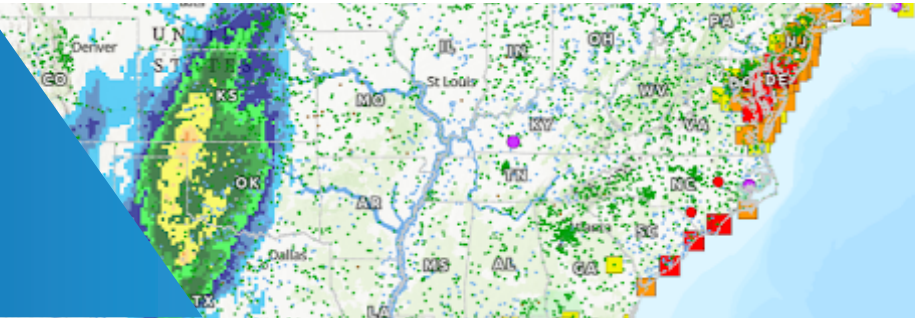




# National Water Prediction Service (NWPS) API Data Services

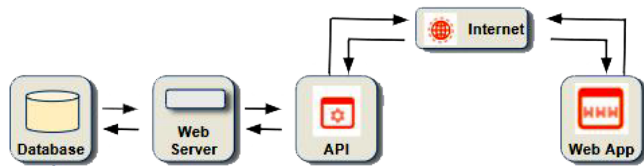


Information shared through the new National Weather Service (NWS) National Water Prediction Service (NWPS) is now fully accessible through an Application Programming Interface (API) via the [web link](#) provided below. From the NWPS API service, users can access all river forecast location data, the latest gauge observations and forecasts, and all metadata, including flood impact descriptions. API access to the National Water Model forecasts is also available and will expand to include evolving water prediction services in development for operational application.

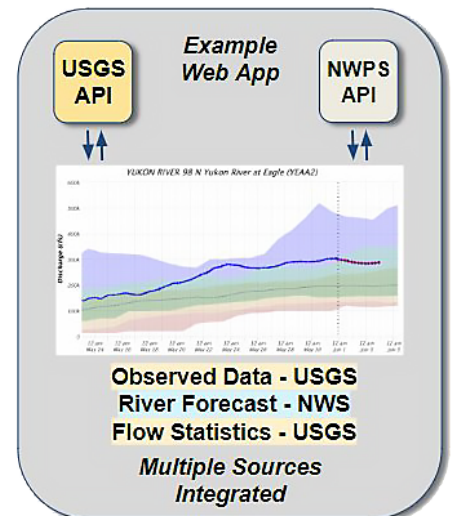
<https://api.water.noaa.gov/nwps/v1/docs/>



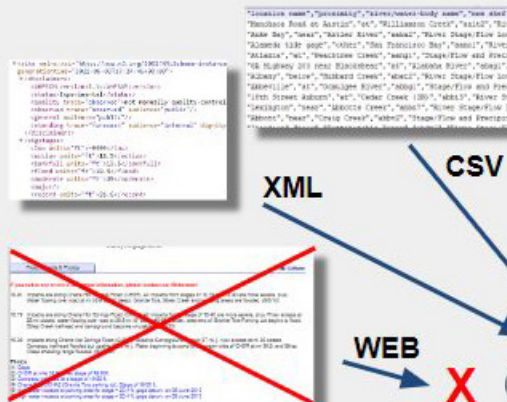
This well-documented API will allow users and systems to easily integrate NWS water prediction information without the need for web-scraping. Core partners and third-party web apps can leverage the NWPS API to integrate forecast data into decision support tools. The NWPS API uses the OpenAPI 3.0 specification and implements RESTful protocols.



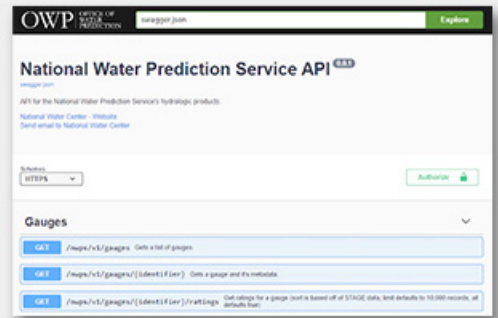
The new **National Water Prediction Service (NWPS)** is a **data service driven Web App!**



**AHPS** (old system)  
Variety of endpoints or not available



**NWPS** (new system)  
Full API access to Data and Metadata



<https://api.water.noaa.gov/nwps/v1/docs/>

**The NWPS API services consist of the following request options:**

**Gauges**

- [/v1/gauges](#) –Returns a list of gauges
- [/v1/gauges/{identifier}](#) –Returns metadata for a requested gauge
- [/v1/gauges/{identifier}/ratings](#) –Retrieves ratings for a gauge (sort is based on STAGE data, limit defaults to 10,000 records)
- [/v1/gauges/{identifier}/stageflow](#) –Returns observed and forecast stage/flow data for a gauge
- [/v1/gauges/{identifier}/stageflow/{product}](#) –Retrieves observed or forecast stage/flow data for a gauge

