OGC-WaterML WaterQuality Profile & FeatureOfInterest

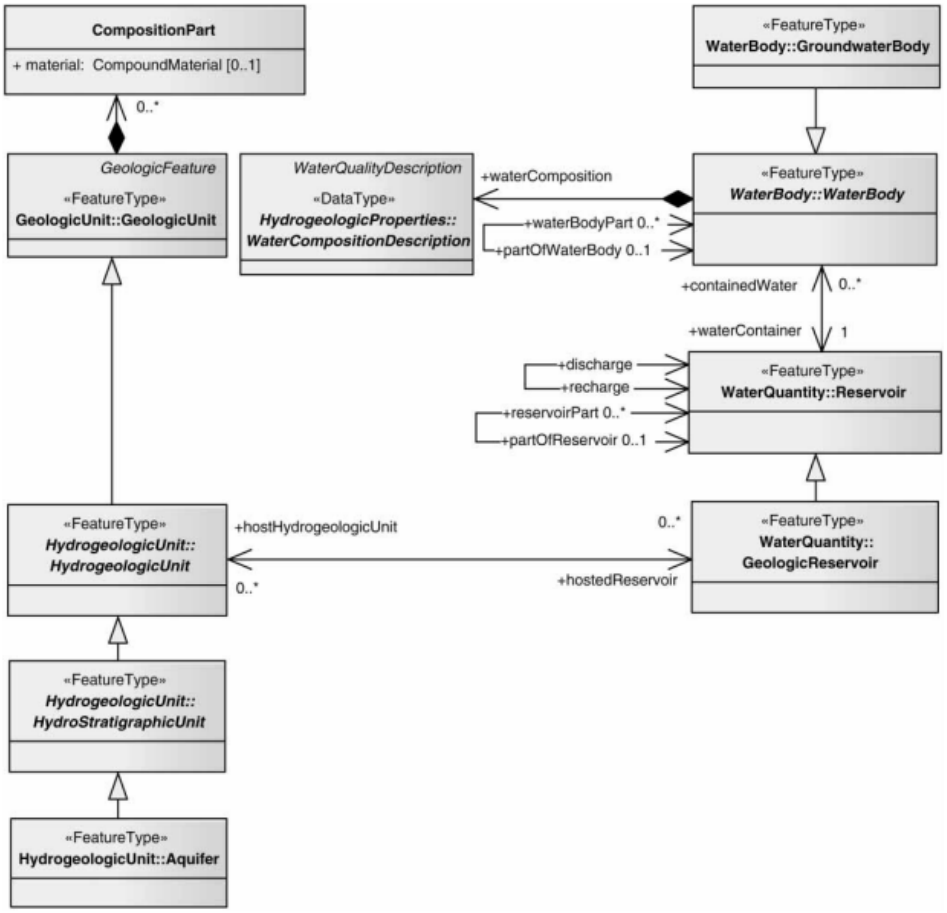
donderdag 25 maart 2021 16:34

In the profile we see the following remark about GeneralFeatureInstance:

