter use
model number	narrative	number of phases	owner
phase letter	project identifier	real power rating	serial number
substation identifier	voltage		

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**FEATURE TYPE NAME** electrical\_motor\_point

**FEATURE CLASS NAME** utilities\_electrical\_system

**OBJECT TYPE** Point

**DEFINITION** A machine that converts electrical energy into mechanical energy.

## Utilities (Feature Types)

### Attributes

circuit identifier	disposition	enclosure type	event identifier
facility identifier	hertz rating	insulation classification	manufacturer identifier
model number	motor horsepower rating	motor identifier	motor type
narrative	number of phases	permit number	phase letter
power factor	project identifier	serial number	startup configuration type
voltage	winding configuration type		

**FEATURE TYPE NAME** electrical\_pedestal\_point

**FEATURE CLASS NAME** utilities\_electrical\_system

**OBJECT TYPE** Point

**DEFINITION** An above ground enclosure which provides access to underground cables.

### Attributes

circuit identifier	disposition	event identifier	manufacturer identifier
model number	narrative	pedestal identifier	project identifier
serial number			

**FEATURE TYPE NAME** electrical\_regulator\_point

**FEATURE CLASS NAME** utilities\_electrical\_system

**OBJECT TYPE** Point

**DEFINITION** An electrical device that maintains its output voltage at a certain level even though its input voltage varies in a certain range over time.

### Attributes

capacity units of measure	circuit identifier	complex power rating	cooling type
date of manufacture	disposition	electrical regulator identifier	event identifier
facility identifier	fuse rating	fuse type	installation type
manufacturer identifier	model number	narrative	number of phases
number of taps	oil capacity	owner	percentage tapped
phase letter	primary voltage	project identifier	regulator use
regulator voltage type	regulator weight	secondary voltage	serial number
substation identifier	weight units of measure		

**FEATURE TYPE NAME** electrical\_splice\_point

**FEATURE CLASS NAME** utilities\_electrical\_system

**OBJECT TYPE** Point

**DEFINITION** The connection of two separate cables at their ends or the tapping of a conductor along the path of another conductor.

### Attributes

electrical splice identifier	facility identifier	feature description
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## Utilities (Feature Types)

**FEATURE TYPE NAME** electrical\_substation\_point

**FEATURE CLASS NAME** utilities\_electrical\_system

**OBJECT TYPE** Point

**DEFINITION** A facility in an electrical system where the voltage is reduced from transmission levels to distribution levels.

### **Attributes**

capacity rate	capacity units of measure	continuous power capacity rating	disposition
event identifier	facility identifier	input voltage	narrative
number of circuits	number of spares	number of transformers	owner
project identifier	substation identifier	substation type	voltage output

**FEATURE TYPE NAME** electrical\_switch\_point

**FEATURE CLASS NAME** utilities\_electrical\_system

**OBJECT TYPE** Point

**DEFINITION** A device which closes and opens (connects and disconnects) an electrical circuit.

### **Attributes**

circuit identifier	dimensions units of measure	disposition	event identifier
facility identifier	installation type	manufacturer identifier	model number
narrative	number of phases	number of switches	owner
phase letter	project identifier	serial number	substation identifier
switch dimensions	switch identifier	switch normal positioning	switch rating
switch type	switch weight	switching cubicle identifier	voltage
weight units of measure			

**FEATURE TYPE NAME** electrical\_transformer\_bank\_point

**FEATURE CLASS NAME** utilities\_electrical\_system

**OBJECT TYPE** Point

**DEFINITION** A location containing one or more transformers.

### **Attributes**

circuit identifier	disposition	event identifier	facility identifier
first transformer capacity	mounting type	narrative	number of transformers
primary voltage	project identifier	second transformer capacity	secondary voltage
substation identifier	third transformer capacity	total kva rating	transformer bank identifier

**FEATURE TYPE NAME** electrical\_transformer\_point

**FEATURE CLASS NAME** utilities\_electrical\_system

**OBJECT TYPE** Point

**DEFINITION** A device for increasing or decreasing voltage levels in an electrical system.

## Utilities (Feature Types)

### Attributes

capacity units of measure	complex power rating	cooling type	date of manufacture
disposition	event identifier	facility identifier	fuse rating
fuse type	installation type	load percentage	manufacturer identifier
model number	narrative	number of phases	oil capacity
owner	phase letter	primary voltage	project identifier
secondary voltage	serial number	substation identifier	transformer bank identifier
transformer identifier	transformer type	transformer use	transformer vault identifier
transformer weight	weight units of measure		

**FEATURE TYPE NAME** electrical\_transformer\_vault\_point

**FEATURE CLASS NAME** utilities\_electrical\_system

**OBJECT TYPE** Point

**DEFINITION** An enclosure housing one or more transformers.

### Attributes

disposition	event identifier	facility identifier	manufacturer identifier
model number	narrative	number of transformers	project identifier
serial number	substation identifier	transformer vault identifier	

**FEATURE TYPE NAME** energy\_control\_monitoring\_cable\_line

**FEATURE CLASS NAME** utilities\_cntrl\_mntr\_system

**OBJECT TYPE** String/Chain

**DEFINITION** Data transmission media, typically fiber optics or shielded twisted-pair.

### Attributes

cable dimensions	cable identifier	cable length	cable material
cable sheath type	cable type	control ductbank identifier	decibel loss
disposition	electrical circuit identifier	facility identifier	from x coordinate
from y coordinate	installation type	length units of measure	loose buffered
narrative	number of links	number of twisted pairs	project identifier
section identifier	to x coordinate	to y coordinate	to z coordinate

**FEATURE TYPE NAME** energy\_control\_monitoring\_device\_point

**FEATURE CLASS NAME** utilities\_cntrl\_mntr\_system

**OBJECT TYPE** Point

**DEFINITION** Devices used in an energy monitoring/control system to collect, process or transmit data signals.

## Utilities (Feature Types)

### Attributes

analog inputs	analog outputs	date of manufacture	device identifier
device type	digital inputs	digital outputs	disposition
facility identifier	impedance	impedance units of measure	installation type
manufacturer identifier	model number	narrative	number of twisted pairs
project identifier	readout	serial number	spare analog inputs
spare analog outputs	spare digital inputs	spare digital outputs	

**FEATURE TYPE NAME** energy\_control\_monitoring\_ductbank\_line

**FEATURE CLASS NAME** utilities\_cntrl\_mntr\_system

**OBJECT TYPE** String/Chain

**DEFINITION** A structure containing multiple conduits used to protect underground cables.

### Attributes

control ductbank identifier	disposition	ductbank length	ductbank material
electrical ductbank size	facility identifier	from x coordinate	from y coordinate
narrative	number of ducts	number of spares	project identifier
section identifier	substation identifier	to x coordinate	to y coordinate
to z coordinate	voltage		

**FEATURE TYPE NAME** energy\_control\_monitoring\_junction\_point

**FEATURE CLASS NAME** utilities\_cntrl\_mntr\_system

**OBJECT TYPE** Point

**DEFINITION** A box or small vault located below grade with above grade access where cables intersect, connect, or pass through.

### Attributes

disposition	electrical circuit identifier	electrical pedestal identifier	event identifier
facility identifier	manufacturer identifier	model number	narrative
project identifier	serial number		

**FEATURE TYPE NAME** energy\_control\_monitoring\_marker\_point

**FEATURE CLASS NAME** utilities\_cntrl\_mntr\_system

**OBJECT TYPE** Point

**DEFINITION** A sign, concrete monument, etc. installed either directly above or immediately adjacent to underground lines, bends, fittings, etc.



## Utilities (Feature Types)

### Attributes

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building identifier	date acquired	dimensions units of measure	disposition
facility identifier	manufacturer identifier	model number	narrative
owner	owner status	owner type	pole depth
pole height	pole material	project identifier	rock condition
sign height	sign material composition	sign text	sign width
type	utilities general marker identifier		

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**FEATURE TYPE NAME** exterior\_lighting\_point

**FEATURE CLASS NAME** utilities\_electrical\_ext\_light

**OBJECT TYPE** Point

**DEFINITION** Locations of point sources of general external lighting.

### Attributes

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external lighting identifier	facility identifier	lighting type
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**FEATURE TYPE NAME** fuel\_air\_eliminator\_point

**FEATURE CLASS NAME** utilities\_fuel\_system

**OBJECT TYPE** Point

**DEFINITION** A device or structure placed in the fuel distribution system to separate air from petroleum products.

### Attributes

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air eliminator identifier	facility identifier	feature description
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**FEATURE TYPE NAME** fuel\_anode\_point

**FEATURE CLASS NAME** utilities\_fuel\_system

**OBJECT TYPE** Point

**DEFINITION** A material used for utility distribution systems that is electrically connected to a less electrolytically active material so that it will oxidize in the place of the less active material.

### Attributes

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anode weight	facility identifier	fuel anode identifier	material
narrative	weight units of measure		

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**FEATURE TYPE NAME** fuel\_anode\_test\_station\_point

**FEATURE CLASS NAME** utilities\_fuel\_system

**OBJECT TYPE** Point

**DEFINITION** A central location where anodes are tested for performance.

## Utilities (Feature Types)

### Attributes

facility identifier	fuel anode test station identifier	insulation type	narrative
number of terminals	type	wire size	wire type

**FEATURE TYPE NAME** fuel\_filter\_strainer\_point

**FEATURE CLASS NAME** utilities\_fuel\_system

**OBJECT TYPE** Point

**DEFINITION** A device through which fuel is passed to remove impurities to the fuel. Usually placed in fuel lines near fill points.

### Attributes

facility identifier	feature description	filter strainer identifier
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**FEATURE TYPE NAME** fuel\_fitting\_point

**FEATURE CLASS NAME** utilities\_fuel\_system

**OBJECT TYPE** Point

**DEFINITION** A fitting is an item used to connect, cap, plug or otherwise alter a pipe.

### Attributes

building identifier	date acquired	dimensions units of measure	disposition
facility identifier	fitting length	fitting width	fuel fitting identifier
fuel pipe identifier	fuel section identifier	fuel zone identifier	manufacturer identifier
material	model number	narrative	owner
owner status	owner type	project identifier	serial number
size	type		

**FEATURE TYPE NAME** fuel\_hydrant\_point

**FEATURE CLASS NAME** utilities\_fuel\_system

**OBJECT TYPE** Point

**DEFINITION** Location where fuel is control discharged to users.

### Attributes

building identifier	date acquired	diameter units of measure	disposition
elevation units of measure	facility identifier	fuel hydrant identifier	fuel pipe identifier
fuel zone identifier	hydrant elevation	hydrant type	manufacturer identifier
model number	narrative	outlet 1 diameter	outlet 2 diameter
outlet 3 diameter	owner	owner status	owner type
pressure units of measure	project identifier	residual pressure	static pressure
valve identifier	valve style		

## Utilities (Feature Types)

**FEATURE TYPE NAME** fuel\_junction\_point

**FEATURE CLASS NAME** utilities\_fuel\_system

**OBJECT TYPE** Point

**DEFINITION** A box or small vault (usually concrete, brick, or cast iron) located below grade with above grade access where pipes intersect. The manhole also houses associated fittings, valves, meters, etc.

### Attributes

air relief valve	building identifier	dimensions units of measure	disposition
drain type	elevation units of measure	facility identifier	fuel manhole identifier
fuel zone identifier	invert elevation	manhole diameter	manhole length
manhole width	manufacturer identifier	material	model number
narrative	number of pipes	number of valves	owner
owner status	owner type	project identifier	rim elevation
status	type	use	

**FEATURE TYPE NAME** fuel\_line

**FEATURE CLASS NAME** utilities\_fuel\_system

**OBJECT TYPE** String/Chain

**DEFINITION** A pipe used to carry a substance from location to location (main line, service line, vent line, etc).

### Attributes

bottom slope	building identifier	cathodic protection	date acquired
dimensions units of measure	disposition	elevation units of measure	facility identifier
from x coordinate	from y coordinate	fuel pipe identifier	fuel pumping station identifier
fuel section identifier	fuel type	fuel zone identifier	invert elevation 1
invert elevation 2	manufacturer identifier	material	maximum pressure
model number	narrative	normal pressure	owner
owner status	owner type	pressure units of measure	project identifier
size	slope units of measure	source identifier	tank identifier
to x coordinate	to y coordinate	to z coordinate	type
use	water system pipe length		

**FEATURE TYPE NAME** fuel\_marker\_point

**FEATURE CLASS NAME** utilities\_fuel\_system

**OBJECT TYPE** Point

**DEFINITION** A sign, concrete monument, etc. installed either directly above or immediately adjacent to underground lines, bends, fittings, etc.

## Utilities (Feature Types)

### Attributes

building identifier	date acquired	dimensions units of measure	disposition
facility identifier	manufacturer identifier	model number	narrative
owner	owner status	owner type	pole depth
pole height	pole material	project identifier	rock condition
sign height	sign material composition	sign text	sign width
type	utilities general marker identifier		

**FEATURE TYPE NAME** fuel\_meter\_point

**FEATURE CLASS NAME** utilities\_fuel\_system

**OBJECT TYPE** Point

**DEFINITION** A device installed in a line for measuring the quantity and or rate of fuel to a facility or through a section of line.

### Attributes

building identifier	date acquired	disposition	elevation units of measure
facility identifier	fuel manhole identifier	fuel meter identifier	fuel pipe identifier
fuel zone identifier	installation type	manufacturer identifier	meter customer
meter elevation	meter service	model number	narrative
owner	owner status	owner type	project identifier
serial number	size	type	

**FEATURE TYPE NAME** fuel\_oil\_water\_separator\_point

**FEATURE CLASS NAME** utilities\_fuel\_system

**OBJECT TYPE** Point

**DEFINITION** A filtering device placed in the fuel stream specifically to remove oil and water from the fuel.

### Attributes

capacity units of measure	date acquired	disposal description	disposition
facility identifier	flow capacity	flow units of measure	fuel pumping station identifier
grit chamber	manufacturer identifier	narrative	oil capacity
optimum operating temperature	owner	owner status	owner type
permit expiration date	permit number	pipe in identifier	pipe out identifier
project identifier	separator code	separator content	separator identifier
separator name	separator process	separator volume	temperature units of measure
type	volume units of measure	waste water oil-water separator flo	

**FEATURE TYPE NAME** fuel\_pump\_booster\_station\_point

**FEATURE CLASS NAME** utilities\_fuel\_system

**OBJECT TYPE** Point

**DEFINITION** A building in which one or more pumps operate to supply material flowing at adequate pressure to or from a distribution system.

## Utilities (Feature Types)

### Attributes

building identifier	capacity alarm level	capacity units of measure	condition
date acquired	design	dimensions units of measure	disposition
elevation units of measure	facility identifier	fuel pumping station identifier	fuel source
fuel zone identifier	narrative	nodal elevation	number of pumps
owner	owner status	owner type	project identifier
pump elevation	station capacity	station length	station type
station width			

**FEATURE TYPE NAME** fuel\_pump\_point

**FEATURE CLASS NAME** utilities\_fuel\_system

**OBJECT TYPE** Point

**DEFINITION** A mechanical device that draws material into itself through an entrance port and forces the material out through an exhaust port.

### Attributes

actual outflow	building identifier	capacity rate	cooling method
date acquired	disposition	elevation units of measure	facility identifier
flow units of measure	fuel pumping station identifier	fuel zone identifier	manufacturer identifier
model number	narrative	observation identifier	owner
owner status	owner type	pipe in identifier	pipe out identifier
priming method	priming requirement	project identifier	pump elevation
pump horsepower rating	pump identifier	serial number	type
use			

**FEATURE TYPE NAME** fuel\_rectifier\_point

**FEATURE CLASS NAME** utilities\_fuel\_system

**OBJECT TYPE** Point

**DEFINITION** A device that changes alternating current to direct current for an impressed current cathodic protection system on an element of the distribution system.

### Attributes

cooling method	current output	current units of measure	enclosure type
facility identifier	input voltage	internal meter	narrative
number of phases	phase letter	rectifier identifier	voltage output

**FEATURE TYPE NAME** fuel\_regulator\_reducer\_point

**FEATURE CLASS NAME** utilities\_fuel\_system

**OBJECT TYPE** Point

**DEFINITION** A pressure regulator automatically reduces the pressure on the downstream side of the valve to a preset magnitude.

## Utilities (Feature Types)

### Attributes

building identifier	date acquired	disposition	facility identifier
fuel manhole identifier	fuel pumping station identifier	fuel zone identifier	manufacturer identifier
model number	narrative	outlet pressure	owner
owner status	owner type	pipe in identifier	pipe out identifier
pressure in	pressure units of measure	project identifier	regulator identifier
required pressure	serial number	size	type

**FEATURE TYPE NAME** fuel\_source\_point

**FEATURE CLASS NAME** utilities\_fuel\_system

**OBJECT TYPE** Point

**DEFINITION** The point from which the utility is supplied a product for processing and distribution.

### Attributes

building identifier	date acquired	disposition	facility identifier
name	narrative	owner	owner status
owner type	project identifier	source identifier	type

**FEATURE TYPE NAME** fuel\_tank\_point

**FEATURE CLASS NAME** utilities\_fuel\_system

**OBJECT TYPE** Point

**DEFINITION** An above or below grade receptacle or chamber for holding components on a temporary basis prior to transfer or use.

### Attributes

altitude valve	Area Unit of Measure	building identifier	capacity units of measure
date acquired	dimensions units of measure	disposition	elevation units of measure
facility identifier	fuel type	fuel zone identifier	head units of measure
invert elevation	manufacturer identifier	material	model number
narrative	normal head	normal pressure	overflow elevation
owner	owner status	owner type	permit number
pressure units of measure	project identifier	rim elevation	serial number
tank style	tank capacity	tank diameter	tank identifier
tank length	tank use	tank width	

**FEATURE TYPE NAME** fuel\_valve\_point

**FEATURE CLASS NAME** utilities\_fuel\_system

**OBJECT TYPE** Point

**DEFINITION** A fitting or device used for shutting or throttling flow through a line.

## Utilities (Feature Types)

### Attributes

date acquired	disposition	elevation units of measure	facility identifier
fuel manhole identifier	fuel pipe identifier	fuel zone identifier	manufacturer identifier
narrative	owner	owner status	owner type
project identifier	use	valve diameter	valve elevation
valve identifier	valve style		

**FEATURE TYPE NAME** heat\_cool\_anchor\_point

**FEATURE CLASS NAME** utilities\_heat\_cool\_system

**OBJECT TYPE** Point

**DEFINITION** A structure, typically concrete, used to either guide the expansion of pipes or used to fix the movement of some part of the expansion section.

### Attributes

anchor identifier	anchor type	facility identifier	heating and cooling system pipe id
narrative			

**FEATURE TYPE NAME** heat\_cool\_anode\_point

**FEATURE CLASS NAME** utilities\_heat\_cool\_system

**OBJECT TYPE** Point

**DEFINITION** A device used in utility distribution systems that is electrically connected to a less electrolytically active material so that it will oxidize in the place of the less active material.

### Attributes

anode weight	facility identifier	heating and cooling system anode i	material
narrative	weight units of measure		

**FEATURE TYPE NAME** heat\_cool\_anode\_test\_station\_point

**FEATURE CLASS NAME** utilities\_heat\_cool\_system

**OBJECT TYPE** Point

**DEFINITION** A central location where anodes are tested for performance.

### Attributes

facility identifier	heating and cooling system anode t	insulation type	narrative
number of terminals	type	wire size	wire type

**FEATURE TYPE NAME** heat\_cool\_fitting\_point

**FEATURE CLASS NAME** utilities\_heat\_cool\_system

**OBJECT TYPE** Point

**DEFINITION** A fitting is an item used to connect, cap, plug or otherwise attach to a pipe.

## Utilities (Feature Types)

### Attributes

building identifier	date acquired	diameter	diameter units of measure
dimensions units of measure	disposition	elevation units of measure	facility identifier
fitting elevation	fitting length	fitting width	ground elevation
heating and cooling system fitting	heating and cooling system pipe id	heating and cooling system zone id	manufacturer identifier
material	model number	narrative	owner
owner status	owner type	project identifier	serial number
size	size units of measure	type	

**FEATURE TYPE NAME** heat\_cool\_junction\_point

**FEATURE CLASS NAME** utilities\_heat\_cool\_system

**OBJECT TYPE** Point

**DEFINITION** A box or small vault (usually concrete, brick, or cast iron) located below grade with above grade access where pipes intersect. The manhole also houses associated fittings, valves, meters, etc.

### Attributes

air relief valve	building identifier	dimensions units of measure	disposition
drain type	elevation units of measure	facility identifier	ground elevation
heating and cooling system manho	heating and cooling system zone id	invert elevation	manhole diameter
manhole length	manhole width	manufacturer identifier	material
model number	narrative	number of pipes	number of valves
owner	owner status	owner type	project identifier
rim elevation	type	use	

**FEATURE TYPE NAME** heat\_cool\_line

**FEATURE CLASS NAME** utilities\_heat\_cool\_system

**OBJECT TYPE** String/Chain

**DEFINITION** A pipe used to carry a substance from location to location (main line, service line, vent line, etc).

### Attributes

bottom slope	building identifier	cathodic protection	date acquired
dimensions units of measure	disposition	elevation units of measure	facility identifier
from x coordinate	from y coordinate	ground elevation 1	ground elevation 2
heating and cooling system pipe id	heating and cooling system plant i		heating and cooling system zone id
invert elevation 1	invert elevation 2	manufacturer identifier	material
maximum pressure	model number	narrative	normal pressure
owner	owner status	owner type	pressure units of measure
project identifier	size	slope units of measure	tape
to x coordinate	to y coordinate	to z coordinate	type
use	water system pipe length		



## Utilities (Feature Types)

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**FEATURE TYPE NAME** heat\_cool\_marker\_point

**FEATURE CLASS NAME** utilities\_heat\_cool\_system

**OBJECT TYPE** Point

**DEFINITION** A sign, concrete monument, etc., installed either directly above or immediately adjacent equipment marking its location.

**Attributes**

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building identifier	date acquired	dimensions units of measure	disposition
facility identifier	manufacturer identifier	model number	narrative
owner	owner status	owner type	pole depth
pole height	pole material	project identifier	rock condition
sign height	sign material composition	sign text	sign width
type	utilities general marker identifier		

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**FEATURE TYPE NAME** heat\_cool\_meter\_point

**FEATURE CLASS NAME** utilities\_heat\_cool\_system

**OBJECT TYPE** Point

**DEFINITION** A device installed in a line for measuring the quantity and or rate of water to a facility or through a section of line.

