Facilities REST Testing

Analysts Megan Pritchard, Glenn Campagna, Ella Fox

2023-05-26

# Pulling All Regions/Counties

all\_counties <- RomFeature$new(ds,list(bundle='usafips'),TRUE)  
counties.df <- cbind(all\_counties[["name"]], all\_counties[["hydrocode"]])  
 colnames(counties.df) <- c("County", "hydrocode\_fips")  
  
all\_regions <- RomFeature$new(ds,list(ftype= 'wsp\_plan\_region'),TRUE)  
regions.df <- cbind(all\_regions[["name"]], all\_regions[["hydrocode"]])  
 colnames(regions.df) <- c("Region", "hydrocode")

## Previews:

| County | hydrocode\_fips |
| --- | --- |
| Winchester | 51840 |
| Washington | 51191 |
| Wythe | 51197 |
| Fairfax County | 51059 |
| Augusta | 51015 |
| Charles City | 51036 |
| Fauquier | 51061 |
| Clarke | 51043 |

| Region | hydrocode |
| --- | --- |
| Halifax County and Towns | vahydrov1\_1846 |
| Lake Country Regional WSP | vahydrov1\_17045 |
| Region 2000 Regional Water Supply Plan | vahydrov1\_17196 |
| West Piedmont Planning District Commission Regional Water Supply Plan | vahydrov1\_17197 |
| Blacksburg / Christiansburg Regional WSP | vahydrov1\_17828 |
| Charlotte County Regional WSP | vahydrov1\_17829 |
| Roanoke Valley Alleghany Regional Commission Regional WSP | vahydrov1\_18470 |
| New River Valley WSP | vahydrov1\_18567 |
| Hillsboro, Town of (LOCAL PLAN) | vahydrov1\_159153 |

# Pulling Coverages Using Adminreg/Adminid

*note: data frames cap at 100 obs.*

token <- rest\_token(base\_url = site,  
 rest\_uname = rest\_uname,  
 rest\_pw = rest\_pw)

## [1] "REST AUTH INFO HAS BEEN SUPPLIED"  
## [1] "RETRIEVING REST TOKEN"  
## [1] "Login attempt successful"  
## [1] "token = DAv-B9nxccP9YfKBYP4JGwcWk8B0NunI2-eaf3Y4zWY"

#Pulls all water supply basins, can specify one with adminid in list  
wsp\_basin <- getAdminregFeature(inputs = list(  
 ftype = 'wsp\_plan\_watershed',  
 bundle = 'registration'), base\_url = site)  
  
#Pulls all localities, can specify one with adminid in list  
localities <- getAdminregFeature(inputs = list(  
 ftype = 'wsp\_plan\_locality',  
 bundle = 'registration'), base\_url = site)  
  
#Pulls all facilities, can specify one with adminid in list  
facilities <- getAdminregFeature(inputs = list(  
 ftype = 'vdeq\_vwuds',  
 bundle = 'registration'), base\_url = site)  
  
#Specific Localities/Facilities:  
bburgLocalGov <- getAdminregFeature(inputs = list(  
 adminid = '172746',  
 bundle = 'local\_government'), base\_url = site)  
  
bburgGolfCourse <- getAdminregFeature(inputs = list(  
 adminid = '68732',  
 bundle = 'registration'), base\_url = site)

## Previews:

Water Supply Basins

| adminid | bundle | ftype | admincode | name | fstatus |
| --- | --- | --- | --- | --- | --- |
| 181148 | registration | wsp\_plan\_watershed | vahydrosw\_wshed\_JU3\_6790\_7260 | Maury River | active |
| 181149 | registration | wsp\_plan\_watershed | vahydrosw\_wshed\_JB0\_7395\_0000 | Tidal JB0\_7395\_0000 James River | active |
| 181150 | registration | wsp\_plan\_watershed | vahydrosw\_wshed\_RU2\_6220\_6170 | Rapidan River | active |
| 181151 | registration | wsp\_plan\_watershed | vahydrosw\_wshed\_ES0\_0000\_0000 | Eastern Shore | active |
| 181152 | registration | wsp\_plan\_watershed | vahydrosw\_wshed\_EL0\_5892\_0000 | Tidal EL0\_5892\_0000 Eastern Shore | active |
| 181153 | registration | wsp\_plan\_watershed | vahydrosw\_wshed\_EL0\_5764\_0000 | Tidal EL0\_5764\_0000 Eastern Shore | active |
| 181154 | registration | wsp\_plan\_watershed | vahydrosw\_wshed\_JU4\_7380\_7160 | Maury River | active |