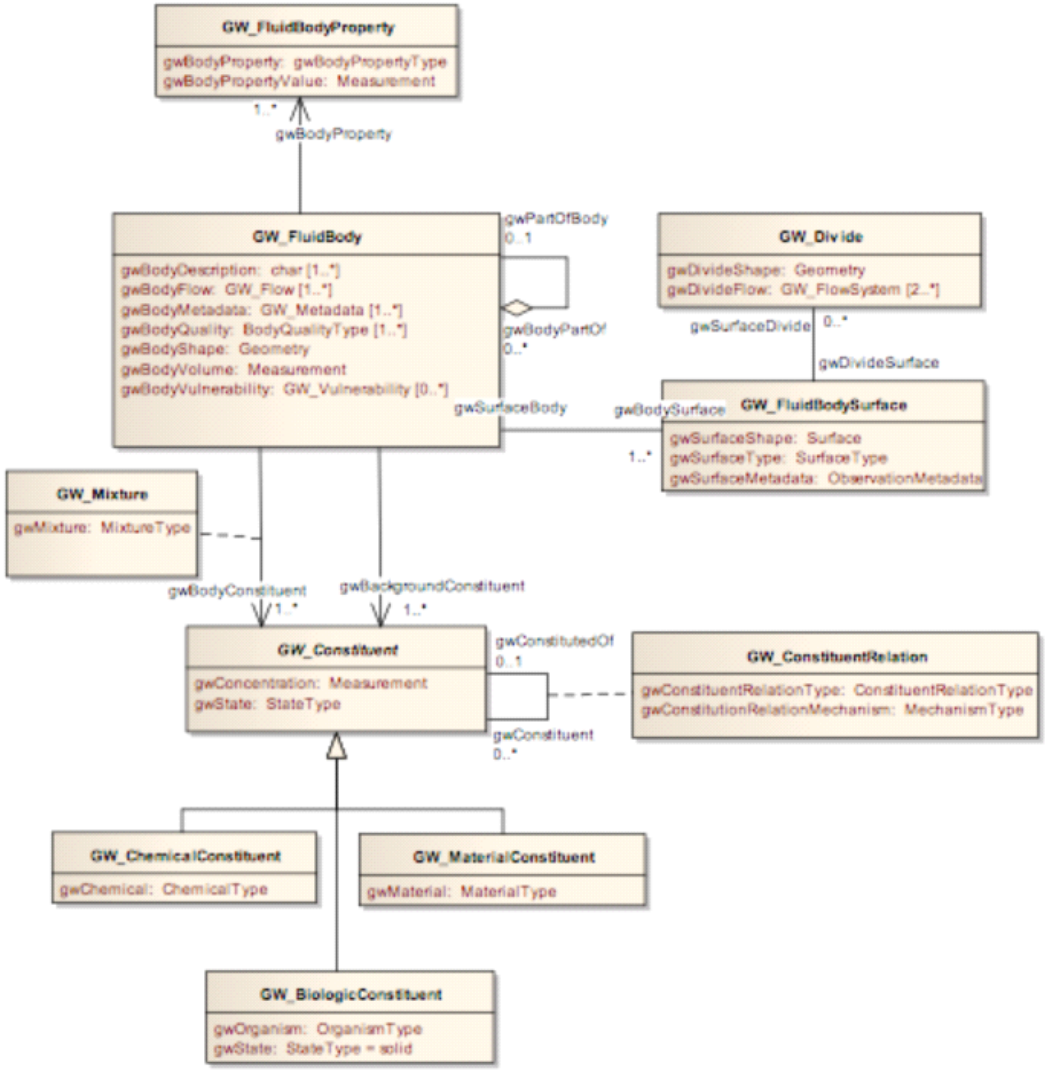
> The XML element om:featureOfInterest SHOULD have an xlink:href property that is an instance of a GroundWaterML 1 GroundWaterBody feature or sub-type of HydrologicUnit feature as specified in the XML schema at http://ngwd-bdnes.cits.nrcan.gc.ca/service/gwml/schemas/gwml.xsd
> OR
> The XML element om:featureOfInterest SHOULD have an xlink:href property that is an instance of an OGC HY_Features HY_HydroFeature or sub-type as specified at "HY_Features: a Common Hydrologic Feature Model Discussion Paper OGC 11-039r2"

So the possibilities are:

