MR Schema and API Contents

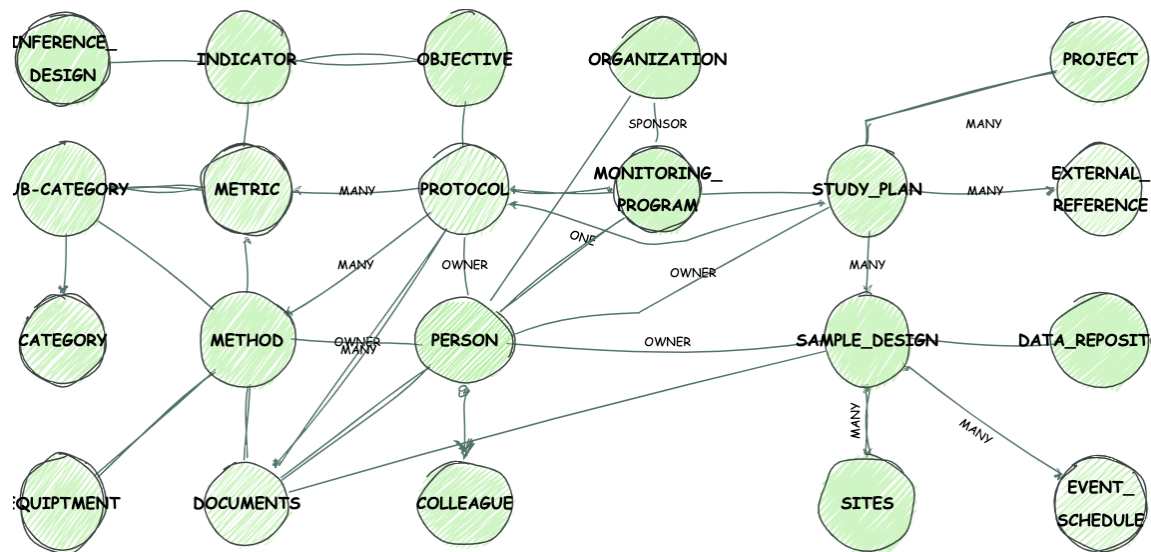## Scott Akenhead

2023-03-12

Schema for MonitoringResource.org

Figure 1: Figure 1. MR schema as derived without access to RDBMS schema.

Summaries of Tables Via API MonitoringResource.org

via API at https://mrv1.docs.apiary.io/#introduction/contact-information:
Protocol, Method Design, Site, Program Project , Study Design, Study Design Web References
Data Repository, Users, Exchange

Table 1: Table 1. API Entries from MR

Name	API	Saved
Protocol	https://**www.monitoringresources.org**/api/v1/protocols	protocols.Rdata
Method	https://**www.monitoringresources.org**/api/v1/methods	methods.Rdata
Design	https://**www.monitoringresources.org**/api/v1/designs	designs.Rdata
Site	*(not implemented)*	
Program	https://**www.monitoringresources.org**/api/v1/programs	programs.Rdata
Project	https://**www.monitoringresources.org**/api/v1/projects (response is 404)	
Study Design	https://**www.monitoringresources.org**/api/v1/studydesigns	studydesigns.Rdata
Study Design Web References	*(requires parameter: websystemservice=)*	
Data Repository	https://**www.monitoringresources.org**/api/v1/repositories	repositories.Rdata
Users	(offers colleagues for specified user)	
Exchange	(only dce)	
Data Collection Events	https://**www.monitoringresources.org**/exchange/dce – notice change in url.	dce.Rdata

```r
library(jsonlite); library(magrittr)
setwd("~/Documents/Projects/DFO 2023 Tom Bird/Monitoring Resources")
```

Read Methods as JSON, Write as Rdata and CSV

```r
#
apiObject <- c('protocols', 'methods', 'designs','programs','dce', 'studydesigns','reposit
# obj <- 'protocols'  # test w ith one
for (obj in apiObject){
    cat('\n -- ', obj, '--\n')

    api_name  <- paste0('http://www.monitoringresources.org/api/v1/',obj) # API URL
    if (obj =='dce') api_name='https://www.monitoringresources.org/exchange/dce'
    rds_name  <- paste0('data/', obj,'.Rdata')
```

```r
    csv_name  <- paste0('data/', obj,'.csv')

    a <- fromJSON( api_name)
    cat(obj, dim(a), colnames(a), '\n')
    j <- dim(a)[1] %>% sample(size=10) %>% sort # pick random rows
    print(a[j, ])

    saveRDS(a, rds_name)
    if (obj =='dce') next
    write.csv(a, csv_name)
  }
```

```
 --  protocols --
protocols 341 5 id status url title lastUpdated
      id    status                                                url
57   363 Finalized  http://www.monitoringresources.org/api/v1/protocols/363
