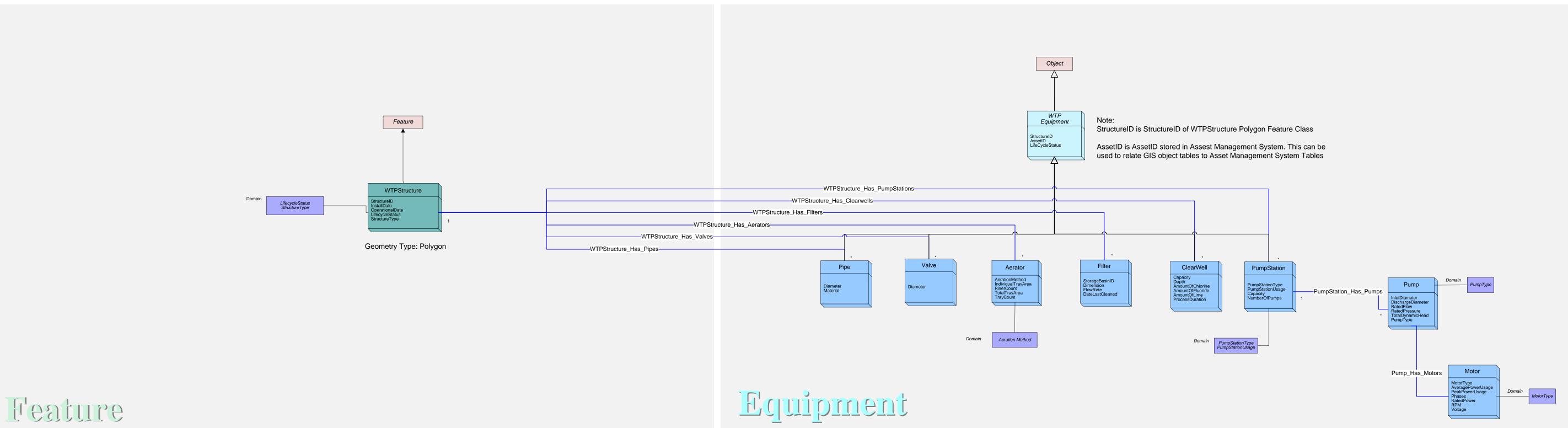


Simplified Water Treatment Plant Data Model (Conceptual)

Copyright © 2001 Environmental Systems Research Institute, Inc. All rights reserved. ESRI is a trademark of Environmental Systems Research Institute, Inc., registered in the United States and certain other countries; registration is pending in the European Community. ArcGIS is a trademark of Environmental Systems Research Institute, Inc.



Type Inheritance About this diagram How to read this diagram The objects below show an example of This diagram illustrates the implicit type This diagram illustrates the implicit type This diagram illustrates the implicit type StandByPower. Tables for the class Types of Classes Aggregation is an asymmetric association in which This diagram is not just for programmers. Understanding this object model will give many users the conceptual insight to make better an object from one class is considered to be a "whole" and objects from the other class are StandByPower are created from the objects that inherit from the ESRI Object An ESRI Object class cannot be used to create new objects but is a specification for instances of subclasses considered "parts". (through type inheritance). An **Abstract class** is a class for which no instances may be created. In a class diagram you indicate that a class be created. In a class diagram you indicate that a class lifetime of objects from the "whole" class control the lifetime of objects from the "part" class. Object Object ArcGIS A N-ary association specifies that more than two A Feature class is a class for objects that inherit from classes are associated. A diamond is placed at the the feature class. Feature classes can also be intersection of the association branches. This diagram has several examples of an instantiation of an object from two other objects. A **Multiplicity** is a constraint on the number of Associations represent relationships between classes. objects that can be associated with another object. Association, aggregration and composition relationships have multiplicities on both sides. This Your Class They have defined multiplicities at both ends. Type inheritance defines specialized classes of objects which share properties and methods with the superclass is the notation for multiplicities: and have additional properties and methods. 0..1 Zero or one