**Reaches**

- [/v1/reaches/{reachId}](#) –Returns metadata for a specific stream/river
- [/v1/reaches/{reachId}/streamflow](#) –Returns flow forecast values for a specific stream/river reach

**Accessing the National Water Model**

Requesting metadata and NWM time series from various model runs

```
GET /v1/reaches/{reachId} Get metadata for a specific reach.
```

Request URL for reach information and data retrieval:  
[https://api.water.noaa.gov/nwps/v1/reaches/23021904/streamflow?series=analysis\\_assimilation](https://api.water.noaa.gov/nwps/v1/reaches/23021904/streamflow?series=analysis_assimilation)

```
{
  "reach": {
    "reachId": "23021904",
    "name": "Deep Creek",
    "latitude": 47.6982,
    "longitude": -117.497,
    "streamflow": [
      "analysis_assimilation",
      "short_range",
      "long_range",
      "medium_range_blend",
      "medium_range"
    ],
    "route": {
      "upstream": [
        {
          "reachId": "23021906",
          "streamOrder": "7"
        },
        {
          "reachId": "23023198",
          "streamOrder": "7"
        }
      ],
      "downstream": [
        {
          "reachId": "23022058",
          "streamOrder": "7"
        }
      ]
    }
  },
  "analysisAssimilation": {
    "series": {
      "referenceTime": "2024-01-09T13:00:00Z",
      "units": "ft³/s",
      "data": [
        {
          "validTime": "2024-01-06T17:00:00Z",
          "flow": 3541.7099609375
        },
        {
          "validTime": "2024-01-06T18:00:00Z",
          "flow": 3541.7099609375
        },
        {
          "validTime": "2024-01-06T19:00:00Z",
          "flow": 3526.169921875
        },
        {
          "validTime": "2024-01-06T20:00:00Z",
          "flow": 3516.280029296875
        },
        {
          "validTime": "2024-01-06T21:00:00Z",
          "flow": 3509.56982421875
        },
        {
          "validTime": "2024-01-06T22:00:00Z",
          "flow": 3504.6298828125
        },
        {
          "validTime": "2024-01-06T23:00:00Z",
          "flow": 3533.22998046875
        }
      ]
    }
  }
}
```

**NWPS API Examples – Building a Hydrograph:**

Workflow to build a stage hydrograph: 2 endpoints

```
GET /v1/gauges/{identifier} Gets a gauge and it's metadata.
```

Request URL: <https://api.water.noaa.gov/nwps/v1/gauges/LOLT2>

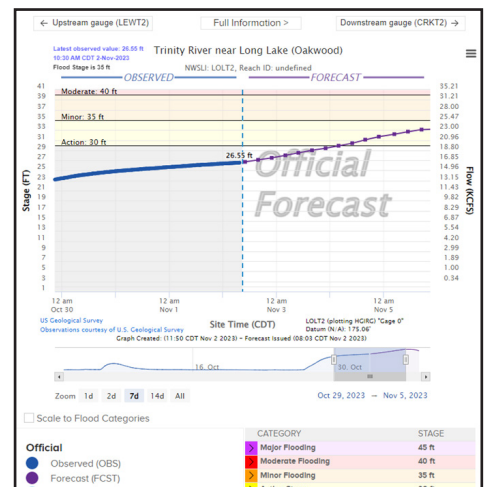
```
{
  "lid": "LOLT2",
  "usgsId": "08065000",
  "reachId": "1453127",
  "name": "Trinity River near Long Lake (Oakwood)",
  "description": "",
  "rfc": {
    "abbreviation": "WGRFC",
    "name": "West Gulf River Forecast Center"
  },
  "wfo": {
    "abbreviation": "FWD",
    "name": "Fort Worth"
  },
  "state": {
    "abbreviation": "TX",
    "name": "Texas"
  }
}
```

```
GET /v1/gauges/{identifier}/stageflow Gets observed and forecast stage/flow product data for a gauge.
```

Request URL: <https://api.water.noaa.gov/nwps/v1/gauges/LOLT2/stageflow>

```
{
  "observed": {
    "pedts": "HGIRG",
    "issuedTime": "2024-01-24T20:30:00Z",

```



**NWPS API Resources:**

- API Access and Documentation: <https://api.water.noaa.gov/nwps/v1/docs/#/>
- NWPS access: <https://water.noaa.gov/>
- NWPS API Webinar Recording: <https://www.youtube.com/watch?v=-A8mt1EgAj0>