**Attributes**

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building identifier	date acquired	disposition	elevation units of measure
facility identifier	ground elevation	heating and cooling system manho	heating and cooling system meter i
heating and cooling system pipe id	heating and cooling system zone id	installation type	manufacturer identifier
meter customer	meter elevation	meter service	model number
narrative	owner	owner status	owner type
project identifier	serial number	size	size units of measure
type			

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**FEATURE TYPE NAME** heat\_cool\_plant\_area

**FEATURE CLASS NAME** utilities\_heat\_cool\_system

**OBJECT TYPE** G/GT Polygon

**DEFINITION** A building or structure containing boilers, furnaces, chillers, pumps and appurtenant equipment to produce the water temperature/pressure combinations which are distributed to other buildings and facilities.

## Utilities (Feature Types)

### Attributes

Area Unit of Measure	building identifier	cooling capacity	cooling capacity unit of measure
cooling pressure	date acquired	dimensions units of measure	disposition
elevation units of measure	facility identifier	ground elevation	heating and cooling system plant i
	heating capacity	heating capacity unit of measure	heating pressure
name	narrative	nominal cooling temperature	nominal heating temperature
owner	owner status	owner type	perimeter units of measure
plant elevation	plant length	plant width	pressure units of measure
product type	project identifier	temperature units of measure	type

**FEATURE TYPE NAME** heat\_cool\_pump\_point

**FEATURE CLASS NAME** utilities\_heat\_cool\_system

**OBJECT TYPE** Point

**DEFINITION** A mechanical device that draws material into itself through an entrance port and forces the material out through an exhaust port.

### Attributes

actual capacity	building identifier	capacity rate	capacity units of measure
cooling method	date acquired	disposition	elevation units of measure
facility identifier	ground elevation	heating and cooling system pump i	heating and cooling system zone id
manufacturer identifier	model number	narrative	observation identifier
owner	owner status	owner type	pipe in identifier
pipe out identifier	power required	priming method	priming requirement
project identifier	pump elevation	serial number	total dynamic head rating
total dynamic head units of measur	type	use	

**FEATURE TYPE NAME** heat\_cool\_rectifier\_point

**FEATURE CLASS NAME** utilities\_heat\_cool\_system

**OBJECT TYPE** Point

**DEFINITION** A device that changes alternating current to direct current for an impressed current cathodic protection system.

### Attributes

cooling method	current output	current units of measure	enclosure type
facility identifier	heating and cooling system rectifie	input voltage	internal meter
narrative	number of phases	phase letter	voltage output

**FEATURE TYPE NAME** heat\_cool\_regulator\_point

**FEATURE CLASS NAME** utilities\_heat\_cool\_system

**OBJECT TYPE** Point

**DEFINITION** A pressure regulator automatically reduces the pressure on the downstream side of the valve to a preset magnitude.

## Utilities (Feature Types)

### Attributes

building identifier	date acquired	disposition	elevation units of measure
facility identifier	ground elevation	heating and cooling system manho	heating and cooling system regulat
heating and cooling system zone id	manufacturer identifier	model number	narrative
outlet pressure	owner	owner status	owner type
pipe in identifier	pipe out identifier	pressure in	pressure units of measure
project identifier	regulator elevation	required pressure	serial number
size	type		

**FEATURE TYPE NAME** heat\_cool\_valve\_point

**FEATURE CLASS NAME** utilities\_heat\_cool\_system

**OBJECT TYPE** Point

**DEFINITION** A fitting or device used for shutting or throttling flow through a line.

### Attributes

date acquired	disposition	elevation units of measure	facility identifier
ground elevation	heating and cooling system manho	heating and cooling system pipe id	heating and cooling system valve i
heating and cooling system zone id	manufacturer identifier	narrative	owner
owner status	owner type	project identifier	size units of measure
use	valve elevation	valve size	valve style

**FEATURE TYPE NAME** industrial\_waste\_discharge\_point

**FEATURE CLASS NAME** utilities\_industrial\_system

**OBJECT TYPE** Point

**DEFINITION** Any location where industrial waste water pipes directly discharge effluent.

### Attributes

building identifier	date acquired	discharge identifier	disposition
facility identifier	industrial waste water collection di	industrial waste water pipe identifi	industrial waste water tank identifi
industrial waste water treatment pl		narrative	owner
owner status	owner type	project identifier	tributary code
type			

**FEATURE TYPE NAME** industrial\_waste\_fitting\_point

**FEATURE CLASS NAME** utilities\_industrial\_system

**OBJECT TYPE** Point

**DEFINITION** A fitting is an item used to connect, cap, plug or otherwise alter a pipe.

## Utilities (Feature Types)

### Attributes

building identifier	date acquired	dimensions units of measure	disposition
facility identifier	fitting depth	fitting length	fitting width
industrial waste water collection di	industrial waste water fitting identi	industrial waste water pipe identifi	industrial waste water section ident
manufacturer identifier	material	model number	narrative
owner	owner status	owner type	project identifier
serial number	size	tributary code	type

**FEATURE TYPE NAME** industrial\_waste\_grit\_chamber\_point

**FEATURE CLASS NAME** utilities\_industrial\_system **OBJECT TYPE** Point

**DEFINITION** A chamber designed to remove sand, gravel, or other heavy solids that have subsiding velocities or specific gravities substantially greater than those of the organic solids in the waste water.

### Attributes

capacity units of measure	date acquired	disposition	facility identifier
flow capacity	flow units of measure	grit type	industrial waste water collection di
industrial waste water grit chamber	industrial waste water treatment pl		manufacturer identifier
narrative	oil-water separator	owner	owner status
owner type	pipe in identifier	pipe out identifier	project identifier
storage capacity	tributary code	waste water oil-water separator flo	

**FEATURE TYPE NAME** industrial\_waste\_inlet\_point

**FEATURE CLASS NAME** utilities\_industrial\_system **OBJECT TYPE** Point

**DEFINITION** The location where water is collected and received into the utility system.

### Attributes

date acquired	design capacity	disposition	elevation units of measure
facility identifier	flow units of measure	industrial waste water collection di	industrial waste water inlet identifi
industrial waste water pipe identifi	inlet step	invert elevation	manufacturer identifier
model number	narrative	owner	owner status
owner type	project identifier	tributary code	weir elevation

**FEATURE TYPE NAME** industrial\_waste\_junction\_point

**FEATURE CLASS NAME** utilities\_industrial\_system **OBJECT TYPE** Point

**DEFINITION** A box or small vault (usually concrete, brick, or cast iron) located below grade with above grade access where pipes intersect. The manhole also houses associated fittings, valves, meters, etc.

## Utilities (Feature Types)

### Attributes

building identifier	dimensions units of measure	disposition	drain type
elevation units of measure	facility identifier	industrial waste water collection di	industrial waste water manhole ide
invert elevation	liner type	manhole diameter	manhole length
manhole width	manufacturer identifier	material	model number
narrative	neutralization agent	number of pipes	owner
owner status	owner type	project identifier	reactant
rim elevation	tributary code	type	use

**FEATURE TYPE NAME** industrial\_waste\_lagoon\_area

**FEATURE CLASS NAME** utilities\_industrial\_system

**OBJECT TYPE** G/GT Polygon

**DEFINITION** A shallow man made pool or pond for the purpose of holding industrial waste.

### Attributes

aerator	aerator power	Area Unit of Measure	average depth
average invert elevation	basin identifier	cross dikes	date acquired
date analyzed	date constructed	dimensions units of measure	discharge identifier
elevation units of measure	facility identifier	frequency units of measure	horsepower units of measure
industrial waste water collection di	industrial waste water lagoon ident	industrial waste water treatment pl	
laboratory name	laboratory type	lagoon length	lagoon width
managing office	manufacturer identifier	monitoring agency	name
narrative	number of inlet pipes	number of outlet pipes	number of pumps
outlet control	owner	owner status	owner type
perimeter units of measure	pipe in identifier	pipe out identifier	pipe outlet
project identifier	sampling frequency	soil condition	soil erosion
soil family	soil texture	test type	tributary code
type	user indicator	waste water lagoon sanitary waste	weir identifier
weir outlet			

**FEATURE TYPE NAME** industrial\_waste\_line

**FEATURE CLASS NAME** utilities\_industrial\_system

**OBJECT TYPE** String/Chain

**DEFINITION** A pipe used to carry a substance from location to location (main line, service line, vent line, etc).

## Utilities (Feature Types)

### Attributes

bottom slope	building identifier	date acquired	dimensions units of measure
disposition	drainage pattern	drainage texture	elevation units of measure
facility identifier	from x coordinate	from y coordinate	industrial waste water collection di
industrial waste water pipe identifi	industrial waste water pumping sta	industrial waste water section ident	industrial waste water tank identifi
industrial waste water treatment pl		invert elevation 1	invert elevation 2
lined	manufacturer identifier	material	maximum pressure
model number	narrative	normal pressure	owner
owner status	owner type	pressure units of measure	project identifier
size	slope units of measure	to x coordinate	to y coordinate
to z coordinate	tributary code	type	use
water system pipe length			

**FEATURE TYPE NAME** industrial\_waste\_marker\_point

**FEATURE CLASS NAME** utilities\_industrial\_system

**OBJECT TYPE** Point

**DEFINITION** A sign, concrete monument, etc. installed either directly above or immediately adjacent to underground lines, bends, fittings, etc.

### Attributes

building identifier	date acquired	dimensions units of measure	disposition
facility identifier	manufacturer identifier	model number	narrative
owner	owner status	owner type	pole depth
pole height	pole material	project identifier	rock condition
sign height	sign material composition	sign text	sign width
type	utilities general marker identifier		

**FEATURE TYPE NAME** industrial\_waste\_meter\_point

**FEATURE CLASS NAME** utilities\_industrial\_system

**OBJECT TYPE** Point

**DEFINITION** A device installed in a line for measuring the quantity and or rate of waste through a section of line.

### Attributes

building identifier	date acquired	design	dimensions units of measure
disposition	elevation units of measure	facility identifier	ground elevation
industrial waste water collection di	industrial waste water manhole ide	industrial waste water meter identif	industrial waste water pipe identifi
installation type	manufacturer identifier	meter depth	meter elevation
meter length	meter width	model number	narrative
owner	owner status	owner type	project identifier
serial number	size	type	

## Utilities (Feature Types)

**FEATURE TYPE NAME** industrial\_waste\_neutralizer\_point

**FEATURE CLASS NAME** utilities\_industrial\_system

**OBJECT TYPE** Point

**DEFINITION** A receptacle or chamber, which by chemical reactions with reactant materials in the receptacle, makes liquid waste passing through the receptacle chemically neutral.

### Attributes

building identifier	dimensions units of measure	disposition	drain type
elevation units of measure	facility identifier	industrial waste water collection di	invert elevation
liner type	manufacturer identifier	material	model number
narrative	neutralization agent	neutralization pit diameter	neutralization pit identifier
neutralization pit length	neutralization pit width	number of pipes	owner
owner status	owner type	project identifier	reactant
rim elevation	tributary code	type	

**FEATURE TYPE NAME** industrial\_waste\_oil\_water\_separator\_point

**FEATURE CLASS NAME** utilities\_industrial\_system

**OBJECT TYPE** Point

**DEFINITION** A device or structure placed in the waste stream to separate water from oil products.

### Attributes

capacity units of measure	date acquired	disposal description	disposition
facility identifier	flow capacity	flow units of measure	grit chamber
industrial waste water collection di	industrial waste water oil-water se	industrial waste water pumping sta	industrial waste water tank identifi
industrial waste water treatment pl		manufacturer identifier	narrative
oil capacity	optimum operating temperature	owner	owner status
owner type	permit expiration date	permit number	pipe in identifier
pipe out identifier	project identifier	separator code	separator content
separator name	separator process	separator volume	temperature units of measure
tributary code	type	volume units of measure	waste water oil-water separator flo

**FEATURE TYPE NAME** industrial\_waste\_pump\_point

**FEATURE CLASS NAME** utilities\_industrial\_system

**OBJECT TYPE** Point

**DEFINITION** A mechanical device that draws material into itself through an entrance port and forces the material out through an exhaust port.

## Utilities (Feature Types)

### Attributes

actual capacity	building identifier	capacity rate	capacity units of measure
cooling method	date acquired	disposition	elevation units of measure
facility identifier	industrial waste water collection di	industrial waste water pump identif	industrial waste water pumping sta
industrial waste water treatment pl		manufacturer identifier	model number
narrative	owner	owner status	owner type
pipe in identifier	pipe out identifier	priming method	priming requirement
project identifier	pump elevation	pump horsepower rating	serial number
tributary code	type	use	

**FEATURE TYPE NAME** industrial\_waste\_pump\_station\_ejector\_point

**FEATURE CLASS NAME** utilities\_industrial\_system

**OBJECT TYPE** Point

**DEFINITION** A building in which one or more pumps operate to supply material flowing at adequate pressure to or from a distribution system.

### Attributes

alarm valve level	building identifier	capacity units of measure	condition
date acquired	design	dimensions units of measure	disposition
elevation units of measure	facility identifier	high water elevation	industrial waste water collection di
industrial waste water pumping sta	industrial waste water treatment pl		narrative
nodal elevation	number of pumps	owner	owner status
owner type	project identifier	station length	station width
tributary code	type	wet well capacity	

**FEATURE TYPE NAME** industrial\_waste\_tank\_point

**FEATURE CLASS NAME** utilities\_industrial\_system

**OBJECT TYPE** Point

**DEFINITION** An above or below grade receptacle or chamber for holding components on a temporary basis prior to transfer or use.

### Attributes

altitude valve	Area Unit of Measure	building identifier	capacity units of measure
date acquired	dimensions units of measure	disposition	elevation units of measure
facility identifier	head units of measure	industrial waste water collection di	industrial waste water tank identifi
invert elevation	manufacturer identifier	material	model number
narrative	normal head	overflow elevation	owner
owner status	owner type	permit number	project identifier
serial number	tank style	tank capacity	tank depth
tank diameter	tank length	tank width	top elevation
tributary code	use		



## Utilities (Feature Types)

**FEATURE TYPE NAME** industrial\_waste\_treatment\_plant\_area

**FEATURE CLASS NAME** utilities\_industrial\_system

**OBJECT TYPE** G/GT Polygon

**DEFINITION** Equipment; or a structure containing equipment, processes, piping, or components; used to treat and remove unwanted constituents.

### **Attributes**

actual rate of flow	Area Unit of Measure	building identifier	bypass
condition	date acquired	dimensions units of measure	disposition
elevation units of measure	facility identifier	flow units of measure	industrial waste water treatment pl
	name	narrative	number of pumps
owner	owner status	owner type	perimeter units of measure
plant elevation	plant length	plant width	project identifier
rated flow capacity	type		

**FEATURE TYPE NAME** industrial\_waste\_valve\_point

**FEATURE CLASS NAME** utilities\_industrial\_system

**OBJECT TYPE** Point

**DEFINITION** A fitting or device used for shutting or throttling flow through a line.

### **Attributes**

date acquired	disposition	elevation units of measure	facility identifier
industrial waste water collection di	industrial waste water manhole ide	industrial waste water pipe identifi	industrial waste water treatment pl
industrial waste water valve identif	manufacturer identifier	narrative	owner
owner status	owner type	project identifier	size
tributary code	use	valve elevation	valve style

**FEATURE TYPE NAME** natural\_gas\_anode\_point

**FEATURE CLASS NAME** utilities\_natural\_gas\_system

**OBJECT TYPE** Point

**DEFINITION** A material used for utility distribution systems that is electrically connected to a less electrolytically active material so that it will oxidize in the place of the less active material.

### **Attributes**

anode identifier	anode weight	facility identifier	material
narrative	weight units of measure		

**FEATURE TYPE NAME** natural\_gas\_anode\_test\_station\_point

**FEATURE CLASS NAME** utilities\_natural\_gas\_system

**OBJECT TYPE** Point

**DEFINITION** A central location where anodes are tested for performance.

## Utilities (Feature Types)

### Attributes

facility identifier	insulation type	narrative	number of terminals
test station identifier	type	wire size	wire type

**FEATURE TYPE NAME** natural\_gas\_fill\_point

**FEATURE CLASS NAME** utilities\_natural\_gas\_system

**OBJECT TYPE** Point

**DEFINITION** Location where gas is control discharged to users.

### Attributes

building identifier	date acquired	diameter units of measure	disposition
elevation units of measure	facility identifier	gas pipe identifier	gas type
gas valve identifier	gas zone identifier	hydrant elevation	hydrant identifier
hydrant type	manufacturer identifier	model number	narrative
outlet 1 diameter	outlet 2 diameter	outlet 3 diameter	owner
owner status	owner type	pressure units of measure	project identifier
residual pressure	source	static pressure	valve style

**FEATURE TYPE NAME** natural\_gas\_fitting\_point

**FEATURE CLASS NAME** utilities\_natural\_gas\_system

**OBJECT TYPE** Point

**DEFINITION** Hardware used to cap, plug, or join pieces of pipe.

### Attributes

building identifier	date acquired	dimensions units of measure	disposition
facility identifier	fitting length	fitting width	gas fitting identifier
gas pipe identifier	gas section identifier	gas zone identifier	manufacturer identifier
material	model number	narrative	owner
owner status	owner type	project identifier	serial number
size	type		

**FEATURE TYPE NAME** natural\_gas\_junction\_point

**FEATURE CLASS NAME** utilities\_natural\_gas\_system

**OBJECT TYPE** Point

**DEFINITION** A box or small vault (usually concrete, brick, or cast iron) located below grade with above grade access where pipes intersect. The manhole also houses associated fittings, valves, meters, etc.

## Utilities (Feature Types)

### Attributes

air relief valve	building identifier	dimensions units of measure	disposition
drain type	elevation units of measure	facility identifier	gas manhole identifier
gas zone identifier	invert elevation	manhole diameter	manhole length
manhole width	manufacturer identifier	material	model number
narrative	number of pipes	number of valves	owner
owner status	owner type	project identifier	rim elevation
type	use		

**FEATURE TYPE NAME** natural\_gas\_light\_point

**FEATURE CLASS NAME** utilities\_natural\_gas\_system

**OBJECT TYPE** Point

**DEFINITION** A point graphic representing the location of a gas light fixture. A gas light fixture utilizes gas as it's energy source and contains a flame used for illumination of an area.

### Attributes

building identifier	date acquired	disposition	facility identifier
fixture height	fixture identifier	fixture type	fixture use
gas pumping station identifier	gas type	gas zone identifier	height units of measure
manufacturer identifier	model number	narrative	owner
owner status	owner type	pole identifier	project identifier
rate units of measure	use rate		

**FEATURE TYPE NAME** natural\_gas\_line

**FEATURE CLASS NAME** utilities\_natural\_gas\_system

**OBJECT TYPE** String/Chain

**DEFINITION** A pipe used to carry a substance from location to location (main line, service line, vent line, etc).

### Attributes

building identifier	cathodic protection	date acquired	dimensions units of measure
disposition	elevation units of measure	facility identifier	from x coordinate
from y coordinate	gas pipe identifier	gas pumping station identifier	gas section identifier
gas source identifier	gas tank identifier		gas type
gas zone identifier	invert elevation 1	invert elevation 2	manufacturer identifier
material	maximum pressure	model number	narrative
normal pressure	owner	owner status	owner type
pressure units of measure	project identifier	size	source
to x coordinate	to y coordinate	to z coordinate	type
use	water system pipe length		

## Utilities (Feature Types)

---

**FEATURE TYPE NAME** natural\_gas\_marker\_point

**FEATURE CLASS NAME** utilities\_natural\_gas\_system

**OBJECT TYPE** Point

**DEFINITION** A sign, concrete monument, etc. installed either directly above or immediately adjacent to underground lines, bends, fittings, etc.

**Attributes**

---

building identifier	date acquired	dimensions units of measure	disposition
facility identifier	manufacturer identifier	model number	narrative
owner	owner status	owner type	pole depth
pole height	pole material	project identifier	rock condition
sign height	sign material composition	sign text	sign width
type	utilities general marker identifier		

---

**FEATURE TYPE NAME** natural\_gas\_meter\_point

**FEATURE CLASS NAME** utilities\_natural\_gas\_system

**OBJECT TYPE** Point

**DEFINITION** A device installed in a line for measuring the quantity and or rate of gas to a facility or through a section of line.

**Attributes**

---

building identifier	date acquired	diameter units of measure	disposition
elevation units of measure	facility identifier	gas manhole identifier	gas meter identifier
gas pipe identifier	gas zone identifier	installation type	manufacturer identifier
meter customer	meter elevation	meter service	model number
narrative	owner	owner status	owner type
project identifier	serial number	size	source
type			

---

**FEATURE TYPE NAME** natural\_gas\_pump\_point

**FEATURE CLASS NAME** utilities\_natural\_gas\_system

**OBJECT TYPE** Point

**DEFINITION** A mechanical device that draws material into itself through an entrance port and forces the material out through an exhaust port.

## Utilities (Feature Types)

### Attributes

actual outflow	building identifier	cooling method	date acquired
disposition	elevation units of measure	facility identifier	flow rate
flow units of measure	gas pump identifier	gas pumping station identifier	gas source identifier
gas zone identifier	manufacturer identifier	model number	narrative
observation identifier	owner	owner status	owner type
pipe in identifier	pipe out identifier	priming method	priming requirement
project identifier	pump elevation	pump horsepower rating	serial number
type	use		

**FEATURE TYPE NAME** natural\_gas\_pump\_station\_point

**FEATURE CLASS NAME** utilities\_natural\_gas\_system

**OBJECT TYPE** Point

**DEFINITION** A building in which one or more pumps operate to supply material flowing at adequate pressure to or from a distribution system.

### Attributes

building identifier	capacity alarm level	capacity units of measure	condition
date acquired	dimensions units of measure	disposition	elevation units of measure
facility identifier	gas pumping station identifier	gas zone identifier	narrative
nodal elevation	normal operating pressure	number of pumps	outlet pressure
owner	owner status	owner type	pressure units of measure
project identifier	source	station capacity	station length
station type	station width		

**FEATURE TYPE NAME** natural\_gas\_rectifier\_point

**FEATURE CLASS NAME** utilities\_natural\_gas\_system

**OBJECT TYPE** Point

**DEFINITION** A device that changes alternating current to direct current for an impressed current cathodic protection system on an element of the distribution system.