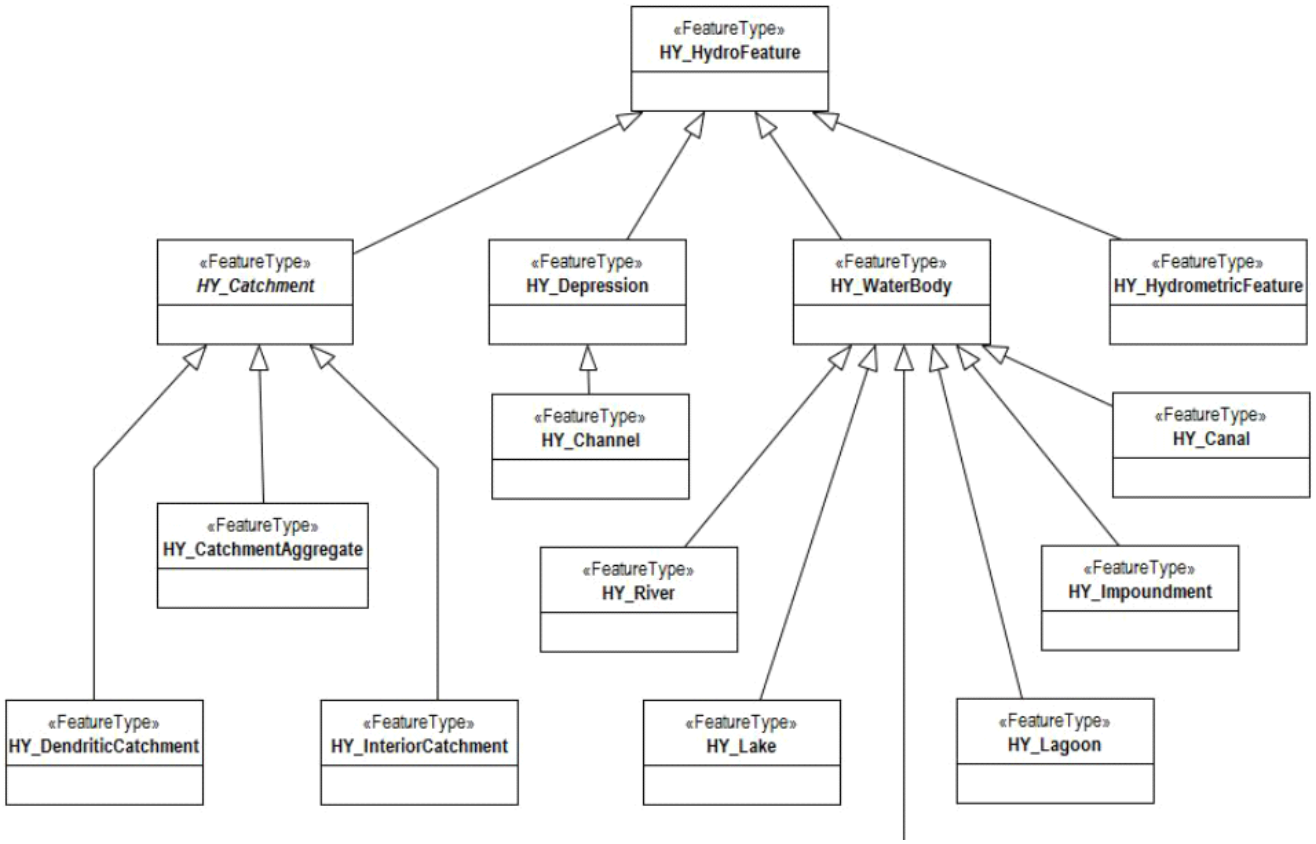
- GroundwaterBody (uit GroundwaterML1) = missing but mentioned in https://iwaponline.com/jh/article/14/1/93/3144/GroundWater-Markup-Language-GWML-enabling (GroundWater Markup Language (GWML) – enabling groundwater data interoperability in spatial data infrastructures):

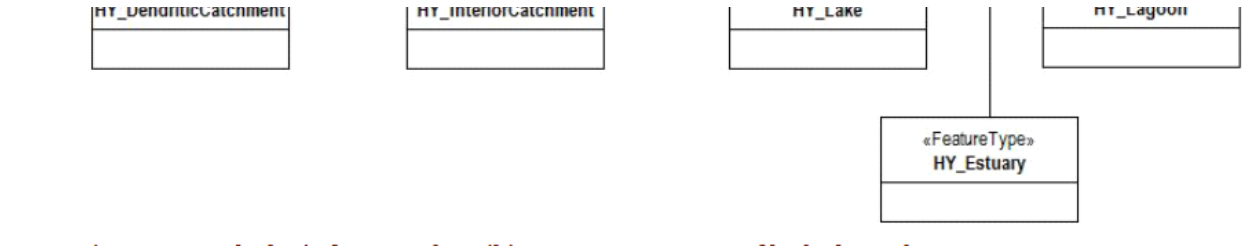


- In Groundwater ML2 Groundwaterbody is not mentioned anymore, it seems to have been generalized as GW_FluidBody because it can not only consist of water but also for example of something like oil:



- Subtypes van HydrologicUnit = missing
- OGC:HY_HydroFeature or subtypes = http://docs.opengeospatial.org/is/14-111r6/14-111r6.html (WaterML2 part3 Surface Hydrology Features):





Compare all this with the list of waterbodies from WISE (see https://dd.eionet.europa.eu/dataelements/75907):

Coastal water body
Groundwater body
Lake water body
Marine waters
River water body
Territorial waters
Transitional water body

Discussion:

- The WISE list is a good summary when it comes to water bodies: contains surface waters, marine waters as well as groundwater. But no artificial water bodies?
- WISE: Can MarineWaters not be broken down further into subclasses like Sea, Ocean etc?
- WISE: The distinction territorial/coastalwaters is some other classification in WISE for marineWaters.
- Compared to WISE the HY_Hydrofeature taxonomy contains things like:
  - HY_Catchments (= catchment area of a river)
  - HY_Depressions (=collecting eg rainwater, with HY_Channel as a subclass)
  - HY_HydrometicFeature (= bv monitoring station)
  - HY_Impoundment (=bv reservoir, eg behind a dam)
  - HY_Canal (=man made)
- HY_Lagoon & HY_Estuary seem to correspond with Transitional Waterbody (transition zones between frsh & salt water).

Conclusion:

- If we combine all these categories (incl overlaps) then we get something like: