**Conceptual mapping of water allocations data from the Oregon API into WaDE 2.0**

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**Data sources and documentations (Oregon Water Resources Department OWRD)**

<https://www.oregon.gov/OWRD/access_Data/Pages/Data.aspx>

Downloaded the data and documentation named:

***“Statewide Water Right Spatial Data with Metadata”***

Spatial data for Points of Diversions (PODs) and Points of Use (POUs) and file linking water rights to PODs are available in Geodatabase and shapefile formats which we exported to CSV files (in QGIS) to be used as inputs to the Python codes developed here to prepare WaDE2 input files:

·         wr\_pod\_nhdevent.csv

·         wr\_v\_pod\_public.csv   (POD info with related Water right)

PODs refer to Water right surface Points of Diversion (POD) and groundwater Points of Appropriation (POA) locations in the state of Oregon.

**Documentations:**

wr\_pod\_metadata.pdf (downloaded from the website above)

Key codes: <https://www.oregon.gov/owrd/WRDFormsPDF/wris_code_key.pdf>

**Water allocations**

|  |  |  |
| --- | --- | --- |
| **WaterAllocations (WaDE)** | **OR column name** | **Hardcoded value or logic** |
| OrganizationUID |  | OWRD |
| SiteUUID | From sites table | Based on mapping on  'pod\_location\_id' |
| VariableSpecificUID |  | “OWRD Allocation all” |
| WaterSourceID | From watersources.csv | Based on  *source (water source name)*  *and*  *wr\_type (dominant water source type)* |
| MethodID |  | “OWRD-Water Rights” |
| BeneficialUseID | use\_code\_description |  |
| NativeAllocationID | snp\_id | From wr\_pod\_metadata.pdf:  *Primary water right database key. Useful for relating point of diversion and place of use*  *attributes for a given water right.* |
| AllocationTypeCV | claim\_char | Map each code to respective types  Claim\_char   |  |  | | --- | --- | | GR | groundwater registrations | |  |  | | PC | power claim | |  |  | | SW | surface water registrations | |  |  | | KL | Klamath Adjudication claim | |  |  | | KA | Klamath Adjudication | |
| AllocationOwner | name last  name first  name\_company | Either name\_company  OR  Concatenate name last and name first |
| AllocationApplicationDate |  | Leave it empty |
| AllocationPriorityDate | priority\_date | Format to WaDE compatible date from  1989-11-21T00:00:00.000 format |
| AllocationLegalStatusCV |  |  |
| PrimaryUseCategory |  | “Irrigation” |
| AllocationCropDutyAmount |  | Leave it empty |
| AllocationExpirationDate |  | Leave it empty |
| AllocationChangeApplicationIndicator |  | Leave it empty |
| LegacyAllocationIDs |  | Leave it empty |
| AllocationBasisCV |  | “Unknown” |
| IrrigatedAcreage |  |  |
| TimeframeStart | |  | | --- | | begin\_month | | begin\_day | |  | |  | | Concatenate them in 01/01 format |
| TimeframeEnd | |  | | --- | | end\_month | | end\_day | | Concatenate them in 12/31 format |
| AllocationAmount | rate\_cfs | Note: Sum them over multiple PODs |
| AllocationMaximum | max\_rate\_acre\_feet | Maximum allowed storage amount at the POD.  Note: Sum them over multiple PODs (when they exist, and watch out for NANs) |
| WaterAllcationNativeURL | wris\_link |  |

**Sites**

|  |  |  |
| --- | --- | --- |
| **WaDE** |  | **Hard coded value/comment** |
| SiteUUID |  | OR\_SiteNativeID |
| SiteNativeID | pod\_location\_id | From wr\_pod\_metadata.pdf:  Water right POD location database key. |
| SiteName |  | “Unspecified” |
| USGSSiteID |  | Leave it empty |
| SiteTypeCV | source\_type  (Type of diversion (code)) | Map Codes   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | LK | lake | | DR | drain | | SP | spring | | ST | stream | | SL | slough | | WW | waste water | | WE | well | | WR | winter runoff | | SM | sump | | PD | pond | | RS | reservoir | | DT | ditch | | SE | sewage effluent | | CN | canal | |  | |
| Longitude\_x | X | Project to lat lon (EPSG:4236) from input D\_Point shapes in EPSG:2992 |
| Latitude\_y | Y | Project to lat lon (EPSG:4236) from input D\_Point shapes in EPSG:2992 |
| Geometry |  |  |
| CoordinateMethodCV |  | “Unspecified” |
| CoordinateAccuracy |  |  |
| GNISCodeCV |  |  |
| EPSGCodeCV |  | EPSG:4236 |
| NHDNetworkStatusCV |  |  |
| NHDProductCV |  |  |
| NHDUpdateDate |  |  |
| NHDReachCode |  |  |
| NHDMeasureNumber |  |  |
| HUC8 |  |  |
| HUC12 |  |  |
| County |  |  |
| StateCV |  | OR |

**WaterSources\_dim**

|  |  |  |
| --- | --- | --- |
| WaDE |  |  |
| WaterSourceUUID |  | OR\_WaterSourceNativeID |
| WaterSourceNativeID |  | Auto generate |
| WaterSourceName | source | “Unknown” for empty  ST: storage  GW: groundwater  SW: surface water |
| WaterSourceTypeCV | wr\_type | “Unknown” for empty |
| WaterQualityIndicatorCV |  | Fresh |
| GNISFeatureNameCV |  |  |
| Geometry |  |  |

**Methods**

Modify existing variables table

|  |  |  |
| --- | --- | --- |
| WaDE | Value | comment |
| MethodUUID |  | OWRD-Water Rights |
| MethodName |  | Oregon Water Rights |
| MethodDescription |  | Water Rights |
| MethodNEMILink |  | <https://www.oregon.gov/OWRD/access_Data/Pages/Data.aspx> |
| ApplicableResourceTypeCV |  | Surface/Ground/Storage |
| MethodTypeCV |  | Adjudicated |
| DataCoverageValue |  |  |
| DataQualityValueCV |  |  |
| DataConfidenceValue |  |  |

**Variables**

Modify existing variables table

|  |  |
| --- | --- |
| Column | Value |
| VariableUUID | OWRD Allocation all |
| VariableSpecificCV | Allocation All |
| VariableCV | Allocation |
| AggregationStatisticCV | Average |
| AggregationInterval | 1 |
| AggregationIntervalUnitCV | Year |
| ReportYearStartMonth | 10 |
| ReportYearTypeCV | WaterYear |
| AmountUnitCV | CFS |
| MaximumAmountUnitCV | AFY |

**Organizations**

Modify existing Organization table to add a row for OR.