### Attributes

cooling method	current output	current units of measure	enclosure type
facility identifier	gas rectifier identifier	input voltage	internal meter
narrative	number of phases	phase letter	voltage output

**FEATURE TYPE NAME** natural\_gas\_regulator\_reducer\_point

**FEATURE CLASS NAME** utilities\_natural\_gas\_system

**OBJECT TYPE** Point

**DEFINITION** A pressure regulator automatically reduces the pressure on the downstream side of the valve to a preset magnitude.

## Utilities (Feature Types)

### Attributes

building identifier	date acquired	disposition	facility identifier
gas manhole identifier	gas pumping station identifier	gas regulator identifier	gas zone identifier
manufacturer identifier	model number	narrative	outlet pressure
owner	owner status	owner type	pipe in identifier
pipe out identifier	pressure in	pressure units of measure	project identifier
required pressure	serial number	size	type

**FEATURE TYPE NAME** natural\_gas\_source\_point

**FEATURE CLASS NAME** utilities\_natural\_gas\_system **OBJECT TYPE** Point

**DEFINITION** The point from which the utility is supplied a product for processing and distribution.

### Attributes

building identifier	date acquired	disposition	facility identifier
gas source identifier	name	narrative	owner
owner status	owner type	project identifier	type

**FEATURE TYPE NAME** natural\_gas\_tank\_point

**FEATURE CLASS NAME** utilities\_natural\_gas\_system **OBJECT TYPE** Point

**DEFINITION** An above or below grade receptacle or chamber for holding components on a temporary basis prior to transfer or use.

### Attributes

altitude valve	Area Unit of Measure	building identifier	capacity units of measure
date acquired	dimensions units of measure	disposition	elevation units of measure
facility identifier	gas tank identifier		gas zone identifier
head units of measure	invert elevation	manufacturer identifier	material
model number	narrative	normal head	normal pressure
overflow elevation	owner	owner status	owner type
permit number	pressure units of measure	project identifier	serial number
tank style	tank capacity	tank diameter	tank length
tank use	tank width	top elevation	

**FEATURE TYPE NAME** natural\_gas\_valve\_point

**FEATURE CLASS NAME** utilities\_natural\_gas\_system **OBJECT TYPE** Point

**DEFINITION** A fitting or device used for shutting or throttling flow through a line.

## Utilities (Feature Types)

### Attributes

branch system name	date acquired	disposition	elevation units of measure
facility identifier	gas manhole identifier	gas pipe identifier	gas valve identifier
gas zone identifier	manufacturer identifier	narrative	owner
owner status	owner type	project identifier	use
valve diameter	valve elevation	valve style	

**FEATURE TYPE NAME** storm\_sewer\_armor\_point

**FEATURE CLASS NAME** utilities\_storm\_system

**OBJECT TYPE** Point

**DEFINITION** Any location where armor stone is used for erosion protection in an open channel.

### Attributes

armor identifier	armor length	armor type	basin identifier
bedding material	bottom slope	bottom width	channel identifier
date acquired	dimensions units of measure	disposition	elevation units of measure
facility identifier	from x coordinate	from y coordinate	invert elevation 1
invert elevation 2	narrative	owner	owner status
owner type	project identifier	reach name	slope of left side
slope of right side	slope units of measure	to x coordinate	to y coordinate
to z coordinate	top width		

**FEATURE TYPE NAME** storm\_sewer\_culvert\_line

**FEATURE CLASS NAME** utilities\_storm\_system

**OBJECT TYPE** String/Chain

**DEFINITION** Interception and removal of ground water or surface water.

### Attributes

basin identifier	bottom slope	building identifier	date acquired
dimensions units of measure	disposition	drainage pattern	drainage texture
drainage zone	elevation units of measure	facility identifier	from x coordinate
from y coordinate	invert elevation 1	invert elevation 2	lined
manufacturer identifier	material	maximum pressure	model number
narrative	normal pressure	owner	owner status
owner type	pipe identifier	pipe width	pressure units of measure
project identifier	screen type	section identifier	size
slope units of measure	station identifier	storm discharge identifier	to x coordinate
to y coordinate	to z coordinate	type	use
water system pipe length	water system treatment plant identi		

## Utilities (Feature Types)

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**FEATURE TYPE NAME** storm\_sewer\_discharge\_point

**FEATURE CLASS NAME** utilities\_storm\_system

**OBJECT TYPE** Point

**DEFINITION** Any location where storm sewer pipes directly discharge effluent.

**Attributes**

---

basin identifier	building identifier	date acquired	disposition
narrative	owner	owner status	owner type
project identifier	storm discharge identifier	type	

---

**FEATURE TYPE NAME** storm\_sewer\_downspout\_point

**FEATURE CLASS NAME** utilities\_storm\_system

**OBJECT TYPE** Point

**DEFINITION** A pipe normally attached to the side of a building or structure which conveys rainfall runoff from the roof area to the ground surface or an underground collection system.

**Attributes**

---

base elevation	building identifier	date acquired	dimensions units of measure
disposition	down spout length	downspout identifier	downspout length
elevation units of measure	facility identifier	ground elevation	manufacturer identifier
material	model number	narrative	project identifier
section identifier	size	station identifier	type
water system treatment plant identifier			

---

**FEATURE TYPE NAME** storm\_sewer\_drainage\_basin\_area

**FEATURE CLASS NAME** utilities\_storm\_system

**OBJECT TYPE** G/GT Polygon

**DEFINITION** An area in which surface runoff collects and from which it is carried by a drainage system.

**Attributes**

---

Area Unit of Measure	average grade	basin identifier	date acquired
disposition	facility identifier	grade minimum	grade units of measure
maximum grade	narrative	owner	owner status
owner type	perimeter units of measure	project identifier	

---

**FEATURE TYPE NAME** storm\_sewer\_drainage\_divide\_line

**FEATURE CLASS NAME** utilities\_storm\_system

**OBJECT TYPE** String/Chain

**DEFINITION** The border of a drainage basin where one side directs runoff to one basin and the other side directs runoff to a different basin.

**Attributes**

---

facility identifier	feature description	from x coordinate	from y coordinate
sewer drain identifier	to x coordinate	to y coordinate	to z coordinate

---



## Utilities (Feature Types)

**FEATURE TYPE NAME** storm\_sewer\_fitting\_point

**FEATURE CLASS NAME** utilities\_storm\_system

**OBJECT TYPE** Point

**DEFINITION** A fitting is an item used to connect, cap, plug or otherwise alter a pipe.

### **Attributes**

basin identifier	building identifier	date acquired	dimensions units of measure
disposition	facility identifier	fitting depth	fitting identifier
fitting length	fitting width	manufacturer identifier	material
model number	narrative	owner	owner status
owner type	project identifier	section identifier	serial number
size	storm discharge identifier	type	

**FEATURE TYPE NAME** storm\_sewer\_flood\_area

**FEATURE CLASS NAME** utilities\_storm\_system

**OBJECT TYPE** G/GT Polygon

**DEFINITION** Areas where the storm sewer drainage capacity has been exceeded resulting in localized flooding.

### **Attributes**

Area Unit of Measure	basin identifier	channel identifier	dimensions units of measure
elevation units of measure	facility identifier	flood elevation	flood flow
flood frequency	flood identifier	flow units of measure	flow width
narrative	perimeter units of measure	project identifier	storm discharge identifier

**FEATURE TYPE NAME** storm\_sewer\_flow\_control\_point

**FEATURE CLASS NAME** utilities\_storm\_system

**OBJECT TYPE** Point

**DEFINITION** Devices for a storm water system to control the pressure in and out of the open channel.

### **Attributes**

basin identifier	building identifier	centerline elevation	date acquired
dimensions units of measure	disposition	elevation units of measure	facility identifier
flood control device identifier	flow control depth	flow control length	flow control width
installation type	manufacturer identifier	model number	narrative
owner	owner status	owner type	project identifier
serial number	size	type	

**FEATURE TYPE NAME** storm\_sewer\_gate\_point

**FEATURE CLASS NAME** utilities\_storm\_system

**OBJECT TYPE** Point

**DEFINITION** A movable barrier used in an open channel.

## Utilities (Feature Types)

### Attributes

basin identifier	capacity units of measure	condition	date acquired
dimensions units of measure	disposition	elevation units of measure	facility identifier
flood control device identifier	gate capacity	gate identifier	gate length
gate style	gate width	invert elevation	manufacturer identifier
material	narrative	owner	owner status
owner type	project identifier	size	storm discharge identifier

**FEATURE TYPE NAME** storm\_sewer\_headwall\_point

**FEATURE CLASS NAME** utilities\_storm\_system **OBJECT TYPE** Point

**DEFINITION** A wall (of any material) at the end of a culvert or drain to serve one or more of the following purposes: protect fill from scour or undermining; increase hydraulic efficiency, divert direction of flow, and serve as a retaining wall.

### Attributes

facility identifier	feature description	sewer wall identifier
---------------------	---------------------	-----------------------

**FEATURE TYPE NAME** storm\_sewer\_inlet\_point

**FEATURE CLASS NAME** utilities\_storm\_system **OBJECT TYPE** Point

**DEFINITION** The location where water is collected and received into the utility system.

### Attributes

basin identifier	date acquired	design capacity	disposition
elevation units of measure	facility identifier	flow units of measure	inlet point identifier
inlet step	invert elevation	manufacturer identifier	model number
narrative	owner	owner status	owner type
project identifier	storm discharge identifier	weir elevation	weir identifier

**FEATURE TYPE NAME** storm\_sewer\_junction\_point

**FEATURE CLASS NAME** utilities\_storm\_system **OBJECT TYPE** Point

**DEFINITION** A box or small vault (usually concrete, brick, or cast iron) located below grade with above grade access where pipes intersect. The manhole also houses associated fittings, valves, meters, etc.

## Utilities (Feature Types)

### Attributes

basin identifier	building identifier	dimensions units of measure	disposition
drain type	elevation units of measure	facility identifier	invert elevation
manhole diameter	manhole identifier	manhole length	manhole width
manufacturer identifier	material	model number	narrative
number of pipes	owner	owner status	owner type
project identifier	rim elevation	storm discharge identifier	type
use			

**FEATURE TYPE NAME** storm\_sewer\_line

**FEATURE CLASS NAME** utilities\_storm\_system

**OBJECT TYPE** String/Chain

**DEFINITION** A pipe used to carry a substance from location to location (main line, service line, vent line, etc).

### Attributes

basin identifier	bottom slope	building identifier	date acquired
dimensions units of measure	disposition	drainage pattern	drainage texture
drainage zone	elevation units of measure	facility identifier	from x coordinate
from y coordinate	invert elevation 1	invert elevation 2	lined
manufacturer identifier	material	maximum pressure	model number
narrative	normal pressure	owner	owner status
owner type	pipe identifier	pipe width	pressure units of measure
project identifier	screen type	section identifier	size
slope units of measure	station identifier	storm discharge identifier	to x coordinate
to y coordinate	to z coordinate	type	use
water system pipe length	water system treatment plant identi		

**FEATURE TYPE NAME** storm\_sewer\_marker\_point

**FEATURE CLASS NAME** utilities\_storm\_system

**OBJECT TYPE** Point

**DEFINITION** A sign, concrete monument, etc. installed either directly above or immediately adjacent to underground lines, bends, fittings, etc.

### Attributes

building identifier	date acquired	dimensions units of measure	disposition
facility identifier	manufacturer identifier	model number	narrative
owner	owner status	owner type	pole depth
pole height	pole material	project identifier	rock condition
sign height	sign material composition	sign text	sign width
type	utilities general marker identifier		

## Utilities (Feature Types)

**FEATURE TYPE NAME** storm\_sewer\_oil\_water\_separator\_point

**FEATURE CLASS NAME** utilities\_storm\_system

**OBJECT TYPE** Point

**DEFINITION** A device or structure placed in the water stream to separate water from oil products.

### **Attributes**

basin identifier	capacity units of measure	date acquired	disposal description
disposition	facility identifier	flow capacity	flow units of measure
grit chamber	manufacturer identifier	narrative	oil capacity
optimum operating temperature	owner	owner status	owner type
permit expiration date	permit number	pipe in identifier	pipe out identifier
project identifier	separator code	separator content	separator identifier
separator name	separator process	separator volume	station identifier
storm discharge identifier	temperature units of measure	type	volume units of measure
waste water oil-water separator flo			

**FEATURE TYPE NAME** storm\_sewer\_open\_drainage\_line

**FEATURE CLASS NAME** utilities\_storm\_system

**OBJECT TYPE** String/Chain

**DEFINITION** Interception and removal of ground water or surface water by natural means.

### **Attributes**

Area Unit of Measure	average flow	average flow elevation	average top width flow
bank armor	basin identifier	bedding material	bottom slope
bottom width	channel identifier	channel length	channel style
cross sectional area of average flo	date acquired	design	dimensions units of measure
disposition	drainage zone	elevation units of measure	facility identifier
flood depth	flood zone	flow units of measure	from x coordinate
from y coordinate	invert elevation 1	invert elevation 2	narrative
number of floods	owner	owner status	owner type
project identifier	reach name	slope of left side	slope of right side
slope units of measure	storm discharge identifier	to x coordinate	to y coordinate
to z coordinate	top width		

**FEATURE TYPE NAME** storm\_sewer\_pump\_point

**FEATURE CLASS NAME** utilities\_storm\_system

**OBJECT TYPE** Point

**DEFINITION** A mechanical device that draws material into itself through an entrance port and forces the material out through an exhaust port.

## Utilities (Feature Types)

### Attributes

actual outflow	basin identifier	building identifier	cooling method
date acquired	disposition	elevation units of measure	facility identifier
flow rate	flow units of measure	manufacturer identifier	model number
narrative	owner	owner status	owner type
pipe in identifier	pipe out identifier	priming method	priming requirement
project identifier	pump elevation	pump horsepower rating	pump identifier
serial number	station identifier	storm discharge identifier	type
use			

**FEATURE TYPE NAME** storm\_sewer\_pump\_station\_point

**FEATURE CLASS NAME** utilities\_storm\_system

**OBJECT TYPE** Point

**DEFINITION** A building in which one or more pumps operate to supply material flowing at adequate pressure to or from a distribution system.

### Attributes

alarm valve level	basin identifier	building identifier	capacity units of measure
condition	date acquired	dimensions units of measure	disposition
elevation units of measure	facility identifier	high water elevation	invert elevation
narrative	nodal elevation	number of pumps	owner
owner status	owner type	project identifier	pump elevation
station identifier	station length	station width	storm discharge identifier
type	wet well capacity		

**FEATURE TYPE NAME** storm\_sewer\_reservoir\_point

**FEATURE CLASS NAME** utilities\_storm\_system

**OBJECT TYPE** Point

**DEFINITION** The location where storm sewer water is collected.

### Attributes

average depth	average invert elevation	basin identifier	cross dikes
date acquired	date constructed	dimensions units of measure	disposition
elevation units of measure	facility identifier	name	narrative
outlet control	owner	owner status	owner type
project identifier	reservoir type	reservoir length	reservoir width
reservoir identifier	storm discharge identifier	use	

**FEATURE TYPE NAME** storm\_sewer\_stilling\_basin\_point

**FEATURE CLASS NAME** utilities\_storm\_system

**OBJECT TYPE** Point

**DEFINITION** The location where the energy from turbulent water flow is reduced.

## Utilities (Feature Types)

### Attributes

average depth	average invert elevation	basin identifier	cross dikes
date acquired	date constructed	dimensions units of measure	disposition
elevation units of measure	facility identifier	flood control device identifier	name
narrative	outlet control	owner	owner status
owner type	project identifier	stilling basin identifier	stilling basin length
stilling basin width	storm discharge identifier	type	

**FEATURE TYPE NAME** storm\_sewer\_valve\_point

**FEATURE CLASS NAME** utilities\_storm\_system

**OBJECT TYPE** Point

**DEFINITION** A fitting or device used for shutting or throttling flow through a line.

### Attributes

basin identifier	date acquired	disposition	elevation units of measure
facility identifier	manhole identifier	manufacturer identifier	narrative
owner	owner status	owner type	project identifier
size	storm discharge identifier	use	valve elevation
valve identifier	valve style		

**FEATURE TYPE NAME** utility\_pole\_guy\_point

**FEATURE CLASS NAME** utilities\_general

**OBJECT TYPE** Point

**DEFINITION** A support configuration, which generally includes connecting hardware, cables, and anchor components, used to stabilize structures (poles, towers, etc.). Down guys typically connect to the structures at key stress points and extend to an anchor at the ground.

### Attributes

anchor attachment type	anchor type	cable diameter	cable diameter unit of measure
cable material	cable sheath type	cable tensile force	cable type
date acquired	design	disposition	facility identifier
from x coordinate	from y coordinate	guy type	guy wire identifier
manufacturer identifier	narrative	owner	owner status
owner type	pole identifier	project identifier	tensile force units of measure
to x coordinate	to y coordinate	to z coordinate	

**FEATURE TYPE NAME** utility\_pole\_tower\_point

**FEATURE CLASS NAME** utilities\_general

**OBJECT TYPE** Point

**DEFINITION** A structure used to elevate wires, cables, or other lines above the ground surface.

## Utilities (Feature Types)

### Attributes

capped	condition	date acquired	date treated
design	dimensions units of measure	facility identifier	grounded
manufacturer identifier	material	narrative	owner
owner status	owner type	pole height	pole identifier
pole length	project identifier	treatment type	type

**FEATURE TYPE NAME** wastewater\_discharge\_point

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** Point

**DEFINITION** Any location where wastewater pipes directly discharge effluent.

### Attributes

building identifier	date acquired	disposition	district identifier
facility identifier	narrative	owner	owner status
owner type	pipe identifier	project identifier	tributary code
type	waste water discharge identifier	waste water tank identifier	waste water treatment plant identifi

**FEATURE TYPE NAME** wastewater\_disposal\_tank\_point

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** Point

**DEFINITION** An above or below grade receptacle or chamber for holding components on a temporary basis prior to transfer or use.

### Attributes

altitude valve	Area Unit of Measure	building identifier	capacity units of measure
date acquired	dimensions units of measure	disposition	district identifier
elevation units of measure	facility identifier	head units of measure	invert elevation
manufacturer identifier	material	model number	narrative
normal head	normal pressure	overflow elevation	owner
owner status	owner type	permit number	pressure units of measure
project identifier	serial number	tank capacity	tank depth
tank description	tank diameter	tank length	tank style
tank width	top elevation	tributary code	use
waste water tank identifier			

**FEATURE TYPE NAME** wastewater\_downspout\_point

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** Point

**DEFINITION** A pipe normally attached to the side of a building or structure which conveys rainfall runoff from the roof area to the ground surface or an underground collection system.

## Utilities (Feature Types)

### Attributes

base elevation	building identifier	date acquired	dimensions units of measure
disposition	down spout length	downspout length	elevation units of measure
facility identifier	ground elevation	manufacturer identifier	material
model number	narrative	pipe identifier	project identifier
size	station identifier	type	waste water down spout identifier
waste water treatment plant identifier			

**FEATURE TYPE NAME** wastewater\_drain\_field\_area

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** G/GT Polygon

**DEFINITION** The area of influence where perforated pipe placed in gravel trenches carries effluent from a waste storage containment for percolation into the earth.

### Attributes

Area Unit of Measure	bottom slope	building identifier	date acquired
dimensions units of measure	disposition	district identifier	drainage pattern
drainage texture	elevation units of measure	facility identifier	from x coordinate
from y coordinate	invert elevation 1	invert elevation 2	lined
manufacturer identifier	material	maximum pressure	model number
narrative	normal pressure	owner	owner status
owner type	perimeter units of measure	pipe identifier	pressure units of measure
project identifier	size	slope units of measure	station identifier
to x coordinate	to y coordinate	to z coordinate	tributary code
type	use	waste water section identifier	waste water tank identifier
waste water treatment plant identifier	water system pipe length		

**FEATURE TYPE NAME** wastewater\_filtration\_bed\_area

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** Point

**DEFINITION** A below grade system consisting of perforated piping installed in sand or gravel beds or trenches designed to permit the uniform distribution and absorption of effluent from a septic tank or aerobic unit into the soil.



## Utilities (Feature Types)

### Attributes

Area Unit of Measure	building identifier	capacity units of measure	condition
date acquired	dimensions units of measure	disposition	distribution box
distribution box invert elevation	district identifier	drainage pattern	drainage texture
elevation units of measure	facility identifier	field drain style	flow rate
flow units of measure	invert elevation 1	invert elevation 2	lateral average length
lateral slope	lateral total length	manhole	manufacturer identifier
material	narrative	number of laterals	owner
owner status	owner type	percolation units of measure	perimeter units of measure
project identifier	slope units of measure	soil percolation rate	tank style
tank capacity	tank depth	tank length	tank width
trench width	tributary code	use	waste water tank identifier

**FEATURE TYPE NAME** wastewater\_fitting\_point

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** Point

**DEFINITION** A fitting is an item used to connect, cap, plug or otherwise alter a pipe.

### Attributes

building identifier	date acquired	dimensions units of measure	disposition
district identifier	facility identifier	fitting depth	fitting length
fitting width	manufacturer identifier	material	model number
narrative	owner	owner status	owner type
pipe identifier	project identifier	serial number	size
tributary code	type	waste water collection fitting ident	waste water section identifier

**FEATURE TYPE NAME** wastewater\_grease\_trap\_point

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** Point

**DEFINITION** A tank which separates grease from water, collects the grease for removal, and allows the water to exit.

## Utilities (Feature Types)

### Attributes

building identifier	capacity units of measure	condition	date acquired
dimensions units of measure	disposition	distribution box	distribution box invert elevation
district identifier	drainage pattern	drainage texture	elevation units of measure
facility identifier	field drain style	flow rate	flow units of measure
grease trap capacity	grease trap depth	grease trap length	grease trap width
invert elevation 1	invert elevation 2	lateral average length	lateral slope
lateral total length	manhole	manufacturer identifier	material
narrative	number of laterals	owner	owner status
owner type	percolation units of measure	pipe in identifier	pipe out identifier
project identifier	slope units of measure	soil percolation rate	trap style
trap identifier	trench width	tributary code	

**FEATURE TYPE NAME** wastewater\_grit\_chamber\_point

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** Point

**DEFINITION** A chamber designed to remove sand, gravel, or other heavy solids that have subsiding velocities or specific gravities substantially greater than those of the organic solids in the waste water.

### Attributes

capacity units of measure	date acquired	disposition	district identifier
facility identifier	flow capacity	flow units of measure	grit type
manufacturer identifier	narrative	oil-water separator	owner
owner status	owner type	pipe in identifier	pipe out identifier
project identifier	storage capacity	tributary code	waste water oil-water separator flo
waste water treatment plant identifi			

**FEATURE TYPE NAME** wastewater\_junction\_point

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** Point

**DEFINITION** A box or small vault (usually concrete, brick, or cast iron) located below grade with above grade access where pipes intersect. The manhole also houses associated fittings, valves, meters, etc.

### Attributes

building identifier	dimensions units of measure	disposition	district identifier
drain type	elevation units of measure	facility identifier	invert elevation
liner type	manhole diameter	manhole length	manhole width
manufacturer identifier	material	model number	narrative
neutralization agent	number of pipes	owner	owner status
owner type	project identifier	reactant	rim elevation
tributary code	type	use	waste water manhole identifier

## Utilities (Feature Types)

**FEATURE TYPE NAME** wastewater\_lagoon\_area

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** G/GT Polygon

**DEFINITION** A shallow man made pool or pond for the purpose of providing treatment of domestic wastewater.

### Attributes

aerator	aerator power	Area Unit of Measure	average depth
average invert elevation	basin identifier	cross dikes	date acquired
date analyzed	date constructed	dimensions units of measure	district identifier
elevation units of measure	facility identifier	frequency units of measure	horsepower units of measure
laboratory name	laboratory type	lagoon identifier	lagoon length
lagoon width	managing office	manufacturer identifier	monitoring agency
name	narrative	number of pumps	outlet control
owner	owner status	owner type	perimeter units of measure
pipe in identifier	pipe out identifier	pipe outlet	project identifier
sampling frequency	soil condition	soil erosion	soil family
soil texture	test type	tributary code	type
user indicator	waste water discharge identifier	waste water lagoon sanitary waste	waste water treatment plant identifi
weir identifier	weir outlet		

**FEATURE TYPE NAME** wastewater\_line

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** String/Chain

**DEFINITION** A pipe used to carry a substance from location to location (main line, service line, vent line, etc).

### Attributes

Area Unit of Measure	bottom slope	building identifier	date acquired
dimensions units of measure	disposition	district identifier	drainage pattern
drainage texture	elevation units of measure	facility identifier	from x coordinate
from y coordinate	invert elevation 1	invert elevation 2	lined
manufacturer identifier	material	maximum pressure	model number
narrative	normal pressure	owner	owner status
owner type	perimeter units of measure	pipe identifier	pressure units of measure
project identifier	size	slope units of measure	station identifier
to x coordinate	to y coordinate	to z coordinate	tributary code
type	use	waste water section identifier	waste water tank identifier
waste water treatment plant identifi	water system pipe length		

## Utilities (Feature Types)

**FEATURE TYPE NAME** wastewater\_marker\_point

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** Point

**DEFINITION** A sign, concrete monument, etc. installed either directly above or immediately adjacent to underground lines, bends, fittings, etc.

### **Attributes**

building identifier	date acquired	dimensions units of measure	disposition
facility identifier	manufacturer identifier	model number	narrative
owner	owner status	owner type	pole depth
pole height	pole material	project identifier	rock condition
sign height	sign material composition	sign text	sign width
type	utilities general marker identifier		

**FEATURE TYPE NAME** wastewater\_meter\_point

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** Point

**DEFINITION** A device installed in a line for measuring the quantity and or rate of water through a section of line.

### **Attributes**

building identifier	date acquired	design	dimensions units of measure
disposition	district identifier	elevation units of measure	facility identifier
installation type	manufacturer identifier	meter depth	meter elevation
meter length	meter width	model number	narrative
owner	owner status	owner type	pipe identifier
project identifier	serial number	size	type
waste water manhole identifier	waste water meter identifier		

**FEATURE TYPE NAME** wastewater\_neutralizer\_point

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** Point

**DEFINITION** A receptacle or chamber, which by chemical reactions with reactant materials in the receptacle, makes liquid waste passing through the receptacle chemically neutral.

### **Attributes**

building identifier	dimensions units of measure	disposition	district identifier
drain type	elevation units of measure	facility identifier	invert elevation
liner type	manufacturer identifier	material	model number
narrative	neutralization agent	neutralization pit diameter	neutralization pit length
neutralization pit width	number of pipes	owner	owner status
owner type	project identifier	reactant	rim elevation
tributary code	type	waste water neutralization pit ident	

## Utilities (Feature Types)

**FEATURE TYPE NAME** wastewater\_oil\_water\_separator\_point

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** Point

**DEFINITION** A device or structure placed in the waste stream to separate water from oil products.

### **Attributes**

capacity units of measure	date acquired	disposal description	disposition
district identifier	facility identifier	flow capacity	flow units of measure
grit chamber	manufacturer identifier	narrative	oil capacity
optimum operating temperature	owner	owner status	owner type
permit expiration date	permit number	pipe in identifier	pipe out identifier
project identifier	separator code	separator content	separator name
separator process	separator volume	station identifier	temperature units of measure
tributary code	type	volume units of measure	waste water oil-water separator flo
waste water oil-water separator ide	waste water tank identifier	waste water treatment plant identifi	

**FEATURE TYPE NAME** wastewater\_pump\_ejector\_station\_point

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** Point

**DEFINITION** A building in which one or more pumps operate to supply material flowing at adequate pressure to or from a distribution system.

### **Attributes**

alarm valve level	building identifier	capacity units of measure	condition
date acquired	design	dimensions units of measure	disposition
district identifier	elevation units of measure	facility identifier	high water elevation
invert elevation	narrative	nodal elevation	number of pumps
owner	owner status	owner type	project identifier
pump elevation	station identifier	station length	station width
tributary code	type	waste water treatment plant identifi	wet well capacity

**FEATURE TYPE NAME** wastewater\_pump\_point

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** Point

**DEFINITION** A mechanical device that draws material into itself through an entrance port and forces the material out through an exhaust port.

## Utilities (Feature Types)

### Attributes

actual outflow	building identifier	cooling method	date acquired
disposition	district identifier	elevation units of measure	facility identifier
flow units of measure	manufacturer identifier	model number	narrative
owner	owner status	owner type	pipe in identifier
pipe out identifier	priming method	priming requirement	project identifier
pump elevation	pump horsepower rating	rated outflow	serial number
station identifier	tributary code	type	use
waste water pump identifier	waste water treatment plant identifi		

**FEATURE TYPE NAME** wastewater\_septic\_tank\_point

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** Point

**DEFINITION** Typically, a below grade receptacle or chamber in which solid organic waste is decomposed and purified by anaerobic bacteria.

### Attributes

Area Unit of Measure	building identifier	capacity units of measure	condition
date acquired	dimensions units of measure	disposition	distribution box
distribution box invert elevation	district identifier	drainage pattern	drainage texture
elevation units of measure	facility identifier	field drain style	flow rate
flow units of measure	invert elevation 1	invert elevation 2	lateral average length
lateral slope	lateral total length	manhole	manufacturer identifier
material	narrative	number of laterals	owner
owner status	owner type	percolation units of measure	perimeter units of measure
project identifier	slope units of measure	soil percolation rate	tank style
tank capacity	tank depth	tank length	tank width
trench width	tributary code	use	waste water tank identifier

**FEATURE TYPE NAME** wastewater\_treatment\_plant\_area

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** G/GT Polygon

**DEFINITION** Equipment; or a structure containing equipment, processes, piping, or components; used to treat and remove unwanted constituents.

## Utilities (Feature Types)

### Attributes

actual rate of flow	Area Unit of Measure	building identifier	bypass
condition	date acquired	dimensions units of measure	disposition
elevation units of measure	facility identifier	flow units of measure	name
narrative	number of pumps	owner	owner status
owner type	perimeter units of measure	plant elevation	plant length
plant width	project identifier	rated flow capacity	type
waste water treatment plant identifi			

**FEATURE TYPE NAME** wastewater\_treatment\_unit\_area

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** Point

**DEFINITION** A waste water treatment plant and all appurtenant equipment, buildings, and facilities relating to water treatment.

### Attributes

actual rate of flow	Area Unit of Measure	building identifier	bypass
condition	date acquired	dimensions units of measure	disposition
elevation units of measure	facility identifier	flow units of measure	name
narrative	number of pumps	owner	owner status
owner type	perimeter units of measure	plant elevation	plant length
plant width	project identifier	rated flow capacity	type
waste water treatment plant identifi			

**FEATURE TYPE NAME** wastewater\_valve\_point

**FEATURE CLASS NAME** utilities\_wastewater\_system

**OBJECT TYPE** Point

**DEFINITION** A fitting or device used for shutting or throttling flow through a line.

### Attributes

date acquired	disposition	district identifier	elevation units of measure
facility identifier	manufacturer identifier	narrative	owner
owner status	owner type	pipe identifier	project identifier
size	tributary code	use	valve elevation
valve style	waste water manhole identifier	waste water treatment plant identifi	waste water valve identifier

**FEATURE TYPE NAME** water\_anode\_point

**FEATURE CLASS NAME** utilities\_water\_system

**OBJECT TYPE** Point

**DEFINITION** A material used for utility distribution systems that is electrically connected to a less electrolytically active material so that it will oxidize in the place of the less active material.

## Utilities (Feature Types)

### Attributes

anode weight	facility identifier	material	narrative
water system anode identifier	weight units of measure		

**FEATURE TYPE NAME** water\_anode\_test\_station\_point

**FEATURE CLASS NAME** utilities\_water\_system

**OBJECT TYPE** Point

**DEFINITION** A central location where anodes are tested for performance.

### Attributes

facility identifier	insulation type	narrative	number of terminals
type	water system anode test identifier	wire size	wire type

**FEATURE TYPE NAME** water\_fire\_connection\_point

**FEATURE CLASS NAME** utilities\_water\_system

**OBJECT TYPE** Point

**DEFINITION** An apparatus which dispenses fluids for use in fire management.

### Attributes

building identifier	connection design	date acquired	diameter units of measure
disposition	elevation units of measure	facility identifier	fire flow rate
flow test date	flow units of measure	ground elevation	hydrant elevation
hydrant type	inlet diameter	manufacturer identifier	maximum pressure
measure type	model number	narrative	outlet 1 diameter
outlet 2 diameter	outlet 3 diameter	owner	owner status
owner type	pressure units of measure	project identifier	residual pressure
size	size units of measure	source	static pressure
valve style	water system hydrant identifier	water system pipe identifier	water system valve identifier
water system zone identifier			

**FEATURE TYPE NAME** water\_fitting\_point

**FEATURE CLASS NAME** utilities\_water\_system

**OBJECT TYPE** Point

**DEFINITION** A fitting is an item used to connect, cap, plug or otherwise alter a pipe.



## Utilities (Feature Types)

### Attributes

building identifier	date acquired	diameter	diameter units of measure
dimensions units of measure	disposition	elevation units of measure	facility identifier
fitting elevation	fitting identifier	fitting length	fitting width
ground elevation	manufacturer identifier	material	model number
narrative	owner	owner status	owner type
project identifier	serial number	size	size units of measure
type	water system pipe identifier	water system section identifier	water system zone identifier

**FEATURE TYPE NAME** water\_hydrant\_point

**FEATURE CLASS NAME** utilities\_water\_system

**OBJECT TYPE** Point

**DEFINITION** An apparatus which dispenses fluids.

### Attributes

building identifier	date acquired	design	diameter units of measure
disposition	elevation units of measure	facility identifier	fire flow rate
flow test date	flow units of measure	ground elevation	hydrant elevation
hydrant type	inlet diameter	manufacturer identifier	maximum pressure
measure type	model number	narrative	outlet 1 diameter
outlet 2 diameter	outlet 3 diameter	owner	owner status
owner type	pressure units of measure	project identifier	residual pressure
size	size units of measure	source	static pressure
valve style	water system hydrant identifier	water system pipe identifier	water system valve identifier
water system zone identifier			

**FEATURE TYPE NAME** water\_intake\_point

**FEATURE CLASS NAME** utilities\_water\_system

**OBJECT TYPE** Point

**DEFINITION** The location where water is allowed into the water distribution system.

### Attributes

Area Unit of Measure	building identifier	date acquired	disposition
facility identifier	name	narrative	owner
owner status	owner type	perimeter units of measure	project identifier
type	water system source identifier		

**FEATURE TYPE NAME** water\_junction\_point

**FEATURE CLASS NAME** utilities\_water\_system

**OBJECT TYPE** Point

**DEFINITION** A box or small vault (usually concrete, brick, or cast iron) located below grade with above grade access where pipes intersect. The manhole also houses associated fittings, valves, meters, etc.