67   478 Finalized  http://www.monitoringresources.org/api/v1/protocols/478
118  787 Finalized  http://www.monitoringresources.org/api/v1/protocols/787
119  788 Finalized  http://www.monitoringresources.org/api/v1/protocols/788
146 1980 Finalized http://www.monitoringresources.org/api/v1/protocols/1980
153 2016 Finalized http://www.monitoringresources.org/api/v1/protocols/2016
219 2258 Finalized http://www.monitoringresources.org/api/v1/protocols/2258
222 2266 Finalized http://www.monitoringresources.org/api/v1/protocols/2266
268 3451 Finalized http://www.monitoringresources.org/api/v1/protocols/3451
295 3537 Finalized http://www.monitoringresources.org/api/v1/protocols/3537

57  Monitor and evaluate the genetic characteristics of supplemented salmon and steelhead in
67
118
119
146
153
219
222
268                                                          Benthic MacroInvertebrates Sampli
295
              lastUpdated
57  2017-12-19T23:43:21-08:00
67  2015-04-22T15:14:16-07:00
118 2016-06-15T03:29:59-07:00
```

```
119 2014-03-12T14:50:39-07:00
146 2015-03-03T19:26:43-08:00
153 2014-06-04T16:48:23-07:00
219 2017-08-30T22:21:30-07:00
222 2017-02-28T04:45:34-08:00
268 2020-10-29T07:37:56-07:00
295 2020-02-26T07:16:56-08:00


 --  methods --
methods 1396 6 id type status url title lastUpdated
        id                      type     status
101   140              Data Collection Finalized
107   151              Data Collection Finalized
246   454              Data Collection Finalized
280   821 Data Analysis/Interpretation Finalized
357   993              Data Collection Finalized
504  1440 Data Analysis/Interpretation Finalized
567  1654              Data Collection Finalized
998  5448              Data Collection Finalized
1066 5548              Data Collection Finalized
1256 6898 Data Analysis/Interpretation Finalized
                                                         url
101    http://www.monitoringresources.org/api/v1/methods/140
107    http://www.monitoringresources.org/api/v1/methods/151
246    http://www.monitoringresources.org/api/v1/methods/454
280    http://www.monitoringresources.org/api/v1/methods/821
357    http://www.monitoringresources.org/api/v1/methods/993
504   http://www.monitoringresources.org/api/v1/methods/1440
567   http://www.monitoringresources.org/api/v1/methods/1654
998   http://www.monitoringresources.org/api/v1/methods/5448
1066  http://www.monitoringresources.org/api/v1/methods/5548
1256  http://www.monitoringresources.org/api/v1/methods/6898