Localities

| adminid | bundle | ftype | admincode | name | fstatus |
| --- | --- | --- | --- | --- | --- |
| 173139 | registration | wsp\_plan\_locality | wsp\_2013\_locality\_1600000US5107832 | Blackstone |  |
| 173181 | registration | wsp\_plan\_locality | wsp\_2013\_locality\_1600000US5138280 | Honaker |  |
| 173182 | registration | wsp\_plan\_locality | wsp\_2013\_locality\_1600000US5139528 | Independence |  |
| 173230 | registration | wsp\_plan\_locality | wsp\_2013\_locality\_1600000US5173200 | Smithfield |  |
| 173231 | registration | wsp\_plan\_locality | wsp\_2013\_locality\_1600000US5122160 | Dendron |  |
| 173279 | registration | wsp\_plan\_locality | wsp\_2013\_locality\_1600000US5123648 | Dublin |  |

Facilities

| adminid | bundle | ftype | admincode | name | fstatus |
| --- | --- | --- | --- | --- | --- |
| 68637 | registration | vdeq\_vwuds | vwuds\_10333 | Potomac Shores Golf Club(Potomac Shores Golf Club (Irrigation)) | active |
| 68642 | registration | vdeq\_vwuds | vwuds\_0046 | SYDNOR - small well systems(SYDNOR - small well systems) | active |
| 68917 | registration | vdeq\_vwuds | vwuds\_5208 | BELOTE FARM | active |
| 69493 | registration | vdeq\_vwuds | vwuds\_2139 | SCHOOL COMPLEX | active |
| 68706 | registration | vdeq\_vwuds | vwuds\_10290 | Stratford Hall Plantation(Stratford Hall Plantation Water System) | active |
| 68732 | registration | vdeq\_vwuds | vwuds\_10346 | Blacksburg Municipal Golf Course(Blacksburg Municipal Golf Course (Irrigation)) | active |
| 68758 | registration | vdeq\_vwuds | vwuds\_10296 | OLE MONTEREY GOLF CLUB(OLE MONTEREY GOLF CLUB (Irrigation)) | active |

Blacksburg Local Government

| adminid | bundle | ftype | admincode | name | fstatus |
| --- | --- | --- | --- | --- | --- |
| 172746 | local\_government | town | 1600000US5107784 | Blacksburg |  |

Blacksburg Golf Course

| adminid | bundle | ftype | admincode | name | fstatus |
| --- | --- | --- | --- | --- | --- |
| 68732 | registration | vdeq\_vwuds | vwuds\_10346 | Blacksburg Municipal Golf Course(Blacksburg Municipal Golf Course (Irrigation)) | active |

# Pull Facilities & Their Hydrocodes

#note: if you don't say warning=FALSE these take a LONG time to run  
municipal\_facilities <- RomFeature$new(ds,list(  
 ftype= "municipal",  
 #fstatus= "active", #or proposed, inactive, etc.  
 bundle= "facility"),   
 TRUE)  
municipal\_facil.df <- cbind(municipal\_facilities[["name"]],   
 municipal\_facilities[["hydrocode"]])  
 colnames(municipal\_facil.df) <- c("Municipal Facility", "hydrocode")  
  
commercial\_facilities <- RomFeature$new(ds,list(  
 ftype= "commercial",  
 bundle= "facility"),   
 TRUE)  
commercial\_facil.df <- cbind(commercial\_facilities[["name"]],   
 commercial\_facilities[["hydrocode"]])  
 colnames(commercial\_facil.df) <- c("Commercial Facility", "hydrocode")  
   