## Utilities (Feature Types)

### Attributes

air relief valve	building identifier	dimensions units of measure	disposition
drain type	elevation units of measure	facility identifier	ground elevation
invert elevation	manhole diameter	manhole length	manhole width
manufacturer identifier	material	model number	narrative
number of pipes	number of valves	owner	owner status
owner type	project identifier	rim elevation	type
use	water system manhole identifier	water system zone identifier	

**FEATURE TYPE NAME** water\_line

**FEATURE CLASS NAME** utilities\_water\_system

**OBJECT TYPE** String/Chain

**DEFINITION** A pipe used to carry a substance from location to location (main line, service line, vent line, etc).

### Attributes

bottom slope	building identifier	cathodic protection	date acquired
dimensions units of measure	disposition	elevation units of measure	facility identifier
from x coordinate	from y coordinate	ground elevation 1	ground elevation 2
invert elevation 1	invert elevation 2	manufacturer identifier	material
maximum pressure	model number	narrative	normal pressure
owner	owner status	owner type	pressure units of measure
project identifier	size	slope units of measure	source
tape	to x coordinate	to y coordinate	to z coordinate
type	use	water system pipe identifier	water system pipe length
water system pumping station iden	water system section identifier	water system source identifier	water system tank identifier
water system treatment plant identi	water system zone identifier		

**FEATURE TYPE NAME** water\_marker\_point

**FEATURE CLASS NAME** utilities\_water\_system

**OBJECT TYPE** Point

**DEFINITION** A sign, concrete monument, etc. installed either directly above or immediately adjacent to underground lines, bends, fittings, etc.

### Attributes

building identifier	date acquired	dimensions units of measure	disposition
facility identifier	manufacturer identifier	model number	narrative
owner	owner status	owner type	pole depth
pole height	pole material	project identifier	rock condition
sign height	sign material composition	sign text	sign width
type	utilities general marker identifier		

## Utilities (Feature Types)

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**FEATURE TYPE NAME**    **water\_meter\_point**

**FEATURE CLASS NAME**    utilities\_water\_system

**OBJECT TYPE**    Point

**DEFINITION**    A device installed in a line for measuring the quantity and or rate of water flowing to a facility or through a section of line.

**Attributes**

---

building identifier	date acquired	disposition	elevation units of measure
facility identifier	ground elevation	installation type	manufacturer identifier
meter customer	meter elevation	meter service	model number
narrative	owner	owner status	owner type
project identifier	serial number	size	size units of measure
source	type	water system manhole identifier	water system meter identifier
water system pipe identifier	water system zone identifier		

---

**FEATURE TYPE NAME**    **water\_pressure\_reducing\_station\_point**

**FEATURE CLASS NAME**    utilities\_water\_system

**OBJECT TYPE**    Point

**DEFINITION**    A station consists of a box/pit containing one or more pressure regulators and appurtenant shutoff valves and fittings.

**Attributes**

---

building identifier	condition	date acquired	date constructed
disposition	elevation units of measure	facility identifier	ground elevation
manufacturer identifier	model number	narrative	normal operating pressure
outlet pressure	owner	owner status	owner type
pipe in identifier	pipe out identifier	pressure in	pressure units of measure
project identifier	reducing station identifier	source	station elevation
water system pumping station iden	water system regulator identifier	water system zone identifier	

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**FEATURE TYPE NAME**    **water\_pump\_point**

**FEATURE CLASS NAME**    utilities\_water\_system

**OBJECT TYPE**    Point

**DEFINITION**    A mechanical device that draws material into itself through an entrance port and forces the material out through an exhaust port.

## Utilities (Feature Types)

### Attributes

actual capacity	building identifier	capacity rate	capacity units of measure
cooling method	date acquired	disposition	elevation units of measure
facility identifier	ground elevation	manufacturer identifier	model number
narrative	observation identifier	owner	owner status
owner type	pipe in identifier	pipe out identifier	power generated
power required	priming method	priming requirement	project identifier
pump elevation	serial number	total dynamic head rating	total dynamic head units of measure
type	use	water system pump identifier	water system pumping station identifier
water system source identifier	water system zone identifier		

**FEATURE TYPE NAME** water\_pump\_station\_point

**FEATURE CLASS NAME** utilities\_water\_system

**OBJECT TYPE** Point

**DEFINITION** A building in which one or more pumps operate to supply material flowing at adequate pressure to or from a distribution system.

### Attributes

building identifier	capacity units of measure	condition	date acquired
dimensions units of measure	disposition	elevation units of measure	facility identifier
ground elevation	high water elevation	narrative	nodal elevation
number of pumps	owner	owner status	owner type
project identifier	pump elevation	source	source name
station capacity	station elevation	station length	station type
station width	tank alarm elevation	tributary code	volume units of measure
water system pumping station identifier	water system treatment plant identifier	water system zone identifier	wet well capacity

**FEATURE TYPE NAME** water\_rectifier\_point

**FEATURE CLASS NAME** utilities\_water\_system

**OBJECT TYPE** Point

**DEFINITION** A device that changes alternating current to direct current for an impressed current cathodic protection system on an element of the distribution system.

### Attributes

cooling method	current output	current units of measure	enclosure type
facility identifier	input voltage	internal meter	narrative
number of phases	phase letter	voltage output	water system rectifier identifier

**FEATURE TYPE NAME** water\_regulator\_reducer\_point

**FEATURE CLASS NAME** utilities\_water\_system

**OBJECT TYPE** Point

**DEFINITION** A pressure regulator automatically reduces the pressure on the downstream side of the valve to a preset magnitude.

## Utilities (Feature Types)

### Attributes

building identifier	date acquired	disposition	elevation units of measure
facility identifier	ground elevation	manufacturer identifier	model number
narrative	outlet pressure	owner	owner status
owner type	pipe in identifier	pipe out identifier	pressure in
pressure units of measure	project identifier	regulator elevation	required pressure
serial number	size	type	water system manhole identifier
water system pumping station iden	water system regulator identifier	water system zone identifier	

**FEATURE TYPE NAME** water\_reservoir\_area

**FEATURE CLASS NAME** utilities\_water\_system

**OBJECT TYPE** G/GT Polygon

**DEFINITION** A body of water which supplies water to a water distribution system.

### Attributes

alarm level	altitude valve	Area Unit of Measure	building identifier
date acquired	dimensions units of measure	disposition	elevation level 1 on
elevation level 2 on	elevation level danger shutoff	elevation level pumps off	elevation units of measure
facility identifier	ground elevation	head units of measure	invert elevation
low pressure	manufacturer identifier	material	model number
narrative	normal head	normal pressure	overflow elevation
owner	owner status	owner type	perimeter units of measure
permit number	pressure alarm level	pressure units of measure	project identifier
serial number	tank style	tank volume	tank diameter
tank length	tank width	top elevation	type
volume units of measure	water system tank high pressure	water system tank identifier	water system zone identifier

**FEATURE TYPE NAME** water\_source\_area

**FEATURE CLASS NAME** utilities\_water\_system

**OBJECT TYPE** G/GT Polygon

**DEFINITION** The point from which the utility is supplied a product for processing and distribution.

### Attributes

Area Unit of Measure	building identifier	date acquired	disposition
facility identifier	name	narrative	owner
owner status	owner type	perimeter units of measure	project identifier
type	water system source identifier		

## Utilities (Feature Types)

**FEATURE TYPE NAME** water\_tank\_point

**FEATURE CLASS NAME** utilities\_water\_system

**OBJECT TYPE** Point

**DEFINITION** An above or below grade receptacle or chamber for holding components on a temporary basis prior to transfer or use.

### **Attributes**

alarm level	altitude valve	Area Unit of Measure	building identifier
date acquired	dimensions units of measure	disposition	elevation level 1 on
elevation level 2 on	elevation level danger shutoff	elevation level pumps off	elevation units of measure
facility identifier	ground elevation	head units of measure	invert elevation
low pressure	manufacturer identifier	material	model number
narrative	normal head	normal pressure	overflow elevation
owner	owner status	owner type	perimeter units of measure
permit number	pressure alarm level	pressure units of measure	project identifier
serial number	tank style	tank volume	tank diameter
tank length	tank width	top elevation	type
volume units of measure	water system tank high pressure	water system tank identifier	water system zone identifier

**FEATURE TYPE NAME** water\_treatment\_plant\_area

**FEATURE CLASS NAME** utilities\_water\_system

**OBJECT TYPE** G/GT Polygon

**DEFINITION** A water treatment plant and all appurtenant equipment, buildings, and facilities relating to water treatment.

### **Attributes**

actual rate of flow	Area Unit of Measure	building identifier	bypass
condition	date acquired	dimensions units of measure	disposition
elevation units of measure	facility identifier	flow units of measure	ground elevation
name	narrative	number of pumps	owner
owner status	owner type	perimeter units of measure	plant elevation
plant length	plant width	project identifier	rated flow capacity
source	type	water system source identifier	water system treatment plant identi

**FEATURE TYPE NAME** water\_treatment\_unit\_area

**FEATURE CLASS NAME** utilities\_water\_system

**OBJECT TYPE** G/GT Polygon

**DEFINITION** A water separation pond or other pool designed to allow solid material decomposition.

## Utilities (Feature Types)

### Attributes

actual rate of flow	Area Unit of Measure	building identifier	bypass
condition	date acquired	dimensions units of measure	disposition
elevation units of measure	facility identifier	flow units of measure	ground elevation
name	narrative	number of pumps	owner
owner status	owner type	perimeter units of measure	plant elevation
plant length	plant width	project identifier	rated flow capacity
source	type	water system source identifier	water system treatment plant identi

**FEATURE TYPE NAME** water\_valve\_point

**FEATURE CLASS NAME** utilities\_water\_system

**OBJECT TYPE** Point

**DEFINITION** A fitting or device used for shutting or throttling flow through a line.

### Attributes

branch system name	date acquired	disposition	elevation units of measure
facility identifier	ground elevation	manufacturer identifier	narrative
owner	owner status	owner type	project identifier
size units of measure	use	valve elevation	valve size
valve style	water system manhole identifier	water system pipe identifier	water system valve identifier
water system zone identifier			

**FEATURE TYPE NAME** water\_vent\_point

**FEATURE CLASS NAME** utilities\_water\_system

**OBJECT TYPE** Point

**DEFINITION** A valve installed in a line to either release air trapped in the line, and/or allow air into a line to relieve a vacuum condition.

### Attributes

facility identifier	feature description	water vent identifier
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