101                                                                      Gill Net
107                                    Establishing Transects for Habitat Measurem
246                                                                   Adult Sex
280   Landscape Features (aerial photography and photo points) Data Analysis - Roegner et al.
357                                                               Sturgeon egg colle
504            Adult abundance of iteroparous and migratory salmonid populations from weir
567                                                           Primary Productivity Assess
998                       Video Bypass Chute Construction for Fish Escapement Estima
1066            Turtle Identification and Measurements: Incidental Catch in Large River Sy
1256                                                           Analyze Spawning Survey
```

```
                lastUpdated
101   2013-11-15T16:58:33-08:00
107   2014-06-20T17:28:39-07:00
246   2015-03-26T23:06:47-07:00
280   2013-12-16T18:40:46-08:00
357   2017-06-14T04:24:08-07:00
504   2014-02-05T18:59:14-08:00
567   2013-11-18T18:06:03-08:00
998   2017-03-22T01:24:13-07:00
1066 2017-01-18T07:40:38-08:00
1256 2020-10-28T22:59:12-07:00


 --  designs --
designs 903 7 id title status url spatialDesignCategory spatialDesignCategoryID lastUpdated
        id
16      246
210 15643
261 15764
387 15928
390 15932
471 16074
597 16340
702 16537
765 16656
817 16754


16
210                                                                          aa7c5c5f-13f1-4069
261                                                 c6f6ee77-d6d0-4d6d-9d69-a6ce59178cdc NABa
387
390                                                        Catherine Creek Chinook Domai
471
597
702 Collect cores from Lake Wenatchee and Osoyoos Lake for analysis using paleolimnology - Co
765
817                               Snorkel streams to estimate juvenile densities (Salmon & Cle
      status                                          url
16  Finalized   http://www.monitoringresources.org/api/v1/designs/246
210 Finalized http://www.monitoringresources.org/api/v1/designs/15643
261 Finalized http://www.monitoringresources.org/api/v1/designs/15764
387 Finalized http://www.monitoringresources.org/api/v1/designs/15928
390 Finalized http://www.monitoringresources.org/api/v1/designs/15932
471 Finalized http://www.monitoringresources.org/api/v1/designs/16074
```

```
597 Finalized http://www.monitoringresources.org/api/v1/designs/16340
702 Finalized http://www.monitoringresources.org/api/v1/designs/16537
765 Finalized http://www.monitoringresources.org/api/v1/designs/16656
817 Finalized http://www.monitoringresources.org/api/v1/designs/16754
                                spatialDesignCategory spatialDesignCategoryID
16                                 Historic Precedent                     10
210                                      Census: Full                      5
261                                      Census: Full                      5
387                                Historic Precedent                     10
390                                     Modified GRTS                     14
471 Generalized Random Tessellation Stratified (GRTS)                     18
597                                    Ease of Access                      9
702                                    Ease of Access                      9
765                                    Ease of Access                      9
817                                    Ease of Access                      9
                lastUpdated
16   2015-05-23T12:21:40-07:00
210  2018-03-25T22:14:02-07:00
261  2018-07-17T02:39:03-07:00
387  2015-07-02T02:06:00-07:00
390  2015-06-16T23:32:27-07:00
471  2017-07-21T04:13:28-07:00
597  2019-04-25T04:21:13-07:00
702  2020-03-18T00:15:28-07:00
765  2021-01-11T23:49:30-08:00
817  2022-08-03T22:29:26-07:00


 -- programs --
programs 90 5 id name url primaryContactName primaryContactEmail
   id                                       name
4   5    PIBO (USFS Pacfish/Infish Biological Opinion)
7  12                                        NPT  RME
18 26   Lake Roosevelt White Sturgeon Recovery Program
20 28 KRRFM (Kootenai River Resident Fish Mitigation)
26 35 Confederated Tribes of the Warm Springs RO RM&E
38 47               Missouri River Recovery Program
44 53                     Oregon Large Wood Monitoring
47 56   Oregon National Rivers and Streams Assessments
66 75            Eastern Oregon Fish Research (EOFR)
72 81       Northwest Fisheries Science Center (NWFSC)
                                           url primaryContactName
4   http://www.monitoringresources.org/api/v1/programs/5     Carl Saunders
7  http://www.monitoringresources.org/api/v1/programs/12         Jay Hesse
```

```
18 http://www.monitoringresources.org/api/v1/programs/26
20 http://www.monitoringresources.org/api/v1/programs/28
26 http://www.monitoringresources.org/api/v1/programs/35          Jen Graham
38 http://www.monitoringresources.org/api/v1/programs/47
44 http://www.monitoringresources.org/api/v1/programs/53      Matt Deniston
47 http://www.monitoringresources.org/api/v1/programs/56       Keith Steele
66 http://www.monitoringresources.org/api/v1/programs/75       Nadine Craft
72 http://www.monitoringresources.org/api/v1/programs/81     Ewann Berntson
              primaryContactEmail
4        william.saunders@usda.gov
7                 jayh@nezperce.org
18
20
26          jgraham@wstribes.org
38
44          matt@sitkatech.com
47          keith@sitkatech.com
66 nadine.m.craft@odfw.oregon.gov
72       ewann.berntson@noaa.gov


 --  dce  --
dce 2525 26 ProviderID EventID LastModifiedDate ProgramID ProgramName ProgramURL ProgramApiE
                          ProviderID                              EventID
13    7e64d38f-e606-432f-bde9-bd68ca388a95 97dbe3db-5ec3-4621-9db5-c7bc2e3b218f
98    7e64d38f-e606-432f-bde9-bd68ca388a95 62e8c8ba-6ef9-48d1-8fd8-41990425eb42
395   7e64d38f-e606-432f-bde9-bd68ca388a95 58ec1828-be2f-475d-bc5c-9b1b652dbbe8
577   7e64d38f-e606-432f-bde9-bd68ca388a95 c9e92819-ba81-4e6d-8354-72710f8b29af
715   7e64d38f-e606-432f-bde9-bd68ca388a95 87d84508-d538-43ca-b009-c6e274fb026d
1010  7e64d38f-e606-432f-bde9-bd68ca388a95 ef6f7a0b-3077-4940-add3-2f49dfc5b778
1151  7e64d38f-e606-432f-bde9-bd68ca388a95 d14ec011-9bce-4396-a437-cdec1fbb198b
1267  1af450c5-3c9c-4e60-8921-9226c05349c1 85778056-b3a0-4309-bbe0-6bd7711dfd39
1760  1af450c5-3c9c-4e60-8921-9226c05349c1 00720c55-ae39-4807-b1b5-9c459d5f4049
2338  7e64d38f-e606-432f-bde9-bd68ca388a95 d8b7f80e-7cb3-41d5-83a9-1dfdf6c8ede1
             LastModifiedDate ProgramID
13    2016-07-20T05:04:00-07:00        58
98    2016-11-22T05:52:00-08:00        58
395   2017-04-19T17:55:00-07:00        18
577   2018-02-02T16:40:00-08:00        18
715   2017-11-01T18:47:00-07:00        18
1010  2018-02-23T05:22:00-08:00        18
1151  2017-01-20T19:22:00-08:00        18
1267  2022-02-11T04:41:16-08:00        64
1760  2020-01-31T08:00:10-08:00        79
```

```
2338 2018-02-02T18:35:00-08:00           18
                                          ProgramName
13      BPA's Action Effectiveness Monitoring (AEM) Program
98      BPA's Action Effectiveness Monitoring (AEM) Program
395             CHaMP (Columbia Habitat Monitoring Program)
577             CHaMP (Columbia Habitat Monitoring Program)
715             CHaMP (Columbia Habitat Monitoring Program)
1010            CHaMP (Columbia Habitat Monitoring Program)
1151            CHaMP (Columbia Habitat Monitoring Program)
1267       Washington Department of Fish and Wildlife (WDFW)
1760                             Middle Fork John Day IMW
2338            CHaMP (Columbia Habitat Monitoring Program)
                                           ProgramURL
13    http://www.monitoringresources.org/Resources/Program/Detail/58
98    http://www.monitoringresources.org/Resources/Program/Detail/58
395   http://www.monitoringresources.org/Resources/Program/Detail/18
577   http://www.monitoringresources.org/Resources/Program/Detail/18
715   http://www.monitoringresources.org/Resources/Program/Detail/18
1010  http://www.monitoringresources.org/Resources/Program/Detail/18
1151  http://www.monitoringresources.org/Resources/Program/Detail/18
1267  http://www.monitoringresources.org/Resources/Program/Detail/64
1760  http://www.monitoringresources.org/Resources/Program/Detail/79
2338  http://www.monitoringresources.org/Resources/Program/Detail/18
                                           ProgramApiEndpoint
13    http://www.monitoringresources.org/api/v1/programs/58
98    http://www.monitoringresources.org/api/v1/programs/58
395   http://www.monitoringresources.org/api/v1/programs/18
577   http://www.monitoringresources.org/api/v1/programs/18
715   http://www.monitoringresources.org/api/v1/programs/18
1010  http://www.monitoringresources.org/api/v1/programs/18
1151  http://www.monitoringresources.org/api/v1/programs/18
1267  http://www.monitoringresources.org/api/v1/programs/64
1760  http://www.monitoringresources.org/api/v1/programs/79
2338  http://www.monitoringresources.org/api/v1/programs/18
                 Collector.CollectorID Collector.CollectorName
13    882c9118-c94c-4dcf-9345-7987c88f915b                  NA
98    f1e93f51-bfbc-4248-81e0-59bf115863a8                  NA
395   0e367ea7-1ac7-4638-a232-dc6757641e4e                  NA
577   2c663485-76b0-480b-a006-4691b34fb587                  NA
715   2e9c327f-fefa-4d98-b362-3b97aa9fb432                  NA
1010  538f0752-453a-4236-b23f-ba05415b2025                  NA
1151  2e9c327f-fefa-4d98-b362-3b97aa9fb432                  NA
1267  3417c17c-2759-466b-bb14-b00def1116d6                  NA
```

```
1760 1a10f569-d4fd-4898-941b-a15e45c1f9ef                         NA
2338 2c663485-76b0-480b-a006-4691b34fb587                         NA
     GeographicLocation.SiteID GeographicLocation.LocationID
13                          NA      AEM001-Blackpine_Treatment
98                          NA         AEM001-McCaw_Treatment
395                         NA              ASW00001-SF-F4 P1
577                         NA               CBW05583-041497
715                         NA               CBW05583-138666
1010                        NA               CBW05583-358687
1151                        NA               CBW05583-449962
1267                        NA                        CELL_ 3
1760                        NA                       GRBLWR-1
2338                        NA              WENMASTER-000195
         GeographicLocation.Name GeographicLocation.NameSource
13    AEM001-Blackpine_Treatment                            NA
98        AEM001-McCaw_Treatment                            NA
395            ASW00001-SF-F4 P1                            NA
577             CBW05583-041497                            NA
715             CBW05583-138666                            NA
1010            CBW05583-358687                            NA
1151            CBW05583-449962                            NA
1267                    CELL_ 3                            NA
1760                   GRBLWR-1                            NA
2338           WENMASTER-000195                            NA
     GeographicLocation.Accuracy GeographicLocation.Geometry.Point.pos
13                             0                    -120.295720 48.315820
98                             0                    -118.216390 46.272560
395                            0                    -117.280540 46.221880
577                            0                    -120.360840 48.564340
715                            0                    -117.636970 45.126460
1010                           0                    -115.812680 45.205870
1151                           0                    -117.610750 45.151200
1267                           0                    -119.463591 46.976966
1760                           0                    -118.654370 44.645614
2338                           0                    -120.727100 47.905050
     GeographicLocation.Geometry.Point.id
13           IDAEM001-Blackpine_Treatment
98              IDAEM001-McCaw_Treatment
395                  IDASW00001-SF-F4 P1
577                    IDCBW05583-041497
715                    IDCBW05583-138666
1010                   IDCBW05583-358687
1151                   IDCBW05583-449962
```

```
1267                        IDCELL_ 3
1760                        IDGRBLWR-1
2338                 IDWENMASTER-000195
     GeographicLocation.Geometry.Point.srsName
13   http://www.opengis.net/def/crs/EPSG/0/4326
98   http://www.opengis.net/def/crs/EPSG/0/4326
395  http://www.opengis.net/def/crs/EPSG/0/4326
577  http://www.opengis.net/def/crs/EPSG/0/4326
715  http://www.opengis.net/def/crs/EPSG/0/4326
1010 http://www.opengis.net/def/crs/EPSG/0/4326
1151 http://www.opengis.net/def/crs/EPSG/0/4326
1267 http://www.opengis.net/def/crs/EPSG/0/4326
1760 http://www.opengis.net/def/crs/EPSG/0/4326
2338 http://www.opengis.net/def/crs/EPSG/0/4326
     GeographicLocation.Geometry.Point.srsDimension
13                                             NA
98                                             NA
395                                            NA
577                                            NA
715                                            NA
1010                                           NA
1151                                           NA
1267                                           NA
1760                                           NA
2338                                           NA
     GeographicLocation.SiteApiEndpoint              EventDate
13                                   NA 2016-07-12T19:00:00-07:00
98                                   NA 2015-07-20T20:39:00-07:00
395                                  NA 2015-09-09T15:30:00-07:00
577                                  NA 2017-09-08T15:01:00-07:00
715                                  NA 2017-09-27T16:30:00-07:00
1010                                 NA 2017-07-23T16:35:00-07:00
1151                                 NA 2016-09-18T16:00:00-07:00
1267                                 NA 2021-03-05T08:00:00-08:00
1760                                 NA 2008-07-29T07:00:00-07:00
2338                                 NA 2017-07-09T14:48:00-07:00
                SourceSystem.SystemID SourceSystem.SystemName
13   97ff2a1d-1b3b-4815-91bf-a4f1d6dacf8c                    NA
98   97ff2a1d-1b3b-4815-91bf-a4f1d6dacf8c                    NA
395  75cbd7d4-b22a-49bc-8840-2f42566b4524                    NA
577  75cbd7d4-b22a-49bc-8840-2f42566b4524                    NA
715  75cbd7d4-b22a-49bc-8840-2f42566b4524                    NA
1010 75cbd7d4-b22a-49bc-8840-2f42566b4524                    NA
```

```
1151 75cbd7d4-b22a-49bc-8840-2f42566b4524                    NA
1267 03b5af62-533d-4bbb-ac16-5854584b2761                    NA
1760 3fd3d6a5-ad21-4066-b3f5-73288c8b2f8e                    NA
2338 75cbd7d4-b22a-49bc-8840-2f42566b4524                    NA


13
98    HydrologyWaterQuantity, SedimentSubstrateSoils, SedimentSubstrateSoils, SedimentSubstra
395
577
715
1010
1151
1267
1760
2338
     Contacts Attributes ProtocolID
13      NULL      NULL      1870
98      NULL      NULL      1955
395     NULL      NULL      2020
577     NULL      NULL      2020
715     NULL      NULL      2020
1010    NULL      NULL      2020
1151    NULL      NULL      2020
1267    NULL      NULL      3665
1760    NULL      NULL      3380
2338    NULL      NULL      2020
                                                ProtocolURL
13   https://www.monitoringresources.org/Document/Protocol/Details/1870
98   https://www.monitoringresources.org/Document/Protocol/Details/1955
395  https://www.monitoringresources.org/Document/Protocol/Details/2020
577  https://www.monitoringresources.org/Document/Protocol/Details/2020
715  https://www.monitoringresources.org/Document/Protocol/Details/2020
1010 https://www.monitoringresources.org/Document/Protocol/Details/2020
1151 https://www.monitoringresources.org/Document/Protocol/Details/2020
1267 https://www.monitoringresources.org/Document/Protocol/Details/3665
1760 https://www.monitoringresources.org/Document/Protocol/Details/3380
2338 https://www.monitoringresources.org/Document/Protocol/Details/2020
                              ProtocolApiEndpoint
13   http://www.monitoringresources.org/api/v1/protocols/1870
98   http://www.monitoringresources.org/api/v1/protocols/1955
395  http://www.monitoringresources.org/api/v1/protocols/2020
577  http://www.monitoringresources.org/api/v1/protocols/2020
715  http://www.monitoringresources.org/api/v1/protocols/2020
```

```
1010 http://www.monitoringresources.org/api/v1/protocols/2020
1151 http://www.monitoringresources.org/api/v1/protocols/2020
1267 http://www.monitoringresources.org/api/v1/protocols/3665
1760 http://www.monitoringresources.org/api/v1/protocols/3380
2338 http://www.monitoringresources.org/api/v1/protocols/2020


13
98
395
577
715
1010
1151
1267 , Waterfowl abundance counts with remote camera traps v3.0, Waterfowl abundance data ana
1760
2338
     DesignID
13       2564
98        379
395       256
577      2651
715       433
1010     2646
1151      433
1267    15603
1760       NA
2338     2658
                                                                      DesignURL
13    http://www.monitoringresources.org/Designer/OpportunisticDesign/Detail/2564
98     http://www.monitoringresources.org/Designer/OpportunisticDesign/Detail/379
395    http://www.monitoringresources.org/Designer/OpportunisticDesign/Detail/256
577        http://www.monitoringresources.org/Designer/ModifiedDesign/Detail/2651
715         http://www.monitoringresources.org/Designer/ModifiedDesign/Detail/433
1010       http://www.monitoringresources.org/Designer/ModifiedDesign/Detail/2646
1151        http://www.monitoringresources.org/Designer/ModifiedDesign/Detail/433
1267 http://www.monitoringresources.org/Designer/OpportunisticDesign/Detail/15603
1760                                                                         <NA>
2338       http://www.monitoringresources.org/Designer/ModifiedDesign/Detail/2658
                               DesignApiEndpoint PanelName
13    http://www.monitoringresources.org/api/v1/designs/2564       NA
98     http://www.monitoringresources.org/api/v1/designs/379       NA
395    http://www.monitoringresources.org/api/v1/designs/256       NA
577    http://www.monitoringresources.org/api/v1/designs/2651      NA
```

```
715   http://www.monitoringresources.org/api/v1/designs/433          NA
1010  http://www.monitoringresources.org/api/v1/designs/2646         NA
1151   http://www.monitoringresources.org/api/v1/designs/433         NA
1267 http://www.monitoringresources.org/api/v1/designs/15603         NA
1760                                                          <NA>   NA
2338  http://www.monitoringresources.org/api/v1/designs/2658         NA
                                                    DownloadURL  Notes Restrictions
13                                                        <NA>   <NA>         <NA>
98                                                        <NA>   <NA>         <NA>
395                                                       <NA>   <NA>         <NA>
577                                                       <NA>   <NA>         <NA>
715                                                       <NA>   <NA>         <NA>
1010                                                      <NA>   <NA>         <NA>
1151                                                      <NA>   <NA>         <NA>
1267 http://wdfw.wa.gov/viewing/observations/sgcn/wdfw.html   <NA>         <NA>
1760                                                      <NA> E-herd         <NA>
2338                                                      <NA>   <NA>         <NA>
     IsProbablistic
13          FALSE
98          FALSE
395         FALSE
577         FALSE
715         FALSE
1010        FALSE
1151        FALSE
1267        FALSE
1760           NA
2338        FALSE


 -- studydesigns --
studydesigns 1601 16 id name status url programID programUrl protocolID protocolUrl ownerName
       id
170    176
477    490
507    521
721    738
723    740
779    796
1343 1493
1365 1570
1427 1656
1548 1801
```

```
170  Mill Creek Action Effectiveness Monitoring Tucannon Project Action Effectiveness Monitor
477
507
721
723
779                                                    Monitor and Evaluate the Status and T
1343
1365
1427
1548                                                    IDFG Weir and Hatchery Trap Sampling
        status                                                               url
170       Draft   http://www.monitoringresources.org/api/v1/studyDesigns/176
477       Draft   http://www.monitoringresources.org/api/v1/studyDesigns/490
507       Draft   http://www.monitoringresources.org/api/v1/studyDesigns/521
721       Draft   http://www.monitoringresources.org/api/v1/studyDesigns/738
723       Draft   http://www.monitoringresources.org/api/v1/studyDesigns/740
779       Draft   http://www.monitoringresources.org/api/v1/studyDesigns/796
1343   Finalized http://www.monitoringresources.org/api/v1/studyDesigns/1493
1365    Archived http://www.monitoringresources.org/api/v1/studyDesigns/1570
1427       Draft http://www.monitoringresources.org/api/v1/studyDesigns/1656
1548   Finalized http://www.monitoringresources.org/api/v1/studyDesigns/1801
     programID                                 programUrl protocolID
170         18 http://www.monitoringresources.org/api/v1/programs/18       1896
477         NA                                     [none]        112
507         NA                                     [none]        144
721         NA                                     [none]        408
723         NA                                     [none]        410
779         NA                                     [none]        482
1343        80 http://www.monitoringresources.org/api/v1/programs/80       3363
1365        80 http://www.monitoringresources.org/api/v1/programs/80       3363
1427        80 http://www.monitoringresources.org/api/v1/programs/80       3363
1548        73 http://www.monitoringresources.org/api/v1/programs/73       3569
                                    protocolUrl        ownerName
170  http://www.monitoringresources.org/api/v1/protocols/1896    Joe Lemanski
477   http://www.monitoringresources.org/api/v1/protocols/112     John Tenney
507   http://www.monitoringresources.org/api/v1/protocols/144     Shawn Narum
721   http://www.monitoringresources.org/api/v1/protocols/408  Michael Parsley
723   http://www.monitoringresources.org/api/v1/protocols/410    Elaine Harvey
779   http://www.monitoringresources.org/api/v1/protocols/482   Cindy Helfrich
1343 http://www.monitoringresources.org/api/v1/protocols/3363 Nichole Bjornlie
1365 http://www.monitoringresources.org/api/v1/protocols/3363   Chris Heilakka
1427 http://www.monitoringresources.org/api/v1/protocols/3363    Trent Hawkins
1548 http://www.monitoringresources.org/api/v1/protocols/3569       Eric Stark
```

	ownerEmail	majorVersion	minorVersion
170	joe.lemanski@ctwsbnr.org	1	0
477	john@psmfc.org	1	0
507	nars@critfc.org	1	0
721	mparsley@usgs.gov	1	0
723	elaine@ykfp.org	1	0
779	cindy@cbr.washington.edu	1	0
1343	nichole.bjornlie@wyo.gov	1	0
1365	AcadiaWildlife@nps.gov	1	0
1427	trent.hawkins@osucascades.edu	1	0
1548	eric.stark@idfg.idaho.gov	2	0

	previousStudyDesignVersionId
170	NA
477	NA
507	NA
721	NA