irrigation\_facilities <- RomFeature$new(ds,list(  
 ftype= "irrigation",  
 bundle= "facility"),   
 TRUE)  
irrigation\_facil.df <- cbind(irrigation\_facilities[["name"]],   
 irrigation\_facilities[["hydrocode"]])  
 colnames(irrigation\_facil.df) <- c("Irrigation Facility", "hydrocode")  
   
wwtp\_facilities <- RomFeature$new(ds,list(  
 ftype= "wwtp",  
 bundle= "facility"),   
 TRUE)  
wwtp\_facil.df <- cbind(wwtp\_facilities[["name"]],   
 wwtp\_facilities[["hydrocode"]])  
 colnames(wwtp\_facil.df) <- c("WWTP Facility", "hydrocode")

## Previews:

| Municipal Facility | hydrocode |
| --- | --- |
| Timber Preserve | timber\_preserve |
| King William County - Central Garage Water System | gwp\_2205\_A |
| Upper Occoquan Sewage Authority | uosa |
| Dianne Ridge | gwp\_0382\_A |
| LCWA-Northeast Creek Reservoir System | vahydro\_456224 |
| Boswells Tavern- Growth Area (Proposed) | vahydro\_456271 |
| Ferncliff- Growth Area (Proposed) | vahydro\_456286 |

| Commercial Facility | hydrocode |
| --- | --- |
| Botetourt County Proposed Large User Every 10 Years | vahydro\_456163 |
| Proposed Large User in Franklin County Every 10 Years WSP | vahydro\_456160 |
| Bevans Oyster Company | gwp\_1187\_A |
| Brown and Root -System A | gwp\_tol2\_A |
| Williamsburg -number 1 | gwp\_dre1\_A |
| Greendale Golf Course | gwp\_0513\_A |

| Irrigation Facility | hydrocode |
| --- | --- |
| Bobtown Farm | gwp\_bob\_A |
| Kellam (Eastville) Farm | gwp\_5303\_A |
| Camp Farm | gwp\_mill\_A |
| Farms of New Kent Golf Course Water System | gwp\_NKFG\_A |
| Rountree Farms | gwp\_roun\_A |
| Residence of Michele L. Hiegel | gwp\_HIEG\_A |

| WWTP Facility | hydrocode |
| --- | --- |
| ALEXANDRIA RENEW ENTERPRISES WWTP | echo\_VA0025160 |
| ALEXANDRIA RENEW ENTERPRISES WWTP | echo\_VAN010059 |
| ALLEGHANY CO - LOWER JACKSON RIVER REGIONAL WWTP | echo\_VA0090671 |
| ALDIE WASTEWATER TREATMENT PLANT | echo\_VA0089133 |
| ALLEGHANY COUNTY - LOW MOOR WWTP | echo\_VA0027979 |
| ALTAVISTA TOWN - WASTEWATER TREATMENT PLANT | echo\_VA0020451 |
| AQUIA WASTEWATER TREATMENT PLANT | echo\_VA0060968 |

# Pulling Values from a Specific Facility

facility <- RomFeature$new(ds,list(  
 hydrocode= "vwuds\_1388", #Powhatan Courthouse Service Area  
 #ftype= "municipal",  
 bundle= "facility"),   
 TRUE)  
  
val <- RomProperty$new(ds,list(  
 featureid= facility$hydroid,  
 propname= "wsp2020\_2020\_mgy"),   
 TRUE)  
current\_mgy <- val$propvalue  
  
val <- RomProperty$new(ds,list(  
 featureid= facility$hydroid,  
 propname= "wsp2020\_2040\_mgy"),   
 TRUE)  
future\_mgy <- val$propvalue  
  
val <- RomProperty$new(ds,list(  
 featureid= facility$hydroid,  
 propname= "consumption"),   
 TRUE)  
consumptive\_loss\_frac <- val$propvalue

## Powhatan Courthouse Service Area:

| Facility Statistic | Value |
| --- | --- |
| Current (MGY) | 24.82 |
| Future (MGY) | 312.3238 |
| Consumptive Loss Fraction | 0.3 |