Instantiation specifies that one object from one class

has a method with which it creates an object from

M..N From M to N (positive integers)
* or 0..* From zero to any positive integer

1..* From one to any positive integer

Subtype

Facility

Domains

LifecycleStatus

DomainWTPLifecycleStatus
FieldType: <unspecified> = esriFieldTypeString
MergePolicy: <unspecified> = esriMPTDefaultValue
SplitPolicy: <unspecified> = esriSPTDuplicate
Proposed: esriFieldTypeString = Proposed
Active: esriFieldTypeString = Active
Abandoned: esriFieldTypeString = Abandoned
Removed: esriFieldTypeString = Removed

PipeMaterial

DomainWTPPipeMaterial
FieldType: <urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><urse><ur

AerationMethod

DomainWTPAerationType
FieldType: <unspecified> = esriFieldTypeString
MergePolicy: <unspecified> = esriMPTDefaultValue
SplitPolicy: <unspecified> = esriMPTDefaultValue
SplitPolicy: <unspecified> = esriSPTDuplicate
Diffused: esriFieldTypeString = Diffused Aeration
Spray: esriFieldTypeString = Spray Aeration
Multiple-tray: esriFieldTypeString = Multiple-tray Aeration
Cascade: esriFieldTypeString = Cascade Aeration
Airstripping: esriFieldTypeString = Air strippint Aeration

PumpType

DomainWTPPumpType
FieldType: <unspecified> = esriFieldTypeString
MergePolicy: <unspecified> = esriMPTDefaultValue
SplitPolicy: <unspecified> = esriSPTDuplicate
Axial: esriFieldTypeString = Axial Flow
Centrifugal: esriFieldTypeString = Centrifugal
Jet: esriFieldTypeString = Jet
Rotary: esriFieldTypeString = Rotary
Screw: esriFieldTypeString = Turbine
Turbine: esriFieldTypeString = Turbine
Reciprocating: esriFieldTypeString = Reciprocating

PumpStationUsage

DomainWTPPumpStationUsage
FieldType: <unspecified> = esriFieldTypeString
MergePolicy: <unspecified> = esriMPTDefaultValu
SplitPolicy: <unspecified> = esriSPTDuplicate
Water: esriFieldTypeString = Water
Chemical: esriFieldTypeString = Chemical Meter
Effluent: esriFieldTypeString = Effluent/Sludge

PumpStationType

DomainWTPPumpStationType
FieldType: <unspecified> = esriFieldTypeString
MergePolicy: <unspecified> = esriMPTDefaultValue
SplitPolicy: <unspecified> = esriMPTDuplicate
Wet-pit: esriFieldTypeString = Wet-pit
Dry-pit: esriFieldTypeString = Dry-pit

MotorType

DomainWTPPumpStationType
FieldType: <unspecified> = esriFieldTypeString
MergePolicy: <unspecified> = esriMPTDefaultValue
SplitPolicy: <unspecified> = esriSPTDuplicate
Induction: esriFieldTypeString = Induction
Synchronous: esriFieldTypeString = Synchronous
VariableSpeed: esriFieldTypeString = Variable Speed

Diameter

StructureType

DomainWTPStructureType
FieldType: <unspecified> = esriiFieldTypeString
MergePolicy: <unspecified> = esriiMPTDefaultValue
SplitPolicy: <unspecified> = esriiMPTDefaultValue
SplitPolicy: <unspecified> = esriiMPTDefaultValue
SplitPolicy: <unspecified> = esriiMPTDefaultValue
Intake: esriFieldTypeString = Intake Structure
Raw: esriFieldTypeString = Raw Water Storage
PumpStation: esriFieldTypeString = Pump Station
Precipitation: esriFieldTypeString = Precipitation Basin
Coagulation: esriFieldTypeString = Coagulation Basin
Flocculation: esriFieldTypeString = Flocculation Basin
FlocarWell: esriFieldTypeString = Clear Well
Sedimentation: esriFieldTypeString = Sedimentation Basin
Filtration: esriFieldTypeString = Filtration Basin
Effluent: esriFieldTypeString = Effluent Basin
Reservoir: esriFieldTypeString = Reservoir/Tank
TreatmentPlant: esriFieldTypeString = Treatment Plant
Laboratory: esriFieldTypeString = Laboratory
ChemicalBuilding: esriFieldTypeString = Administration Building
Administration: esriFieldTypeString = Administration Building
Maintenance: esriFieldTypeString = Maintenance Building
Other: esriFieldTypeString = Other