723	NA
779	NA
1343	NA
1365	NA
1427	NA
1548	1770

	previousStudyDesignVersionUrl
170	[none]
477	[none]
507	[none]
721	[none]
723	[none]
779	[none]
1343	[none]
1365	[none]
1427	[none]
1548	http://www.monitoringresources.org/api/v1/studyDesigns/1770

	mostRecentVersionId	mostRecentVersionUrl
170	NA	[none]
477	NA	[none]
507	NA	[none]
721	NA	[none]
723	NA	[none]
779	NA	[none]
1343	NA	[none]
1365	NA	[none]
1427	NA	[none]

```
1548                   NA                 [none]


 -- repositories --
repositories 163 5 id name url webUrl type
      id                                          name
18    67                       ID Conservation Data Center
28    78 NONE - No data repository or not electronically available
59   116               Columbia Basin Fish and Wildlife Library
76   133             Upper Salmon Basin Planning Tool (Demo Site)
101 1158                       WDFW Hatchery Water Quality
116 1174                                         FishGen
134 1192                                   LRFEP Database
136 1194                       UCWSRI Data Management System
141 1199             Nez Perce Tribe Server (Restricted Access)
152 1211                               Idaho OSC Data Server
                                                          url
18     http://www.monitoringresources.org/api/v1/repositories/67
28     http://www.monitoringresources.org/api/v1/repositories/78
59    http://www.monitoringresources.org/api/v1/repositories/116
76    http://www.monitoringresources.org/api/v1/repositories/133
101 http://www.monitoringresources.org/api/v1/repositories/1158
116 http://www.monitoringresources.org/api/v1/repositories/1174
134 http://www.monitoringresources.org/api/v1/repositories/1192
136 http://www.monitoringresources.org/api/v1/repositories/1194
141 http://www.monitoringresources.org/api/v1/repositories/1199
152 http://www.monitoringresources.org/api/v1/repositories/1211
                                       webUrl        type
18    http://fishandgame.idaho.gov/cms/tech/CDC/ Independent
28                                          N/A Independent
59             http://www.streamnetlibrary.org Independent
76           http://demos.geoengineers.com/osc/ Independent
101 http://wdfw.wa.gov/hatcheries/overview.html Independent
116                        http://www.fishgen.net/ Independent
134     http://www.spokanetribalfisheries.com/ Independent
136      http://www.uppercolumbiasturgeon.org/ Independent
141               http://www.nptfisheries.org/ Independent
152                        sftp://ftp.idaho.gov Independent


 -- protocols --
protocols 341 5 id status url title lastUpdated
      id    status                                              url
61    416 Finalized  http://www.monitoringresources.org/api/v1/protocols/416
80    549 Finalized  http://www.monitoringresources.org/api/v1/protocols/549
```

```
83   553 Finalized  http://www.monitoringresources.org/api/v1/protocols/553
148 1985 Finalized http://www.monitoringresources.org/api/v1/protocols/1985
224 2269 Finalized http://www.monitoringresources.org/api/v1/protocols/2269
227 3274 Finalized http://www.monitoringresources.org/api/v1/protocols/3274
259 3373 Finalized http://www.monitoringresources.org/api/v1/protocols/3373
260 3374 Finalized http://www.monitoringresources.org/api/v1/protocols/3374
263 3392 Finalized http://www.monitoringresources.org/api/v1/protocols/3392
275 3481 Finalized http://www.monitoringresources.org/api/v1/protocols/3481

61                             Scientific Protocol for Salmonid Habitat Surveys
80                                               KRRFM - Burbot
83
148                             KRRFM - Determining Fish Assemblage Structu
224                                                     Determi
227                             IDFG LOWER GRANITE DAM JUVENILE Monitoring
259                                               Environmental
260
263
275 Generating demographic information for Westslope Cutthroat Trout populations using data
                  lastUpdated
61  2017-02-24T03:49:19-08:00
80  2017-06-20T21:46:10-07:00
83  2018-12-13T02:46:34-08:00
148 2014-05-05T17:02:31-07:00
224 2017-11-01T19:34:51-07:00
227 2021-05-12T22:28:25-07:00
259 2020-02-01T06:03:02-08:00
260 2018-03-08T07:05:38-08:00
263 2019-12-06T02:25:19-08:00
275 2020-01-25T00:19:38-08:00
```

```r
list.files('data')
```

```
 [1] "dce.Rdata"          "designs.csv"        "designs.Rdata"
 [4] "methods.csv"        "methods.Rdata"      "programs.csv"
 [7] "programs.Rdata"     "protocols.csv"      "protocols.Rdata"
[10] "repositories.csv"   "repositories.Rdata" "studydesigns.csv"
[13] "studydesigns.Rdata" "testGraphML-grid.png" "testGraphML.png"
```